

# ACE 2019

Toshi Center Hotel, Tokyo, Japan  
October 31 - November 3, 2019

## Final Draft Schedule

### Please Check & Confirm

Please check that all information pertaining to you is correct and notify us at [support@iafor.org](mailto:support@iafor.org) if there is any error.

Please notify us of any corrections by **Sunday, October 6** 09:00 (Japan Time).

### Final Schedule

After minor changes have been made to the schedule we will send you a link to the final schedule.

The final schedule will contain session information and a detailed day-to-day presentation schedule (including room allocations and session chairs).

This will be available on **Tuesday, October 22**.

All Abstracts will also be available online at this time.

Thursday at a Glance  
October 31, 2019

**Toshi Center Hotel – Conference Center (5F)**

- 16:00-17:15 Pre-Conference Workshop | Subaru (5F)  
***Writing for Publication: Methods to Maximise Your Chances***  
Yvonne Masters, editor-in-chief of the IAFOR *Journal of Education*, Australia
- 15:30-18:00 Conference Registration
- 18:00-19:00 Conference Welcome Reception | Subaru (5F)

Friday at a Glance  
November 1, 2019

**Toshi Center Hotel – Conference Center (6F & 7F)**

- 08:15-09:00 Conference Registration | 701 (7F)
- 09:00-09:05 Opening Announcements | Orion Hall (5F)**  
Brian Aycock, IAFOR, Japan
- 09:05-09:20 Welcome Addresses | Orion Hall (5F)**  
Steve Cornwell, IAFOR & Osaka Jogakuin University, Japan  
Joseph Haldane, IAFOR, Japan
- 09:20-09:30 Recognition of IAFOR Scholarship Winners | Orion Hall (5F)**  
Steve Cornwell, IAFOR & Osaka Jogakuin University, Japan
- 10:05-10:35 Keynote Presentation | Orion Hall (5F)**  
***Plenary Learning: Harnessing Technology to Support Independence and Interdependence to Maximize Learning for All***  
Michael Menchaca, University of Hawaii at Manoa, USA
- 09:30-10:00 Keynote Presentation | Orion Hall (5F)**  
***Emerging Education with Social Robots***  
Hidenobu Sumioka, Hiroshi Ishiguro Laboratory, ATR, Japan
- 10:35-11:00 Coffee Break | 701 (7F)**
- 11:00-12:00 Keynote Panel | Orion Hall (5F)**  
***Academic Governance/Management/Administration in Higher Education in Asia***  
Grant Black, Black, Inc., Japan  
Justin Sanders, Temple University, Japan  
Lisa Lam, Hong Kong Baptist University, Hong Kong  
Wei Shin Leong, National Institute of Education, Singapore  
Tsediso Michael Makoelle, Nazarbayev University, Kazakhstan  
Reiko Yamada, Doshisha University, Japan
- 12:00-12:10 Conference Photograph**
- 12:10-13:10 Lunch**
- 13:10-14:50 Parallel Session I**
- 14:50-15:05 Coffee Break**
- 15:05-15:55 Parallel Session II**

**15:55-16:00** Short Break

**16:00-17:00** **Conference Poster Session | Orion Hall (5F)**

18:00-20:00 Official Conference Dinner (optional extra) | Torimero  
Meet in the Toshi Center Hotel lobby at 17:15

Please note that all abstracts are printed as submitted. Any errors, typographical or otherwise, are the authors'.

Friday Session I: 13:10-14:50

Room: *To be Announced in Final Schedule*

Panel Presentation

Session Chair: *Tzu-Bin Lin*

**53970**

**Community of Practice in Different Contexts: Experience from Taiwan and Singapore**

Tzu-Bin Lin, National Taiwan Normal University, Taiwan

Victor D. T. Chen, National Institute of Education, Singapore

Chiao-Wen Wu, National Taiwan Normal University, Taiwan

Li-Yi Wang, National Taiwan Normal University, Taiwan

It is increasingly acknowledged by researchers across the world that community of practice (CoP) is a good means of school improvement as well as a practical way of doing professional development for teaching professionals. There is no exception in East Asia. Both Singapore and Taiwan promote this concept and practice in its education systems. In this panel, researchers from these two places are going to share their experiences of CoP. Three case studies will be presented by various panel participants. Each case is an outcome of a research project and therefore, the findings are supported with empirical data. These cases cover different levels of education from secondary to tertiary education. CoP is often considered to be capable of empowering teachers and cause bottom-up changes in school contexts. After the three cases, we draw on the theories related to teacher efficacy to show how CoP can enhance teacher efficacy in the East Asian context. our aim is to share research findings while triggering more conversations on CoP in East Asia.

Friday Session I: 13:10-14:50

Room: *To be Announced in Final Schedule*

Panel Presentation

Session Chair: *Clarence Ng*

**53673**

**Promoting Higher-Order Literacy Learning Among Disadvantaged Students in Australia and Hong Kong**

Clarence Ng, Australian Catholic University, Australia

Peter Renshaw, University of Queensland, Australia

Alan Cheung, Chinese University of Hong Kong, Hong Kong

Barley Mak, Chinese University of Hong Kong, Hong Kong

Disadvantaged students from low SES families are increasingly at risk of falling behind in the learning of higher-order skills (HOS) such as analysing and making inference. This is a significant issue because HOS are critical for creative and analytical literacy engagement and production using print-based and digital materials in and out of school. Delaying or failing to address this educational challenge will create an underclass, sub-skilled graduates from disadvantaged backgrounds who find it difficult to participate productively in literacy-rich advanced economies. The proposed symposium describes an ongoing comparative project that seeks to understand why, how and under what circumstances, economically disadvantaged students are supported or unsupported to learn HOS in Australia and Hong Kong. The symposium will begin with a presentation that explains the rationale and design of this comparative project. Following this overview, the Hong Kong and Australian teams will discuss the current policy frameworks governing the delivery of literacy education in Hong Kong and the Australian State of Tasmania. Based on the results of a policy scan, the challenge of offering advanced literacy education to disadvantaged students in both countries will be explained. In addition, constraining and facilitating factors for offering HOS to disadvantaged students will be discussed using the results derived from an interview study with a selected group of educational leaders and school principals. The symposium will be concluded with an open discussion regarding feasible ways to overcome key constraining factors that hinder disadvantaged students' equitable access to advanced literacy education in Hong Kong and Australia.

## Friday Session I: 13:10-14:50

Room: *To be Announced in Final Schedule*

Session Topic: Language Learning - Assessment

Session Chair: *To be Announced in Final Schedule***54510****A Language Proficiency Test that Works**

Peter Shih, Hangzhou Panda Education and Technology Ltd. Co., China

Qiwen Zhou, Hangzhou Panda Education and Technology Ltd. Co., China

Either out of inadequate technology or for the sake of convenience, most language proficiency tests tend to oversimplify students' diverse needs and provide one size fit all solutions. Take Oxford Young Learners Placement Test for example. One part of this test combines grammar, vocabulary and functional language use. A student gets a final score and a corresponding CEFR level at the end of the test. However, such generic result cannot provide individualized solution for learners. Based on a sample of 156,221 young English learners aged 4 to 12, we find young ELLs have various language acquisition paths both in language knowledge (vocabulary and grammar) and skills (listening, speaking, reading and writing). For instance, learners' grammar knowledge is not always in sync with their lexical range. For any individual, each aspect of the test results may fall into different categorizes, sometimes with huge gap. This indicates the report provided by many test developers might be either too general or unreliable because learners' vocabulary and grammar levels are usually underrepresented or assumed identical to their four language skills. The clear insight into all aspects of language development can help us design a language proficiency test that provides tailored solutions for each individual in developing different domains of competence. With the big data analysis and computer-assisted technology, we also find some benchmarks that can predict what a learner know and doesn't know so as to shorten test time by 5.4 times.

**54507****Diagnostic Distractor Design in Computer-assisted Multiple-choice Grammar Tests: A Case of Young Chinese ELLs**

Monica Huang, PandaABC Educational Technology Co., Ltd., China

This presentation proposes a diagnostic design of distractors in computer-assisted multiple-choice grammar tests for young Chinese ELLs. Grammar assessment is common for second language learners in many places like in China, but its diagnostic value has received little attention so far. Major large-scale English proficiency tests either assess grammar indirectly (e.g. TOFEL primary) or have direct grammatical diagnoses whose difficulty level mismatches young learners' abilities (e.g. DIALANG test). With a growing interest in Assessment for Learning, comprehensive and detailed grammar diagnoses will have great implications for more autonomous and personalized learning. Therefore, the presenter will evaluate the pros and cons of the most common task type in assessing grammar, multiple-choice questions in sentential contexts. The speakers will attempt to identify aspects of grammar that are diagnostically relevant and hypothesize that distractors focusing on form dimension of grammar are more plausible than those focusing on meaning in low context testing. This conceptual discussion will be followed by an empirical analysis of a pilot test administrated to a sample of 82 children aged from 4 to 12 years old. The test aims at giving specific feedback regarding 90 grammar points based on China's Standards of English and contains 49 items with 146 distractors. Preliminary results of comparative distractor analysis support the hypotheses. Additionally, with computer-assisted automatic scoring, the use of semi-correct distractors to diagnose different types of grammar errors within one task will be explained.

54378

**Encouraging Independence and Interdependence in Assessment: Moving Towards Assessment for Learning in Heritage Language Classrooms in Singapore**

Roszalina Binte Rawi, Nanyang Technological University, Singapore

Assessment for learning (AfL) can be viewed as a set of practices that enhance student learning. AfL is applicable in many varied contexts, yet the necessary situation-specific enactment (reflecting, for example, the learner's age, subject matter and resources available) can impede critical examination and thoughtful dissemination. This study explored the extent by which teachers in Malay heritage language classrooms understood, believed and practiced AfL. The three principles underpinning AfL were originally formulated by a large multi-university team working with over 40 schools in England, and can be summarised as: making learning explicit, promoting learner autonomy, and focusing on learning rather than grades. The research reported in this paper involved Malay Language teachers from multiple secondary schools across Singapore. The study involved a survey completed by 121 teachers to indicate the extent of their belief and practice of AfL, 8 classroom observations and 20 in-depth interviews with teachers who have different AfL profiles. It was found that while Malay Language teachers were keen to develop their AfL understanding, they did not associate changes that they had to implement in their classroom assessment practices with the principles underpinning AfL. Also, teachers' attempts to carry out independent self-assessment and interdependent peer assessment were successful only to a certain extent due to the reluctance of students to switch their focus on learning, rather than task performance. It is suggested that the application of AfL principles can make assessment reform in heritage language classrooms more coherent and practices meaningful for teachers.

## Friday Session I: 13:10-14:50

Room: *To be Announced in Final Schedule*

Session Topic: Math Education - Cognitive Skills

Session Chair: *To be Announced in Final Schedule***53676****Students' Problem-Solving and Critical Thinking Skills: Bases for the Development of Contextualized Learning Module in Geometry**

Efren Tellerio, Guimaras State College, Philippines

This design research aimed at developing a contextualized learning module on the basis of the level of problem-solving and critical thinking skills of the Grade 7 students particularly in Geometry under the K to 12 Curriculum.. This study utilized the researcher-made problem-solving and critical thinking skills test. The results revealed that the students' problem-solving and critical thinking skills were at the beginning stage. The least-learned competencies in problem-solving and critical thinking skills were the bases of developing a contextualized learning module utilizing the ADDIE model. The design and development of the module was done through a seminar-workshop participated in by secondary school mathematics teachers. The implementation of the final draft of the module was done through pilot testing to determine the quality of the module. The results revealed that majority of the students found that the module was easy, exciting, enjoyable, and can enhance their problem-solving ability and critical thinking skills. The teachers also found that the contextualized activities can arouse the interest of the students. Hence, the contextualized learning module developed by the researcher can be used by teachers as support instructional material. Competencies in mathematics will be learned by more students if the contents are taught in the students' real-world context.

**53168****Analysing the Inextricable Link Between Visualisation and Reasoning When Solving Mathematical Problems**

Beata Dongwi, Rhodes University, South Africa

Marc Schäfer, Rhodes University, South Africa

While the use of visualisation is an essential problem-solving strategy in mathematics, it is somewhat neglected in actual mathematics classroom practices especially in high school. This paper reports on the findings of a case study research that was conducted in Namibia to explore the significance of using visualisation by selected Grade 11 learners when they solved geometry word problems, and how it related to their mathematical reasoning. The research used the learners' responses to word problems during task-based interviews. Data included interview transcripts, audio and video recordings and learners' worked-out solutions to the given word problems. Using enactivism to theorise the relationship between visualisation and reasoning, the study demonstrated that there exists an inextricable connection between these two embodied processes when engaging in word problem solving. Further, findings suggest that if visualisation processes are incorporated in task development, and if learners are encouraged to talk about their solutions and problem-solving strategies, then a cyclical navigation between their use of visualisation and mathematical reasoning processes is inevitable. This inextricable relationship is termed co-emergence in the context of an enactivist perspective. Therefore, we argue in this paper for the (re-) consideration of visualisation as a word problem-solving strategy for its claimed implication in the development and nurturing of mathematical reasoning.

**52999**

**Design and Technology – Performance Task Based Instruction Towards the Development of Cognitive Skills for Understanding in Mathematics**

Matthew Lasap, Ateneo de Iloilo, Philippines

Elvira Arellano, West Visayas State University, Philippines

The researcher saw potential in the Performance Task (PT), Design and Technology (DT) and Problem-Based Learning (PBL) as best practices in the field of education. This study combines the strengths of these three teaching-learning strategies into one in order to optimize the development of students' cognitive skills towards the understanding of Math. To achieve this end, an Embedded Mixed Method design, with the main design the Grounded Theory by Strauss and Corbin and the embedded design the Explanatory Sequential Mixed Method, was used. The qualitative data analysis showed that some cognitive skills are involved in perceiving and relating to the real world—themed as Domain Sensing which includes Spatial Perception and Language Skills. A set of cognitive skills, on the other hand, are responsible in the active “gateway” or Control of the information. These are the Working Memory and Attention. After the information had been “admitted”, the Speed of Information Processing, Cognitive Flexibility and Field Dependency determine how the information is processed. All these sets of cognitive skills support the Higher Cognitive Functions. It was also found out that in doing a DT-PT BI, the Richness of the Task and of the Problem served as “initiators” of effective use of the cognitive skills in a DT-PT BI. The Working Atmosphere on the other hand serves as the context for the cognitive skills. Finally, students' Strengths and Handicaps, Values and Outlook, and Ascribed Culture of Math were found to be intervening conditions in the effective use of the cognitive skills.

## Friday Session I: 13:10-14:50

Room: *To be Announced in Final Schedule*

Session Topic: School Principals

Session Chair: *To be Announced in Final Schedule***52824****From Teaching to Leading: A Phenomenological Inquiry on Overcoming Challenges From the Lens of Novice Principals**

Joy Magalona, Philippine Normal University, Philippines

Adonis David, Philippine Normal University, Philippines

Literature suggest that high school principal position is one of the most essential, complex and challenging assignments in the public education system. While efforts to understand the nature and dynamics of the transition from being a teacher to a principal have been undertaken in different studies worldwide, a dearth in literature exists in the context of Philippine education. For an accomplished teacher, advancing in to an administrative position is a significant avenue for professional growth and an important career achievement as well. It is undeniable that the best candidates for school administrators have previously held positions as successful teachers. Seemingly, no research has ventured yet to explore experiences of Filipino novice principals on overcoming challenges along their own transition from teaching to leading thus, this study was conducted with five novice principals (n=5) as participants. From the thickness and richness of the descriptions of the field text gathered in this study, an interesting conceptualization labeled as the Leader Continuum Movement which consists of (a) motivation for the move (b) the big move (c) steadfast emerged. Impliedly, the emerged model Leader Continuum Movement afforded an eidetic description of the dynamics of the prevailing transition from classroom teaching to leading a school. The novice principal milieu circumscribes facets associated with preparations and influences (motivation to move), transition challenges (the big move) and meeting halfway (steadfast). Findings of this research will be valuable to current principals, teachers transitioning to a leadership role, and those aspiring for a leadership position.

**53312****The Development of Professional Learning Communities (PLCs) in the Philippines: Roles and Views of Secondary School Principals**

Wenefe Capili-Balbalin, University of Waikato, New Zealand

It is widely recognised that principals play an indispensable role in the professional development of teachers in schools. In the Philippines, principals encourage teachers to participate in the traditional and most common approach to professional development such as conferences, seminars, workshops, and training. Despite documented benefits of these traditional approaches to teacher professional development, recent studies show that many teachers find them insufficient, inconsistent, and sometimes they do not necessarily address teachers' classroom needs. There is a growing body of literature that recognises the importance of teacher engagement through professional learning communities (PLCs) as a new approach to teacher professional development. The study explored the roles and perspectives of secondary school principals in the development of PLCs in the Philippines. It is an underlying assumption that principals' understanding of their roles in the implementation of teacher professional development policies in schools is central to the formation of PLCs. This raised two important questions that principals needed to contemplate: How did they view and implement national policies on teacher professional development at the school level? And, how did they perceive and establish PLCs in their schools? The study utilised a qualitative research methodology based on an interpretive paradigm. Through the use of semi-structured interviews alongside policy analysis, three main themes emerged: lack of continuing teacher professional development programmes in the

Philippines; varying views of principals in the development of PLCs in schools; and, effective leadership styles as key to support continuing professional development of teachers.

**52397**

**Experiences of Outstanding Principals as Mentors: Policy Inputs to a Viable Mentoring Program in DepEd – Division of Pasig City**

Isabelle Sibayan, Department of Education, Philippines

Maricris Murillo, Pasig City Science High School, Philippines

This paper aims to understand the everyday experiences of outstanding principals as mentors cum school leaders, analyze their challenges and secrets to successful school leadership and management, and propose policies for a viable mentoring program in DepEd – Division of Pasig City. In the context of this study, mentoring is a learning and development (L & D) program deliberately designed to prepare aspiring principals for the position to ensure that the next generation of school heads are well-prepared for the demands of the job. Documenting the success stories of mentoring programs implemented by school principals presents an opportunity to encourage other school leaders to do the same in their own respective schools, and may help strengthen and institutionalize a culture of mentoring and continuous improvement in the Division of Pasig City. Utilizing a case study design, this paper purposively identified five (5) outstanding principals who answered the following questions through semi-structured interviews and focus group discussions: (1) How were the participants mentored prior to them becoming school administrators themselves? (2) What mentoring programs have the participants put in place prior to and after they became school administrators? (3) How did the participants deal with the challenges of sustaining the mentoring programs that they initiated? (4) What have been the products of the mentoring programs started and sustained by the participants? (5) What types of mentoring programs may be institutionalized in the Division of Pasig City?, and (6) What policies may be put in place to institutionalize mentoring in DepEd Pasig?

**53332**

**The Role of School Leaders' Styles in Students' Academic Performance**

Maria Gil-Izquierdo, University Autonoma of Madrid, Spain

Alvaro Choi, University of Barcelona, Spain

Javier Valbuena, University of Zaragoza, Spain

Increasing the efficiency of the resources allocated to the education system and improving the academic results of the students constitute a priority for educational authorities. Recent evidence seems to indicate that the leaders of the schools can play a relevant role in achieving both objectives. The link between leadership and academic performance is difficult to determine for at least three reasons. First, because of the difficulty of establishing a single definition of school leadership. Second, due to the existence of different types of leadership. Finally, because it is complex to isolate both the direct and indirect effects - through other agents, such as teachers - that the leader of a school can exercise over the students. It implies a dispersion in the literature evidence so as a scarcity of studies that estimate the impact of various dimensions of leadership on the performance of students. In this paper, we review the existing literature restricted to impact evaluations on academic results and implement a model using longitudinal data using the PISA database. The results of previous studies allow us to conclude that: a) leadership activity affects academic performance; b) the size of this effect is undetermined and seems to vary depending on the environment; c) controversy persists regarding which types of leadership are most effective in improving academic performance; and d) the stability of the management teams and the inspection of their activity have a positive effect on academic performance. Our results indicate that curricular and professional development leadership enhances academic performance.

Friday Session I: 14:00-14:50

Room: *To be Announced in Final Schedule*

Session Topic: Technology in Education

Session Chair: *To be Announced in Final Schedule*

**54042**

**The Influence of Vodcasting to the Comprehension Skill of the Selected Grade 8 Students**

Maulida Watamama Manaol, Mindanao State University-Integrated Laboratory School, Philippines

Vodcasting is a process of teaching which is subscribed from a podcast creator online. It is a mix of video and audio files with visible innovations that can be utilized to upgrade the intellectual capabilities of students. This research used quasi-experimental design to find out the influences of vodcasting to the comprehension skill of the selected grade 8 students of MSU-Integrated Laboratory School. Two methods of teaching were executed—traditional for the control group and vodcasting for the experimental group. This study further utilized quantitative and qualitative research approaches in describing the participants' comprehension and the participants' performances in the teaching sessions. The researcher employed vodcast videos on the simple tenses, grammar tests, and mini-FGD for triangulation. In analyzing and interpreting the data gathered, mean, standard deviation, t-test, t-test independent samples and Levene's test were used. Analyzed data revealed that the mean gain score of the experimental group are far higher than that of the gains of the control group. Thus, vodcasting way of teaching is effective and encouraging but will not substitute the role of the teacher for it only serves as aid for them to teach the lesson.

**54602**

**The Use of Mobile Assisted Language Learning in Enhancing Language Skills Among the Grade 8 Students of Ibn Siena Integrated School Foundation**

Zenaida Candia, Mindanao State University, Philippines

This study was conducted to inquire on the use of Mobile Assisted Language Learning on enhancing language skills. It attempted to find out the following: (1) What is the performance of the students in the experimental and control group in the pre-test and post-test? (2) Is there a significant difference between the means scores of students in the control and experimental groups in their pre-test before the intervention? (3) Is there a significant difference between the means scores of students in the control and experimental groups in their post-test after the intervention? (4) Is there a significant difference between the mean gain scores of students in the control and experimental groups after the intervention? The study is a quasi-experimental design. This study involves MALL as the primary tool for this research as a strategy in the learning-teaching process to assist its effectiveness. The respondents are divided into groups – the control and experimental. A pre-test was given first prior to the intervention. Lecture Method was used for the control group whereas the experimental group made use of MALL. After 4 weeks of intervention, the post-test was administered. The study findings had manifested that all the hypothesis testing were not significant which means there were no significant differences in the use of MALL as an intervention although it motivates and encourages active participation of learners in the teaching-learning.

Friday Session I: 14:00-14:50

Room: *To be Announced in Final Schedule*

Workshop Presentation

**53246**

**Use of QR Code System in Enhancing Teaching and Learning**

Christine May Torres - Reyman, Columban College, Inc., Philippines

Jeanelle Avila, Columban College, Inc. (Barretto), Philippines

Laurabel Bacones, Columban College, Inc (Barretto), Philippines

QR Code System or Quick Response System is a two dimensional bar code system initially designed for automotive industry in Japan is now one of the most popular Universal Product Coding system used because of many applications such as product tracking, item identification, managing documents and marketing features efficiency. Today's educational system is challenged to deliver a more dynamic approach particularly with the challenge of the K to 12 Curriculum implementation that ICT integration is a necessity. It is a challenge to transform every classroom into a 21st Century set up by providing technology in the instruction and assessment. In this workshop, the proponents will demonstrate how QR Code System can be used in teaching and learning process. Initially, this concept was used in plant identification and Science trail or Science Hunt Activities. The students who were able to experience gave positive feedback. However, there are still rooms for improving the of this system such as in terms of the QR Code size, databases and QR Code generators.

## Friday Session II: 15:05-15:55

Room: *To be Announced in Final Schedule*

Session Topic: Community Education

Session Chair: *To be Announced in Final Schedule***54392****Site Co-Lab as a Community Engagement Project: A Case Study of the St. Joseph Chapel Renovation**

Joseph Sedfrey Santiago, Ateneo de Manila University, Philippines

Jason Dy, Ateneo de Manila University, Philippines

Site Co-Lab, an academe-based arts and design project, was co-founded by the co-authors of this paper - Fr. Jason Dy, S.J. as curator and J. Sedfrey Santiago as project manager. The project partners with communities to help the latter respond to their needs that are related to arts and design. It also serves a laboratory where findings and results are documented for research and publication as a means of sharing lessons learned from the partnership. Site Co-Lab's first partner is Freedom Park community in Batasan Pambansa, Quezon City, with the renovation of the community's St. Joseph Chapel as its first activity as it is the articulated need of the community. In this paper, the authors describe the beginnings of the partnership, specifically how it started, the specific activities the partners have undergone to achieve the agreed goal, and the stages or phases that the community engagement has undergone so far as pointed out by Sargent and Water; i.e., 1) initiation, 2) clarification, and 3) implementation; and at this time we also project the happening of the fourth stage – completion. Our learnings will serve as in good stead for our expected next project – assisting a private high school in the development of its art appreciation curriculum.

**53391****Study Protocol of Design and Development of Web Approach to Control Hypertension (WAtCH) for Adult Hypertensive Patients in Malaysia**

Mohd Ramadan Ab Hamid, Universiti Teknologi MARA, Malaysia

Norazmir Md Nor, Universiti Teknologi MARA, Malaysia

Siti Sabariah Buhari, Universiti Teknologi MARA, Malaysia

Harrinni Md Noor, Universiti Teknologi MARA, Malaysia

Nutrition education is essential for adult patients with hypertension to reduce the adverse outcomes of the disease through modification of the dietary intake. Web Approach to Control Hypertension (WAtCH) has the potential for improving the quality of nutrition education. This paper describes the protocol to design and develop the website. WAtCH is aimed to improve nutrition knowledge and promote behavioural changes among patients. This study involves three phases, which phase I: inputs: collecting assessment data, phase II: outputs: designing the theory-based intervention and phase III: evaluation plan. Mix-method approach (qualitative and quantitative) will be applied. Theory of Planned Behaviours, Self-Determination theory and Cognitive Load Theory will be used in the development of the website. WAtCH will be piloted to the targeted population at the end stage of the development. The website will (1) serve as a portable resource for patients on nutritional education for blood pressure control; (2) supplement the hypertension clinical care by providing an online educational tool for patient. This paper describes the process of the design and development of the nutrition education website for patients with hypertension.

Friday Session II: 15:05-15:55

Room: *To be Announced in Final Schedule*

Session Topic: Literacy

Session Chair: *To be Announced in Final Schedule*

**54516**

**The Trends of Literacy-Based Curriculum Development in Taiwan**

Yu Hsiu Su, Department of Education National Pingtung University, Taiwan

Hui Lan Wang, Department of Education National Pingtung University, Taiwan

The aim of this study was to investigate the curriculum policy innovation, particularly the trends of literacy-based curriculum development which had been highlighted in “The Master Framework for the 12-year Basic Education Curriculum Guidelines” as new important direction of education reform in Taiwan. Through theoretical perspectives and scholarly research by means of literature review, the basic assumptions of curriculum innovation, the core concepts and main policy of literacy-based curriculum had been analyzed and led to the explanation, generality and understanding. The results revealed that the subjectivity of the learner, the growth mindset, interdisciplinary learning design and self-edited teaching materials or textbooks are the focus of literacy-based curriculum development. The adjustment of teachers’ roles and empowerment, positive supports from the government, different administrative levels, parents and also society will be the key factors for the development of curriculum innovation in Taiwan. Keywords: literacy-based curriculum, curriculum innovation, 12-year Basic Education Curriculum Guidelines in Taiwan

**54128**

**The Significance of Media in Literary Theory: Shaping the Future of Literary Criticism of Electronic Literature**

Sohaimi Abdul Aziz, Universiti Sains Malaysia, Malaysia

Mohammad Fitry Ariff Ahmad Zulkefley, Universiti Sains Malaysia, Malaysia

Media plays an important role in literary studies. Nevertheless, the media has been neglected since the emergence of literary theories and criticism. Today, the development of digital media, which has influenced the world, has greatly influenced the development of literature. This development has created a research gap for further research on the effect of media on literature. The emergence of electronic literature has become the fundamental drive to look into the importance of the media in literary studies specifically the need of literary theory and criticism that adopt the role of media. The aim of this paper is to show how important literary theory and criticism to incorporate the elements of media that will give a better understanding of reading, writing, authorship and meaning of literature in the different context of media usage. In this paper, a theory of literary digital media, which focuses on three aspects, the creation, presentation and reception of literary work are discussed, but only the aspect of the representation will be explored in detail and apply to the text studied. Using the video content analysis, a study has been done to analyse the audio, text and image that reflect a set of semantic meaningful representations of a video poetry entitled “Aku”. This video poetry by Barlycine from Indonesia is an adaptation of a written poetry by Khairil Anwar, an Indonesian poet with the same title. This paper shows that theory of literary digital media, which become the basic aspect of the literary criticism of the video poetry is able to analyse semantic meaningful representations of the video poetry. This paper has also revealed the conventional of assumptions about reading, writing and meaning have challenged. A comparative study between the written text and the video poetry gives a better perspective of the effect of media on literature, specifically video poetry of electronic literature.

## Friday Session II: 15:05-15:55

Room: *To be Announced in Final Schedule*

Session Topic: English as a Foreign Language

Session Chair: *To be Announced in Final Schedule***53375****Intelligibility of Hong Kong English: Implications to Education**

Ka Long Roy Chan, The Chinese University of Hong Kong, Hong Kong

Hong Kong English (HKE) has been researched excessively since the 1980s. These studies cover most parts of HKE, including phonetics, Phonology, Lexis, and Sociolinguistics etc. In recent years, various attempts have been done on the intelligibility of HKE and the results showed that HKE is basically very understandable to speakers all around the world. However, despite the increasing amount of studies in HKE, studies on how to immerse HKE into the local education system have rarely been conducted. One of the potential reasons for this would be the hesitance on the intelligibility of HKE. While there has been no attempts on immersing HKE into the local education, Hino (2018) created a framework to gradually immerse Japanese English into the local education system. Given Hong Kong is traditionally seen as ESL area while Japan is EFL, Hong Kong should also have a framework for such educational use due to its closer relationship to English. The current study is therefore conducted to serve two purposes: first, to investigate the intelligibility of HKE to people from different circles under the World Englishes paradigm; second, to see how the result can potentially fit HKE into the local education system using Hino's (2018) framework. A specifically designed online Verbal Guise program was developed and the preliminary results of fifty people show that HKE is highly intelligible with just slight difficulty in understanding the intonation of HKE. At last, A modified version of Hino's (2018) framework is made to suit the Hong Kong context.

**53434****Primary Causes that Hinder Learning Retention in Turkish 9th Grade EFL Classes and Successful Strategies to Address Them**

Harun Serpil, Anadolu University, Turkey

This study focuses on the root causes behind Turkish EFL learners' inability to retain what they have learned, seeking ways to address these problems at the secondary school level. This study adopts a mixed method approach, involving three 9th grade classrooms with a total of 58 students and three teachers. The study was conducted in 2018 at a secondary school in a small town in southeastern Turkey, over one semester. In the first phase of the study, a 10-item survey was distributed to the students to be filled out, and it was completed by all 58 students. In the second phase, five students from each classroom (n=15) were interviewed. Next, their teachers were interviewed through a semi-structured interview, probing into the possible causes of low learning retention. The teachers participating in the study were also asked about any possible strategies they might be using to increase retention of subject knowledge taught in the class. The analysis of the obtained data indicates that the biggest cause for low learning retention for students is "not having a private room to study." This is followed by "family-related reasons" and "difficulties in concentration." Low socioeconomic status requiring students to help their families, leading to distraction emerges as a strong inhibitor of sustaining attention and retaining previous learning. Based on the qualitative interview data elicited from the teachers, close cooperation with parents is highlighted as the major strategy to tackle the problem. Some other practical strategies are discussed, and suggestions for further research are made.

## Friday Session II: 15:05-15:55

Room: *To be Announced in Final Schedule*

Session Topic: Learning Management System

Session Chair: *To be Announced in Final Schedule***53276****The Development of Terminology Learning System for Thai Classical Dance Through Learning Management System**

Jansamorn Pholboon, Songkhla Rajabhat University, Thailand

Monton Pholboon, Prince of Songkla University, Thailand

Effective use of web application for self-paced learning can provide a valuable opportunity for students to make progress at a pace that is commensurate with their prior knowledge. To facilitate self-paced learning, the aim of this study was to develop the terminology learning system for Thai classical dance through Learning Management System. Based on the Randomized Solomon four-group design, the study was implemented on a group of performing art students using the purposive sampling method. The findings of the study revealed that, to develop the terminology learning system for Thai classical dance, the researchers used web application to enhance the quality of learning system. Acting as a powerful agent, it is most associated with 1) Webboard 2) Test instruments including Pre-test and Post-test 3) Lessons comprising. Two experimental and two control groups were involved in this study. The findings revealed that 1) after employing the learning system, the first experimental and control groups showed higher achievement results with a significance level of 0.01. As for a study period, the first experimental group completed their course within one week while the control one needed two consecutive months after completing the course. Moreover, according to the achievement scores, the second experimental group showed higher statistical results than the second control one in all aspects. With regard to quality assessment and satisfaction with learning and practice system for Thai classical dance, the findings indicated all at the highest levels.

**52413****Harnessing Learning Analytics to Improve Online Quiz Equity**

Jess Wei Chin Tan, Singapore University of Social Sciences, Singapore

Chong Hui Tan, Singapore University of Social Sciences, Singapore

Hian Chye Koh, Singapore University of Social Sciences, Singapore

The use of online learning management systems (LMS) such as Blackboard, Canvas and Moodle is becoming a norm in higher education. In general, these systems provide tools to facilitate active learning such as discussion forums and student assessments such as online quizzes. Studies have shown that students who do pre-class online quizzes that encourage preparatory reading perform better in examinations. The Singapore University of Social Sciences (SUSS) is a university that caters primarily to working adults. In line with self-directed lifelong learning, it uses pre-class online quizzes to encourage students to self-study. SUSS uses Canvas as the learning management system to implement these quizzes. Students sit for 3 pre-class quizzes and need to obtain at least 12 out of 20 questions correct for the first pre-class quiz before class starts to be allowed to attend class. This motivates students to engage the course materials before the classes start. The faculty will usually prepare a bank of questions from which the questions for the pre-class quizzes will be randomly drawn for each student. The level of difficulty for the questions varies. This raises the issue of quiz equity despite the random allocation of quiz questions. In this context, this study investigates how the current method of question allocation has affected the equity of the quiz. It also proposes a solution to mitigate quiz inequity. With an integration of learning analytics and problem solving, we hope to provide a different approach to implementing online quizzes that will be more equitable.

## Friday Session II: 15:05-15:55

Room: *To be Announced in Final Schedule*

Session Topic: Student Finance

Session Chair: *To be Announced in Final Schedule***54151****The Effect of Personal Finance Education on the Financial Knowledge, Attitudes and Behaviour of University Students in Indonesia**

Irni Johan, IPB University, Indonesia

Karen Rowlingson, University of Birmingham, United Kingdom

Lindsey Appleyard, Coventry University, United Kingdom

Financialisation and the rapid advances in information technology throughout the world have created a more complex and dynamic financial sector. Younger generations today are in a particularly challenging situation. Starting to live independently, college students face new responsibilities to manage their finances, including budgeting, managing income and expenses, and paying bills. Developing sound financial capability during college years may lead to higher chances of attaining financial wellbeing in the future. This paper contributes to debates about the impact of personal finance education on financial capability that is financial knowledge, attitudes, and behaviour. Employed a face-to-face representative sample survey of 521 undergraduate students at IPB University (Bogor Agricultural University) in Indonesia, we measured the impact of a 14-week personal finance education course on students' financial capability. The findings show that the personal finance course have a positive and statistically significant impact on financial knowledge and behaviour. However, there was no statistically significant impact on financial attitudes after controlling for other factors. This paper also contributes to debates on personal financial education by arguing that experiences and family financial socialisation have a great impact on financial capability. Thus, when developing financial education, it is suggested that more practical content be included, as this can have a longer and more stable effect on developing attitudes and behaviour.

**53207****The Latent Peril of Student Debt: Analysing Students' Perception of Debt at Selected South African Universities of Technology**

Gauda Johannes Maseko, Vaal University of Technology, South Africa

Merwe Oberholzer, North West University, South Africa

Susanna Levina Middelberg, North West University, South Africa

Although there is freed education for qualifying students, South African universities are still confronted with the student debt. The outstanding student accounts is mainly from students whose families earn income above the threshold or for whatever reason do not qualify for a government bursary. These students are vulnerable because they are not eligible for a government bursary, while they are not from affluent families that can afford the university fees. Consequently, universities face a challenge of unwarranted default rates and maintaining higher education accessibility. The purpose of the study was to determine students' perspectives on debt and how they are related to family income and some other selected demographic factors. In total 1382 students at five of the six universities of technology completed a questionnaire. Exploratory factor analysis was applied to group students' student debt perceptions into factors. Thereafter, an analysis of these factors means' was done to determine how the perceptions of debt relate to demographics and socio-economic variables. What was found is that having debt, students are mostly: (i) concern thereof; (ii) reflecting destruction reaction; and (iii) aware of the threats of debt. In the context of South African universities, this study also revealed some risk areas, i.e. undergraduates which are more concern about debt and the threat thereof than postgraduates; students attending university for longer

periods (5-6 years) are more concerned than new comers; the previous “missing-middle” group that were excluded from free education during this investigation and all students with debt are concern thereof, relatively to those not having debt. This study’s contribution towards the theory is that it confirmed that students with different socio-economic and demographic environments, and how they differently observe debt, i.e. the credit granted to them by their institutions.

Friday Session II: 15:05-15:55

Room: *To be Announced in Final Schedule*

Symposium Presentation

Session Chair: *Wei Shin Leong*

**53068**

**Assessment for Learning in Singapore Context**

Wei Shin Leong, National Institute of Education, Singapore

Tay Hui Yong, National Institute of Education, Singapore

In many Asian countries, educational agencies have heeded the advice of research findings and acknowledge the value of Assessment for Learning (AfL) practices through policy initiatives. At definitional level, the multiple evolving conceptions and theories of what constitutes AfL have consistently streamed in from overwhelmingly European and Anglophone-based research. The implementation of AfL in Asian classrooms may therefore encounter barriers such as deeply rooted learning traditions that conflict with current mainstream AfL methodology and an unfamiliarity with, or distrust of, specific AfL practices. This symposium presents findings from a grant-funded two-year mixed methods research study based in 13 Singaporean secondary schools. From the results, we present cases of how AfL are situated and enacted in Singaporean classrooms. How various stakeholders negotiate and select solutions to resolving tensions of assessment are analysed, as are mediating influences in this process. Overall, the findings suggest that, while AfL has gained traction among secondary-school teachers, they also reflect ambivalence in negotiating the formative and summative expectations of policy and practice.

Presenter 1 will present findings suggesting Singapore teachers reported valuing learner-centred AfL (e.g. self and peer assessment) more than they reported practising or feeling proficient in it. The qualitative data showed that teachers constantly toggle between AfL practices that focus narrowly on exams (more predominant) and those with deeper learning goals.

Presenter 2 will present findings on the role of middle leaders affecting teachers' perceptions of AfL; as well as how they themselves are influenced by and mediate policy implementation in schools. The study also found in response to various tensions encountered in their work, MLs used three dominant approaches in their assessment leadership – Technical, Tactical and Ethical.

Presenter 1 and 2 will then suggest implications for further inquiry and analysis. Singapore's continuous efforts to scale up a form of assessment that balances the summative and the formative are also reflected in other (Asian) contexts, where educational institutions continue to grapple between the priorities of external examination results and the need for assessment to improve learning. The findings from this study reflect teachers' efforts in negotiating the tensions between competing assessment priorities. Whether such efforts may yield positive results in Singapore or elsewhere could be explored further.

Friday Session II: 15:05-15:55

Room: *To be Announced in Final Schedule*

Workshop Presentation

**54167**

**GQ**

Annette Karseras, Keio University & Temple University Japan

Global Intelligence (GQ) isn't rocket science. But it does draw on the insights of astronauts, such as Chris Hadfield. Hadfield was privileged to see our planet from beyond the bubble of Earth's atmosphere. From the ISS, ridges and vortices of naturally evolving geography (not socio-politics heightened by economic nationalism) map boundaries between land-, sea- and skylscapes beneath. The GQ perspective is co-creative. It's a work-in-progress derived from Bohmian and World Café style dialogues facilitated at Universities, conferences and corporate workshops, over 5 years. IAFOR's GQ workshop has 3 stages. Stage 1: Soundbites from past students' & clients' introduce you to GQ. GQ lies within the 4th iteration of 5 scales, from emotional, through social and cultural intelligences, to universal intelligence: EQ > SQ > CQ > GQ > UQ. Stage 2: Micro-learning activities develop your EQ & SQ communication skills, ready for Bohmian dialogue. Stage 3: Participants draw on their dialogue skills, at World Café tables, to have 'serious fun' and lighten the load of challenges related to the question "What is GQ?" Importantly, we start by 'framing the future' (and refrain from worrying about ways to wrestle with problems created by our individual and collectively warring pasts). For example, 'How can the next era of civilization develop so our grandchildren will like it? How can we integrate an interdependent global view (GQ) together with the sustainment of independent national interests (CQ)? These both-and, win-win approaches are at the heart of GQ premises that workshop participants can play with.

Friday Session II: 15:05-15:55

Room: *To be Announced in Final Schedule*

Workshop Presentation

**54575**

**Extensive Reading and Communal Reading: Two Approaches in Teaching Reading in EAP Programs**

Ai Ishida, University of Toronto, Canada

For L2 learners in an EAP program at university, building an effective reading strategy is essential to survive a rigorous academic life. Anderson (1999) claims that both selections of appropriate level texts and the motivation to read are the two key elements to increase the reading rate. This workshop explores two approaches that are often used outside the classroom but can be useful if used in class for motivating and supporting EAP students: extensive reading and communal reading. While extensive reading, “pleasure reading,” is often left as a volunteer activity outside the classroom, Takase and Otsuki (2012) warn that assigning students to read books outside class does not guarantee they become effective readers. I will demonstrate how I implement extensive reading as a class activity and emphasize that the key here is to give students lower level texts than their skills so that they can increase reading rates, build confidence and keep the incentive to read. Secondly, communal reading, aka “reading texts aloud and sharing with other people” is a technique often used with children or for reading religious texts. Gurdon (2019) claims that children whose parents read books aloud have a bigger vocabulary. Also, both Gurdon and Wright (2017) argue that communal reading helps readers challenge themselves to read higher-level texts. I use this approach when students are required to read newspapers, magazines, or academic articles. Through this workshop, I am hoping to have a discussion about how and when to alternate levels when teaching reading in EAP.

Friday Session II: 15:05-15:55

Room: *To be Announced in Final Schedule*

Workshop Presentation

**54567**

**Open Letter to a Nation: Using the Open Letter Genre to Teach Intercultural Communication and Encourage Global Citizenship**

Chad Eller, Providence University, Taiwan

Shiao-Wei Chu, National Chin-Yi University of Technology, Taiwan

This talk will explain a unit from a course on intercultural communication (IC) whose capstone assignment is to write an open letter to a nation or culture. The unit is designed to introduce concepts from IC, to ignite interest in foreign cultures, and to engage students' reflections about global citizenship. Students are encouraged to indulge their curiosity and to examine their feelings and preconceptions about a place, a culture, and its people. The open letter is a safe yet socially-engaging way for students to learn about culture while practicing a creative letter-writing genre. The open letter assignment is scaffolded through various activities, each designed to build students' awareness about IC concepts as well as the open letter genre. Activities include materials and discussions on basic concepts from the field of IC, readings from example open letters, group and individual fact-finding, and the eventual drafting of open letters. The audience will have access to example letters from students and be presented with ideas for adapting this activity to other contexts and purposes.

Friday Poster Session: 16:00-17:00

Room: *To be Announced in Final Schedule*

**51746**

**Interactive Facial Emotion Recognition Game for Children with Autism**

Jim Gribble, UCSB, United States

Guoying Zhao, University of Oulu, Finland

Xiaohua Huang, University of Oulu, Finland

This paper reports on the design of facial emotion recognition software to improve the lives of children with autism by allowing them to practice creating and conveying emotions while simultaneously learning to recognize the same emotions in others. This paper reports on process of creating such a game. There are two levels involved in the game. First, children are asked to mimic facial expressions corresponding to happy as well as sad. Level two challenges them to focus their attention up from the mouth and to the eyes and forehead to convey a surprise. Research on children with autism has largely focused on asking them to recognize and identify facial emotions in others, which is important. To our knowledge, no research has focused on asking autistic children to create different facial emotions themselves (i.e. their own “sad” face) using a computer screen and camera with advanced facial recognition software as we do here.

**52258**

**How to Be Elective by Being Selective: Why Not Question and Debate: A Framework**

Carmel Charles Sant, Anadolu University, Turkey

The ELT curriculum gap at Anadolu University pinpointed that no debating English course was available. Was left at liberty in 2016/2017 academic year to tailor a new elective speaking course for ELT undergraduates. Argumentation Theory with an emphasis on socio topics in the Syllabus Design of this particular course seemed to be the ideal filler. Flexibility was key as the topics chosen had to capture current issues which I felt strongly about ( The Refugee Crisis, The Rise of Nationalism, Sweatshops, Inequality and so forth). The poster would outline the framework of this particular course. Charts and graphs representing an analysis of attendance / dropout rates and exam results (3 academic years) will also be made available. Moreover, students shortcomings and suggestions will also be explained. From my own personal reflection over 3 years facilitating this course, most attendees were given the chance to communicate accurately by considering diverse perspectives on socio-topics in a classroom environment. The course proved to be very popular. Indeed, what started as a 2-hour weekly slot has been extended to 4 hours as from 2018/2019 covering 2 different groups. Hopefully, this piloted model will be implemented in other institutions and the poster will attract and encourage others to proceed with the process.

**52991**

**Investigation of Process-oriented Guided Inquiry Learning as a Framework for Teaching Science-focused English Courses at a Japanese University**

James Ellinger, University of Tokyo, Japan

Previous research indicates that inquiry-based learning is beneficial for English-language learners in content courses. Process-Oriented Guided Inquiry Learning (POGIL) is a student-centered, team-focused framework widely used in the United States at the high school and university levels for teaching science. All POGIL activities follow a 3-phase learning cycle and are often organized such that students are treated as learners of the language of science. Published research investigating the effectiveness of POGIL has been conducted primarily at the undergraduate level using material written in English with no distinction regarding the English level of the students. However, anecdotal evidence indicates that POGIL benefits

English-language learners in content courses, even when they are mixed with native speakers. The goal of this study was to investigate student assessment of their learning gains when POGIL was used to teach a molecular biology-focused English course at a Japanese university. All students in the course were English-language learners. Students were either first- or second-year enrollees and approximately 66% were science-track students and 33% were humanities-track students. Results from this study show that students had a positive attitude toward the POGIL method and felt that the activity structure furthered their content knowledge as well as improved their English language skills.

#### **52994**

##### **Predictor of Impact of the Perceived Classroom Goal Structures on the Growth in Avoidance Behaviors via Shame**

Shu-Ling Peng, Cheng Kung University, Taiwan

Biing-Lin Cheng, Cheng Kung University, Taiwan

Jon-Fan Hu, Cheng Kung University, Taiwan

This study was aimed to examine how contextual (i.e., the perceived classroom goal structures) and emotional (shame) factors would impact the change of avoidance behaviors. We conducted a school-year-long longitudinal study investigating the linkage of the perceived classroom goal structures (mastery vs. performance), shame, and avoidance behaviors. Methodologically, a math survey was administered with 427 participants of 7th grade students in Taiwan, and the researcher analyzed the collected data using the technique of structural equation modeling (SEM). First of all, the study revealed that the levels of perceived performance goal structure, shame, and avoidance behaviors increased over time, but not perceived mastery goal structure. Secondly, in cross-sectional analyses, it was shown that students who perceived their classroom more performance goal-oriented experienced more shame and adopted more avoidance behavior. Thirdly, in longitudinal analyses, it was found that students who perceived their classroom as more mastery goal-oriented at the beginning of their school years, could negatively predicted the growth of shame, and in turn predicted growth of avoidance behaviors. Moreover, growth in perceived performance goal structure positively predicted the growth of shame across a school year, which in turn positively predicted the growth of avoidance behaviors across the school year. In other words, growth in perceived performance goal structure had indirect impact on the growth of avoidance behaviors via the growth of shame over time. These findings suggest that classroom environments that focus on performance goals may exacerbate students to have more shameful experiences and to adopt more avoidance behaviors.

#### **53049**

##### **Supporting Refugees in (Online) Higher Education: Between Independence and Interdependence**

Belma Halkic, Munich University of Applied Sciences, Germany

Patricia Arnold, Munich University of Applied Sciences, Germany

Access to higher education for refugees has been a challenge to many host countries as well as for individuals concerned. Several initiatives emerged out of this situation trying to unburden access through digital educational offers (Colucci et al. 2017). Although research on access and success of refugees in the context of higher education has increased in the past years (among others Baywa 2017, Baker 2017, Naidoo 2015), still little is known about the situation of refugees in online education. This paper presents results from a research project that investigated student uptake of an online education offer by Kiron, an NGO that provides online curricula accompanied by various measures to support refugees as online learners and in transferring to regular universities. A mixed methods approach was applied including student data analysis (N=1375), a survey (n=180) and semi-structured interviews (n=25). Results show that many students use support services independent of the offered online curricula but in correspondence with their individual needs and life situations. They evaluate existing support positively, but also emphasize the need for more one-on-one support and opportunities to improve their language skills. Besides language as key barrier, students are facing combined challenges outside of education. Interviews reveal how difficult life

circumstances are affecting usage patterns and the outcome of flexible and low threshold digital approaches which also seem to be (re)producing inequalities within a heterogeneous student population. Not least, results demonstrate the interdependence of refugees' needs on the one hand and the effectivity of support structures on the other.

#### **53084**

##### **International Students in Hybrid Courses: Using Grading Contracts to Create an Online Learning Community**

Sarah Faye, University of California, Davis, United States

While research shows that contract grading improves learning habits (especially labor contracts with their focus on the effort students put in their work, rather than the quality of final products), there is no research on how contracts affect international students in hybrid courses. The purpose of this ongoing study is to show how labor contracts can help this student population by fostering independent learning habits and a strong sense of community. This is particularly important as the international student population continues to grow, and as students take online courses with restricted contact with instructors and peers. Labor contracts teach strong learning habits by asking students to make their own choices on how they want to demonstrate their effort; this helps international students become independent, but it is also important in the online context, where instruction tends to feel canned and impersonal. Being able to create their own learning path makes students more confident and connected to the material. Additionally, labor contracts counteract the fact that technology in hybrid courses tends to isolate students by creating a community of learners where one's success is interconnected with the success of others; for example, the labor contract can highlight group work and providing effective peer review feedback as key aspects of success in the course. To fulfill the contract, students must take the initiative of being reciprocal community members. Our assessment methods thus become tools in facilitating the growth and interconnection of our international students in online classes—preparing them for professional collaboration.

#### **53093**

##### **The Role of Lectures and Factors Affecting Individual Working Competency of Students at Thai Nguyen University, Vietnam Through Mathematical Modeling Process**

Ngoc Dong thi, Thai Nguyen University, Vietnam

Bac Nguyen Trong, Thai Nguyen University, Vietnam

Nam Nguyen Danh, Thai Nguyen University, Vietnam

For university training, all teaching processes aim at developing and perfecting occupational competencies for learners. In the study of teaching mathematics at Thai Nguyen University, Vietnam, we consider mathematical modeling as a way to help students solve problems mathematically. Accordingly, the main role of teachers in these situations mostly include: to build learning environment, conduct research and practice, introduce methods and guarantee accurate content of math theory. Through the process of implementing mathematical modeling, independent working competency of students is influenced by two basic factors named psychological factors and individual competency factors. The research results show that the main psychological factors include attitudes, motives and willpower while individual competency factors include the competency to recognize occupational situations, the competence to switch between the practice and mathematics, the competency to use supportive technology in the process of working with mathematical models and randomly opening data sets.

#### **53100**

##### **Implementation of Self-regulated Learning in Ho Yu**

Ma Yan Sze, Ho Yu College and Primary School, Hong Kong

Since 2012, Ho Yu launched the "self-regulated learning" (SRL) at Secondary one. We aimed at letting students become the owner of their own learning through systematic arrangements and implementations. It

was not easy to initiate the new teaching and learning habit in school. In order to implement it smoothly, we had done some preparation on four aspects as "Administration arrangement", "Classrooms equipment", "Training of teachers" and "Training of students". After years of implementation and through several school visits, exchanges and repeated discussions, we have developed four core elements in SRL lessons: (1) Pre-lesson SRL worksheet: It helps establishing students' own independent preparation skills and their ability to self-learning. (2) Basic knowledge: Students are work in a small learning group. They will clarify some mis-understanding in the homework. (3) Discussion: Students get on group discussion and make a presentation on challenging question which is followed up by a peer and teacher questioning and reasoning interaction. (4) Self Reflection: Students evaluate the learning goals and their performance in the lesson. In order to review self-regulated learning (SRL) in a more objective way and elevate the teaching and learning effectiveness with a focus, we had invited professor and scholar to evaluate SRL in terms of "quality" and "quantity". The feedback and findings from the questionnaires are all encouraging. The student's performances in public examination are also improved. We believe that SRL is a good way to develop students as lifelong learners. It lets students own their learning and learn with dedications wholeheartedly.

**53119**

**Fourth Grade Students' Number Sense Performance on Four-Tier Test**

Der-Ching Yang, National Chiayi University, Taiwan

This study examined fourth-grade students' number sense performance, reasoning, and confidence by using a four-tier number sense test (4TNST) comprising an answer tier, a reasoning tier for those answers, and two corresponding confidence tiers. Few studies have applied four-tier testing to mathematics education. A total of 982 Taiwanese fourth-grade students were selected to join this study. The online 4TNST could be used to diagnose the students' number sense performance, confidence in their answers and reasoning, and differences in confidence between answers and reasoning. In addition, the values of  $\Delta$ ANS and  $\Delta$ RSN were all positive for each number sense component and the whole test, which implies that the students had higher confidence in correct than incorrect responses for both answers and reasoning. The contributions based on this study's findings are discussed.

**53253**

**A Review of the Risk and Protection Factors of Self-injurious Behavior of Adolescents**

Yeonjae Jo, Dong-A University, South Korea

The purpose of this study was to present a comprehensive review of the literature for understanding adolescents' self-injurious behavior. This study reviewed 47 academic articles for the understanding of conceptualization, psychological characteristics, influencing factors of self-injurious behavior among adolescents. The authors implemented an exhaustive search for peer reviewed article for last 5 years on self-injurious behaviors. The risk factors of self-injurious behavior were nursing environment of childhood, difficulties in emotional control, negative self-image, psychological condition, psychosocial factors. The protection factors of self-injurious behavior were recognition of wounded self, goal of life, resilience, social support. Based on the literature review, the author provides the motivation, risk and protection factors of self-injurious behaviors. In addition intervention strategies for self-injurious adolescents such as support group meeting, mindfulness program were discussed.

**53340**

**Effectiveness of E-learning Amongst Nursing Students: An Innovative Approach of Learning the Electronic Documentation Systems**

Feng Chunshu, Tan Tock Seng Hospital, Singapore  
Hnin Nwe Oo, Tan Tock Seng Hospital, Singapore

This study examines the effectiveness of adopting e-learning in teaching hospital electronic documentation systems to the nursing students. This e-learning programme consists of PowerPoint slides and narrated videos which demonstrate the use of the electronic documentation systems. It was mandatory for all nursing students to complete this e-learning programme prior to their clinical practicum. Upon completion, the nursing students had to undergo a post learning quiz in which a 100% passing mark was set as completion criteria. At the end of the clinical practicum, the nursing students were invited to participate in a 11 likert scale questions survey to elicit their feedback on the effectiveness of the e-learn programme. 173 nursing students participated in the survey. 99.5% (172) of the students agreed that the learning content is relevant and prepared them adequately for their clinical practicum. Overall, 96.5% of the students agreed that they were able to accurately document patient data in the electronic systems and effectively gather patient's information from various electronic systems after completing the e-learning programme. The results revealed that e-learning using narrated video is an effective method in teaching electronic documentation systems usage. Nursing students also reported easy accessibility to the learning materials as reference during their clinical practicum. E-learning approach facilitates flexibility, self-directed learning in the novice learners and interactive strategies such as narrated video enhances the learners' understanding.

**53373**

**Design and Development of a Learning Management System for Flipped Learning**

Paul L.C. Lam, The Chinese University of Hong Kong, Hong Kong

Kevin C.K. Wong, The Chinese University of Hong Kong, Hong Kong

Carmen K.M. Lau, The Chinese University of Hong Kong, Hong Kong

The flipped classroom model has grown in popularity among teachers in both secondary and higher education sectors over the past few years due to its noticeable benefits to students. In Hong Kong, we have also witnessed an increasing number of teachers across institutions and disciplines flipping their own classes. Along with exciting achievements, there have been numerous challenges faced by teachers. One common challenge is that students do not engage in pre-class learning as instructed, resulting in low participation in the high cognitive learning activities that teachers make so much effort to design. This lack of engagement can be attributed to 1) students' lack of motivation to do the preparations, and 2) insufficient monitoring of their learning by teachers. A learning management system (LMS) with strong monitoring features and functions to improve students' motivation and capacity for self-regulated learning may be one of the solutions to the abovementioned challenge. In 2018, we initiated the development of an LMS called FabuLearn (which stands for "Flipped And Blended University Learning") that is tailor-made to maximize the flipped learning experience. Unlike other traditional LMSs, FabuLearn is designed with a focus on monitoring and time-keeping functionalities, that enable teachers to understand students' preparations and learning progress at various stages of the flipped classroom process which most of the former LMSs overlooked. In this presentation, we will illustrate the design and development process of the LMS, explain how its features facilitate flipped learning with demonstrations and report initial user feedback.

**53382**

**Mobile Devices as Effective Reference Tools in Undergraduate Studies**

Misa Otsuka, Jissen Women's Junior College, Japan

Dictionary use is one of the most effective means of building one's vocabulary. In Japan, monolingual dictionaries were commonly used to confirm the spelling or forms of Chinese characters until the middle of the 1990s. Then, students began to switch from using paper dictionaries to using electronic dictionaries instead. Currently, neither type is prevalently used, due to the reduced amount of writing by hand and the advent of mobile devices. However, students in other countries use dictionaries differently. The increasing use of mobile phones is generally frowned upon by older people. This is inevitable because many students have not been taught how to correctly use such tools while studying. This present study investigates the possible use of mobile devices as reference tools both inside as well as outside the classroom and seeks the most effective and practical system for a proper introduction these tools. In this presentation, the findings

of a pilot study conducted in a classroom will be reported. The results will indicate how students can be independent in their positive use of mobile devices as an aid while studying. In addition to this, the study will emphasize the interdependency between the unique features of mobile devices and sharing, both inside as well as outside the classroom.

**53388**

**Effects of the Incorporation of Flipped Classroom Approach with Cooperative Learning and an Instant Response System on an Unfamiliar Subject**

Yu-Chen Chou, Feng Chia University, Taiwan

Two practical considerations motivated the design of this study. The course, Introduction to Linguistics, is often viewed as a difficulty to many sophomore English majors in Taiwan, owing to their unfamiliarity with the complexity of language structure and deep linguistic analysis. Such a class typically consists of more than 50 students, which poses many challenges to both instructors and students, mainly causing a lack of interaction between these groups. This large enrollment size may also deteriorate the level of engagement of many students, increasing feelings of alienation and declining motivation and attributions of responsibility. The purpose of this study, therefore, aims to design an alternative teaching method, creating a mixture of flipped classroom and cooperative learning with a web-based instant response system employed in class, and ultimately improve the effectiveness and efficiency of both teaching and learning. Two groups were presented—a control and experimental group (N = 54 and 61 in each, respectively). Focusing on cognitive and affective domain, the results of tests and questionnaires prior to and after the study indicate that: 1) students exposed to the innovative teaching approach reported significantly higher achievement test scores than those otherwise; 2) students with higher anxiety seemed to benefit more from this teaching approach than those with lower anxiety. These results can hopefully provide pedagogical implications for instructors who are facing the challenges of teaching unfamiliar subjects to larger classes, and educational researchers who are committed to new approaches in seeking to improve teaching quality.

**53390**

**The Potential of Rubrics as a Tool for Self Assessment: Consideration from an Interdisciplinary Perspective**

Misa Otsuka, Jissen Women's Junior College, Japan

Rubrics are widely used within higher education, and their educational efficacy as a tool for self-assessment has been demonstrated. There are various types of rubrics, and even among rubrics based on the same concept, the ideal design of a rubric will vary depending on the academic specialty. Our research team is comprised of staff from different faculties and departments, and we promote the development of subject-specific rubrics in the specialized subjects of the departments to which we are affiliated, as well as the creation of general-purpose rubrics that can be used across departments. In this presentation, we will explore the potential of rubrics as a tool for self-assessment, focusing on the results of investigation into the words and phrases used in evaluation criteria within rubrics. Would like to present our findings that rubrics, rather than just being a tool for assessment, are also a means for specifically demonstrating the steps taken by teachers to reach the attainment goals and objectives of the class, as well as a means for students to achieve self-directed learning through self-reflection.

**53436**

**Textbook Vocabulary Coverage in Japanese University Student Mythology Essays**

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This brief study explores the degree to which words encountered in a content class textbook are used by students in argumentative essays they write for that class. A corpus of 22 short student essays from a World Mythology English Seminar EFL class at a Japanese university was examined. First, using AntConc and the British National Corpus as a reference corpus, a keyword list was created for the textbook used in that class.

This keyword list was then manually sorted into two separate lists, one of key non-culturally-related content words, and one of key culturally-related content words and proper nouns. Following this, these keyword lists were used as vocabulary level lists in AntWordProfiler to examine vocabulary coverage in the essay corpus. While there is still some analysis to be conducted, initial results show that the corpus of student papers covered 7.57% of the key non-culture-related word type list and 1.66% of the key culture-related word type list. The noun types “mythology” (occurring in 18 out of the 22 papers), “myth” (12/22), “stories” (14/22), and “history” (5/22) generally had a higher range in the corpus, while their counterpart adjectives “mythological” (7/22), “mythical” (5/22), and “historical” (3/22) had a lower range. It is also worth noting that while the textbook itself is fairly well-balanced in its coverage of cultures from around the world, of all the culturally-related keywords with a range of 2 or more, 50% of these were from Greek culture.

**53439**

**How do Chinese Research Communities Perceive Game-based Learning?**

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We present an analytic framework for game-based learning (GBL) and a systematic review of GBL research published by Chinese researchers at the Global Chinese Conference on Computers in Education (GCCCE) since 2012. Proposed by Jan and Gaydos to better understand GBL research, the GBL analytic framework delineates (1) three research trends in game-based learning, (2) four learning objectives in game-based learning research and practices, and (3) three conceptualizations of game-based learning. We utilize the framework as a systematic analytic tool for GBL conducted by Chinese researchers from Taiwan, China, Hong Kong, and Singapore. Ninety-two conference papers published by the GCCCE conference are analyzed to identify trends and major characteristics. The findings suggest that: 1. Most researchers develop computational platforms and applications as opposed to conceptualizing GBL as innovative pedagogies or learning activities. 2. Most research utilize drill and practices to promote extrinsic motivation and content mastery on the learners. Learning that occurred in the learning processes, such as higher order thinking skills and social skills are often ignored and bypassed. 3. GBL is conceptualized as learning “from” games while games are viewed as “content providers.” GBL is rarely viewed as learning “with” games where games afford authentic contexts for situated learning and scaffolded participation. The findings suggest that GBL in Asia is employed to reaffirm the established “drill and practices” learning culture in Chinese communities. A reconceptualization and reorientation of GBL for 21st-century literacies and competences is critical to move GBL research forward in Asian Chinese research communities.

**53655**

**Morphological Awareness, Syntactic Awareness and Reading Comprehension in a Second Language: A Study Involving Chinese and Filipino Students**

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Prior research has consistently shown that morphological awareness (MA), the conscious ability to manipulate morphological units in words, and syntactic awareness (SA), the metalinguistic awareness of the syntactical structure of language, are significant predictors for reading success in different orthographies. However, limited research has examined the role of MA and SA in reading comprehension in a second language (L2) in groups of ESL learners with different first language (L1). The present study investigated the role of MA and SA in L2 reading comprehension among Chinese- and Filipino-speaking children who learn English as a L2. Seventy-three (38 males) Chinese Grade 3 children and 81 (43 males) Filipino Grade 3 students were assessed on English MA, SA, word reading, vocabulary, reading comprehension and working memory. Adopting the theoretical model of simple view of reading, working memory, vocabulary, word reading were statically controlled in regression analyses which showed that MA is a significant predictor of English reading comprehension among Filipino ESL students and is marginal significant predictor of English

reading comprehension among Chinese ESL students. For both groups of students, SA was not a significant predictor. The results highlighted the role of MA in early reading comprehension development in ESL students with different L1s. The theoretical and practical implications of the findings will be discussed from a developmental perspective.

### 53903

#### **Deeper Experiential Engagement Project (DEEP): Exploring Experiential Learning Strategies for Developing Student Learning Experiences**

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The proposed study explores a new Deeper Experiential Engagement Project (DEEP) course at Nanyang Technological University, Singapore. The course objective is to employ experiential learning strategies to develop student learning experiences that engage local communities. And, to help students develop key metacognitive skills such as an inquiring mindset, critical analysis and creative synthesis. This DEEP course utilises the university undergraduate halls of residence as a platform for students to take disciplinary knowledge beyond the classroom. Students participating in the course gain credits for their participation. The course leverages students' natural interests in several areas of communication including film making, pod casting and graphic novel creation and puts the students through a team-based project with creative challenges that link them to academic disciplines (e.g.: the humanities and social sciences; art and design and communication studies.) Students are asked to seek out and engage local communities and explore their stories through the students' chosen area of interest. The structure of the courses submissions scaffold the Experiential learning process that closes the Experiential Learning Cycle, i.e. complementing hands-on experiences with reflective observation and abstract conceptualisation, which then manifests in the next round of decision-making and active experimentation. The proposed study will focus on whether combining Experiential learning with community engagement and student interests can help students develop their metacognitive skills. The study will use a case study approach. To assess DEEP the researchers will analyse student deliverables, conduct interviews with students and teaching assistants; and ask faculty to complete self-reflections.

### 53976

#### **How to Weave Computational Thinking into Curriculum: A Study on a University Course with VR**

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The twenty-first century is arguably the century of computing. In such a world saturated by computing, Computational Thinking (CT) is now recognized as a foundational competency for being an informed citizen and being successful in STEM work. The aim of this paper is to explore the influence on college students' learning performance of computational thinking with the teaching material of Virtual Reality (VR) infused into university courses. Three intact classes of 75 college students in Tainan City were recruited, and they were randomly assigned into three different groups: VR CT group, hands-on CT group and traditional CT group. This paper also built a computing learning website to guide the three groups of students to conduct CT courses. A pre-test and post-test for three groups, STEM Semantic Survey (SSS) and Career Interest Questionnaire (CIQ), Spatial Reasoning Instrument (SRI), CT Test (CTT), Climate Change Attitude Survey (CCAS) were applied. The results showed that VR CT course can enhance students' SSS, CIQ, SRI and CTT. Both VR and hands-on CT courses can enhance students' SSS, SRI and CTT.

### 54082

#### **Developing an Informal Tandem Learning Scheme for Young Researchers and Academics**

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Matthew Armstrong, Kyushu University, Japan

The constant change in technologies and organizations today require higher education institutions to adapt just as quickly to the new situations. This is especially important for teachers in second language classrooms, as they try to prepare students for this changing world. In the EFL context in which this research took place, students were unable to find research partners to practice higher-level English in a more authentic environment. As such, a Tandem Learning (TL) approach was proposed. TL is recognized as an effective approach in improving the quality of the learning environment as ideally, the knowledge learned has intrinsic value to the learner and it can also be transferred to various real-world contexts. This longitudinal research project aimed to develop an informal TL environment in which students could freely practice research skills with students in other parts of Japan through video conferencing. The first step was to conduct a curriculum analysis to identify if the underlying principles were embedded within the curriculum and teaching practices. A Curriculum Analysis Framework was developed to address three areas: (1) Policy: The overall curricular vision, mission and directives; (2) Practice: Explicit and indirect approaches teachers use in the classroom; and (3) Process: The learning environment from the perspective of the learner. Following this, the TL program was able to begin. The Curriculum Analysis Framework will be presented along with pedagogical implications of implementing a TL approach in other EFL learning contexts.

#### **54085**

##### **The Influence of Low Birth Rate on Elementary School Administration and Teaching: A Study in Six Different Administrative Districts of Tainan, Taiwan**

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Yan Tan, Guangxi University for Nationalities, China

Kuei-Yu Cheng, He-Shun Elementary School, Taiwan

Taiwan's fertility rate dropped sharply in recent years. The decreasing fertility has made a significant impact on overall education system, especially for elementary schools. Most of them are facing a predicament of downsizing. This thesis aims to explore how the phenomenon of low fertility affects the elementary school teachers' teaching method and school administration in Tainan City. The research methods was a questionnaire approach. A total of 330 questionnaires were used, and 290 questionnaires were responded. 95.7% of the questionnaires were considered valid. From the research results, the main findings can be summarized as follows: 1. Tainan City elementary school teachers on the status of the school administration and their teaching are in the middle higher level because of the low birth rate phenomena. 2. Tainan City elementary School teachers' level of awareness of the impacts of low birth rate on school administration differs based on different background variables: teachers acting as an administrative officer, working in small or medium-size schools or working in a different administrative district have high level of impacts. 3. Tainan City elementary School teachers' perception of stress on changing teaching strategies varies with different background variables: Younger teachers, less working experience ones, those who obtain a degree in university or college of education and those who work in small or medium-size schools would have higher stress at work. Based on the results of this study, the researcher offers suggestions for Education authorities, school administration, elementary school teachers, and future researchers.

#### **54135**

##### **Interdependence to Independence: Collaborative Efforts in Peer-Assisted Mock Objective Structured Clinical Examinations (MOSCES)**

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Since 2014 National Healthcare Group Residents began organising MOSCES for the medical students from Nanyang Technological University Lee Kong Chian School of Medicine. The purpose was to test students' competence in physical examination, history taking and clinical skills in preparation for the OSCEs. The

Residents wrote case scenarios, recruited patients, served as examiners and ran the circuits. By 2018, to encourage peer-assisted teaching, LKC senior students started leading the MOSCEs, taking over the roles of the Residents. An independent structure was developed, whereby senior students (Year 4) took over the roles of the Residents and run the OSCEs for their juniors' (Year 3). The Residents now only need to vet the case scenarios that senior students wrote. A total of 76 student participants and 33 peer examiners completed a 4-point Likert scale survey. Participants gave a weighted average of 3.60 out of 4 (90 percentile) for questions relating to the OSCE format, 3.63 (91 percentile) on constructive feedback and debriefing and 3.81 (95 percentile) on whether if the MOSCEs benefited their learning. The examiners gave a weighted average of 3.62 out of 4 (91 percentile) on how these OSCEs hone their skills and knowledge, 3.44 (86 percentile) on their confidence to contributing to their junior's learning and 3.61 (90 percentile) on personal development. The new structure not only ensures sustainability, it encourages peer teaching and learning that reinforce concepts learnt and develop better skills and knowledge. A symbiotic environment where everyone can take charge of their learning had developed.

**54339**

**The Use of Local Genius in Strengthening Student Character**

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Strengthening Character Education is an education program in school whose chief goal is to reinforce student character through the harmonization of heart, mind and body. The program is part of the Mental Revolution National Movement in the context of realizing an advanced and civilized Indonesian nation. However, in reality, such a program has not had a profound impact on student character. One concerning problem is that students are not familiar with local cultures. Addressing this issue, this study used local genius as a medium for strengthening character education, Wayang Golek ((wooden puppet)—a form of performance art that grows and develops in West Java. This performance art not only presents a spectacle, but also encapsulates values that need to be practiced in life. The study was conducted at 16 public junior high schools in the city of Bandung, West Java province, where Wayang Golek performances were utilized as a media to foster character education. Findings reveal that the program serves a dual function, as a vehicle for preserving regional culture and at the same time a means for strengthening student character education. The latter was seen in the students' knowledge about Wayang Golek, the famous puppeteer, and the story in an intriguing performance concept, whereby the students as spectators could enjoy and love the performance.

**54354**

**The Analysis on School Self-evaluation Capacity Building Model and Important Connotation**

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Evaluation helps to maintain and enhance the quality of school education. In order to promote the spontaneous and autonomous management of schools, it is necessary to enhance school self-evaluation capacities and competencies. Research on evaluation capacity building (ECB) is an important trend in the evaluation of educational development, which can be used as an important theoretical basis for school self-evaluation capacity building (ECB). Presently, Taiwan lacks indicators appropriate to benchmarking ECB. For this purpose, through large-scale analysis and integration of the literature, this study elucidated information from the literature review, which found there are four main theoretical models for building evaluation capacity: Evaluation capacity building pathway model, evaluation capacity building measurement, integrative evaluation capacity building (IECB), and the expanded IECB model (EIECB). Each model has its own characteristics and limitations. To be able to build robust self-evaluation capacity via a more concise, appropriate and operable model, this study proposes a "Revised Evaluation Capacity Building (RECB)", and derives the following important connotations: including six variables such as personal factors, organizational

factors, organizational capacity, organizational culture, output, and change, as well as 14 connotative aspects such as knowledge, skills, affective, leadership, learning environment, capacity to improve organization, effective use of information, open atmosphere, organizational learning, benefits' perception, knowledge acquisition, self-evaluation capacity, evaluation autonomy, and problem solving.

**54416**

**Inclusion of Children with Asperger's Syndrome in Regular School: A Case Study from Bangladesh**

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The case study investigated an intimate insight into a child with Asperger's Syndrome (AS) and family experiences of inclusive education enrollment in Bangladesh. Data was collected in precise details and explicit information about the child with AS on his involvement in different inclusive education activities. A case study method was employed to explore the extent of academic and disciplinary achievement of the child. The analysis includes the existing feasibility of regular school system to include a 6 years old special child as well as the child's socio-academic achievements within the educational institutions. Findings indicate that the school culture and the state policies for practicing inclusive education, particularly for the children with special need, is divergent while hardly meeting the socio-academic achievement of a young learner in the current education system. The study recommends further in-depth case analysis of the urban school culture in the context, to have an insight into the regular school system for including the vast increasing special need children of the country.

**54443**

**The Effectiveness of Character Education in Special Education Curricula for Students with Mental Retardation at Special School in West Java**

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The addition of character education in the 2013 special school curriculum or commonly called the K-13 curriculum, has a significant influence on learning services in special schools. Implementation of character education becomes mandatory for all students including, students with mental retardation. Some teachers have tried to implement character education with a variety of learning strategies that integrate character education with special school curriculums of 2013, but currently have not found a model or learning strategy that is considered suitable for character education of students with mental retardation. This qualitative research analyzes the cases of students with mental retardation who study in special schools in West Java Indonesia. The discussion focused on developing character education learning strategy for students with mental retardation in developing the value of independence, discipline, and responsibility. We then suggest recommendations for improvements in implementing character education at special school in Indonesia.

**54456**

**Development of a Questionnaire System with a Response Analyzer**

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It has been increasing that the number of universities which try to give a bidirectional lecture by improving the content of it from responses of students. For the reason, it is necessary for instructors to know students'

responses to carry out those lectures. Questionnaires are general methods used to grasp the situation of students. A lot of universities have been adopting the methods. In general, instructors collect the results of questionnaires after their classes and check responses from their students to improve next their lectures. However, it is difficult to understand students' questions and responses during classes since questionnaires are distributed after them. In order to solve the problem, a response analyzer can make it easier to grasp students' reactions. A response analyzer is an educational device that aggregates students' situation and shows the results of it in real time. Instructors can fix their lectures according to the responses of their students during their classes. In this study, a questionnaire system has been developed by utilizing the response analyzer. Adding to the existing questionnaires after class, this study's system enables instructors to make a single-question questionnaire and let students answer it. Instructors can know the results of it in real time. They can be shown as graphs or tables. Instructors can improve their lectures not only after classes but also during them. There has been a problem that many of the existing response analyzers need specific devices and introduction costs. To solve this problem, this system has been developed as

**54472**

**Analysis of Visuals in Political Science Textbooks to Identify its Role in Encouraging Higher Order Thinking in Students**

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Visuals, including photographs, sketches, and schematic diagrams, are a valuable aspect of textbooks. Visuals in the textbook attract attention and help in the retention of information. It also enhances understanding and creates a context for learning. Schools are also emphasizing 'higher-order thinking (HOT)', rather than memorization of a cannon of topics. HOT occurs when a person takes new information and interrelates and/or rearranges and extends this information to achieve a purpose.

This study identifies and analyses the role of visuals in political science textbooks in encouraging HOT in students. This study is based on the textbooks of the National Council of Educational Research and Training (NCERT) for classes 6–10. On the basis of their relationship with the content, visuals were categorized as Interactive (physical interaction with the visual), Promptive (thought-provoking questions asked on the visual), Representative (visuals supporting text), Antecedent (visuals explained in text), Nested (layers of information in one visual), Intersecting (no explicit relation between visual and text). Of these categories, Interactive, Promptive, Antecedent, and Intersecting visuals are tools for HOT with different levels of complexity. The overall percentage of visuals that encourage HOT is 48.37% (39.3% photos; 54.9% illustrations). The highest percentage of HOT encouraging visuals were found in class 7th (70.73%). Interactive visuals were found to be higher in class 6th and 7th. Promptive visuals were highest in class 8. Antecedent and Intersecting visuals, though their level of complexity is high, were found to be higher in class 6th and 7th as compared to 9th and 10th.

**54527**

**Assessment of Generic Skills of Engineering Students Through Group-Based Learning**

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This study was carried out for addressing the impact of group based learning on generic skills development in engineering students. A workshop was conducted for 3 days with a total of 12 students from different engineering departments. The students filled in the questionnaire after every workshop for 10 selected generic skills. The results of this study indicated that the group based learning have positive impact on the development of generic skills. When all the generic skills for group and individual were assessed, the overall skills were more developed in group than individual assessment. Moreover, the group assessment showed the highest improvements for understanding, teamwork and communication skills. When the inter-relationship among the skills were assessed for individual ratings using network analysis, the results

revealed that the effective team work was strongly associated with co-operativity, communication and information sharing. The significant finding of this study is that group work based learning could be an effective teaching tool for producing innovative manpower.

**54533**

**Exploring Variables Predicting Dropout in Universities of South Korea: Focusing on K University in Gangwon Province**

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The purpose of this study is to investigate variables predicting dropout in Universities of South Korea using data-mining techniques. For this purpose, we collected the data of 4,175 students composed of 892 dropout students and 3,283 graduates from K University in Gangwon province for 2010-2013. In the analysis process, we arranged the data according to the student's individual characteristics, university-related characteristics, high school-related characteristics, university life-related characteristics, and academic characteristics. We then used descriptive statistics to identify the overall characteristics of the students and conducted an ANOVA test to compare the characteristics of dropout students and graduates. Finally, we applied logistic regression analysis to explore the variables that predict students' dropouts. The results of the analysis are as follows. First, since male students are more likely to drop out than female students, it is necessary to help male students recover the meaning of college life by providing intensive mentoring services. Second, the lower the grade is, the more likely they are to drop out. Therefore, it is recommended to provide support programs for new students, such as helping them make plans for future career and introducing various school activities for college life. Finally, the results of the logistic regression analysis suggested that 73.3% predicted the dropout from the collected variables. Based on these results, we discussed the limitations of this study and the direction of future research.

**54556**

**Using Learning Analytic Technique to Visualize STEM Education Model in Northern Part Thailand**

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Science education in Thailand needs significant reform, as shown by PISA examination (2015), in which high-school students were 52nd in science, (out of 72 countries) STEM education plan (Science, Technology, Engineering, Mathematics) was introduced to secondary school via the Wisdom Cultivating Project to improve matters, combined with RBL (Research-Based-Learning) and PBL (Project-Based-learning). The approach employed a process of training and coaching teachers from the central office of the Wisdom Training Program (WCP) to the coaching 8 universities in Thailand, Phayao University as Northern mentors who teach teachers and teachers to continue teaching students. The data of project implementation had been brought to the analysis by means of big data analytics and learning analytics with the modification of unstructured data into structured data to be analyzed with the tagger-bot to determine the relationship of the data and the 21st-century skills. All 929 files, unstructured data, of learning outcome reports from WCP and the trainers including teaching plans, objectives, learning process and measurement of learning outcome, were divided to 27,600 paragraphs and transformed to structured data. The analysis revealed that the transfer of 21st-century skills such as learning and innovation (Critical Thinking, Communication, Collaboration, Creativity), life and career skills (purposes, execution, etc.), information and technology skills. The highest count of 21CSKs are 2,289 tag of flexibility and adaptability skill, 1,611 tags of critical thinking and 1,006 tags of collaboration. These results confirm 21CSKs can

transfer from WPC to mentors and contribute to development of students' 21CSKs empower teachers, and transforming the existing lecture-based teaching paradigm in Thailand.

**54585**

**Towards Resilient and Sustainable Society: A Case Study of Education for Disaster Risk Reduction in Ise City**

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After the Great East Japan Earthquake in 2011, the phase of disaster reduction in Japan has shifted. Now more people pay attention to the next earthquake and tsunami. Also, climate change has affected Japan, so the risk of floods and landslides are increasing. Now the education program for Disaster Risk Reduction can play a more critical role in our society. There is growing evidence to show that most top-down disaster risk management and responses programs fail to address specific local needs of vulnerable communities. Because of ignoring the potential of local resources and capacities, in some cases, may even increase people's vulnerability. At Ise City in Japan, Nakajima Elementary School has a special event in June for Disaster Risk Reduction with Local Community. The community residents provided lectures to students, and they had a workshop with students and their parents. This program started in 2015, for the first three years the professionals and researchers provided lectures to students, and in 2018, the community residents became lecturers. After these lectures, they have a workshop. About 200 people (included 10-12 years-old students) joined the event with their parents. At the workshop, they discussed the evacuation timing (called "Evacuation Switch"). The Education for Disaster Risk Reduction can solve various social problems as well as Disaster Risk. Also, this kind of education is more and more required because the SDGs Goal 11 shows "Make cities and human settlements inclusive, safe, resilient and sustainable."

**54710**

**The Application of Wool Felt Hand-made to the Teaching Workshop for Clinical Nursing Preceptors and New Nursing Staffs**

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Background: Clinical nursing preceptors are the most critical bridge for new nursing staff during the adaptation period. They help to solve important factors such as new nursing staff turnover rate, realistic shock and dissatisfaction, help them get familiar with the work as soon as possible, become professional nurses, and increase job satisfaction. It is important to assist clinical nursing preceptors and new nursing staff to unite their centripetal force. Objective: The purposes of the project were to apply the wool felt hand-made in the workshop for clinical nursing preceptors and new nursing staffs and evaluate its effects on the learning outcomes. Methods: Through the wool felt hand-made and group motivation courses, clinical nursing preceptors and new nursing staffs can learn and communicate together. Clinical nursing preceptors and the new nursing staff who personally guide involved together to stimulate creativity and sharing, as emotional expression and professional value recognition. A semi-structured questionnaire was administered to the participants after the sessions to evaluate their perceptions. Results: A total of 93 participants participated in the two courses included 55 clinical nursing preceptors and 38 new nursing staffs. 80 participants completed the satisfaction questionnaire (filling rate 86%), and the overall satisfaction was over 90%. They thought this course was a fun, stress releasing and inspiring learning experience. They felt the interaction of learners was very good. Conclusion: Clinical nursing preceptors and new nursing staffs are learning communities. Harmonious relationships and good communication help to learn and adapt. Applying hand-made lessons and sharing helps to unite with each other.