IICEHawaii2020 & IICSEEHawaii2020

Hawaii International Convention Center, Honolulu, Hawaii
January 10-12, 2020

Final Draft Schedule

Please Check & Confirm

Please check that all information pertaining to you is correct
and notify us at support@iafor.org if there is any error.
Please notify us of any corrections by **Sunday, December 8** 09:00 (HST).

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 **Friday, December 20.**

Friday at a Glance
January 10, 2020

09:15-10:00   Conference Registration

10:00-10:05   Announcements & Welcome | Room 314 (3F)
Brian Aycock, IAFOR, Japan

10:05-10:25   Featured Cultural Presentation | Room 314 (3F)
Hawaiian Oli Opening

10:25-10:40   Welcome Address | Room 314 (3F)
Joseph Haldane, IAFOR, Japan
Nathan Murata, University of Hawai'i at Mānoa, USA

10:40-10:45   Recognition of IAFOR Scholarship Winners | Room 314 (3F)
Joseph Haldane, IAFOR, Japan

10:45-11:15   Keynote Presentation | Room 314 (3F)
Harrie Vredenburg, University of Calgary, Canada

11:15-11:30   Coffee Break | Room 317 (3F)

11:30-12:20   Keynote Panel Presentation | Room 314 (3F)
Education, Work, and Sustainability in the Fourth Industrial Revolution
Alexander J. Means, University of Hawai'i at Mānoa, USA (moderator)
Deane E. Neubauer, University of Hawai'i at Mānoa, USA
David P. Ericson, University of Hawai'i at Mānoa, USA

12:20-12:30   Conference Photograph | Pakaloka Charlot Courtyard

12:30-14:00   Lunch Break | Room 317 (3F)

14:00-14:50   Featured Panel Presentation | Room 314 (3F)
Ljiljiana Markovic, University of Belgrade, Serbia
Janina Martin, University of Hawai'i at Manoa, USA

14:50-15:00   IAFOR Documentary Photography Award | Room 314 (3F)

15:00-15:15   Coffee Break

15:15-15:45   **Featured Presentation | Room 314 (3F)**
Pacific Solo: A Voyage to Nemo North in the Middle of the North Pacific Garbage Patch
Lowell Sheppard, HOPE International Development Agency, Japan

The International Academic Forum

15:45-16:15   **Featured Presentation | Room 314 (3F)**
SDGs and Education: Sustainable Financing for Early Childhood Care and Education (ECCE) in Vietnam, Laos and Cambodia
Keiichi Ogawa, Kyoto University, Japan

16:15-16:30   Coffee & Tea Break | Room 317 (3F)

16:30-17:20   **Keynote Panel Presentation | Room 314 (3F)**
Global and Educational Engagement through Innovative Technology and Pedagogies
Ann Hartman, East-West Center, USA
Geo Thao, University of Hawaiʻi at Mānoa, USA
Yuko Ida, University of Hawaiʻi at Mānoa, USA

17:20-18:30   **Conference Poster Session Welcome Reception | Room 317 (3F)**

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

Friday Poster Session: 17:20-18:30

Room: *To be Announced in Final Schedule*

53097
The Importance of Continuing Education Units (CEUs) in Current Recreation Therapy Practices
Erick Kong, California State University East Bay, United States

Continuing Education Units (CEUs) plays an important role in the knowledge competencies of current recreation therapists. However, very little research has been done to investigate whether or not attending recreation therapy workshops or conferences advances their knowledge and techniques to apply in their current practices during real life situations that relate to the job task analysis in working with patients or clients. This is especially true when limited resources are available for recreation therapists to advance their skills. Literature suggests that there is a need for healthcare professionals such as recreation therapist to continue to advance their skills by obtaining CEUs online or attending workshops and conferences. Studies also indicate practical experiences enable healthcare professionals to relate academic information into actual practice by fostering skill sets in working with their respective fields. This study will be aimed at recreation therapists' knowledge competency as it relates to the job task by asking the following question: To what extent does recreation therapy conference help to enhance recreation therapists' ability to working with their specialized population? The plan is to administer a survey to 150+ attendees at the California Park and Recreation Society-Recreation Therapy Institute Conference. The implication of this study may suggest whether there is a strong link in attending recreation therapy conference to enhance therapeutic recreation professionals in their ability to work with their specialized population. It may also suggest the importance of CEUs opportunities in the field of recreation therapy and may lead to re-evaluation with policy makers.

53323
Conservation Practices and Their Impact on Hawaiian Well-being Among Youth
Camonia Graham-Tutt, University of Hawaii West Oahu, United States

Research with Kupu alumni included the examination of the relationship between land, culture, health and Native Hawaiian well-being. In this process, using qualitative measures (NVIVO) to analyze youth speeches and journals, we sought to measure the level of impact that Kupu had on youth in terms of health and wellness, however at the conclusion of our work we learned much more than initially planned. We learned three ways Kupu youth believed that their lives had been impacted as a result of their guided land practices and experiences. Kupu alumni expressed an increased sense of pride. As a result of their experiences, youth were positively impacted in the daily routines of their lives. They also noted positive changes in self such as improved self- confidence. Youth noted an increased sense of purpose. Kupu alum shared that their eyes were opened to the value of touching land in changing their mindset on education. They also shared an enhanced motivation to improve and change the current education system to include more land cultivation practices for younger children. Kupu alumni also responded that their experiences had given them an increased recognition of Identity and cultural heritage. Alums expressed an increased effect on their connection to others/family, their history and an increase appreciation for life and sharing their lives with others. In sum, we learned that listening to youth voices, both expressed in written and oral formats, is essential to sustaining knowledge of land, culture and health from generation to generation and for Hawaii's future.

53787

The Virtuous Effect of Priming in the Classroom

Maura A. E. Pilotti, Prince Mohammad Bin Fahd University, Saudi Arabia
Tahani Alwaleed Algouhi, Prince Mohammad Bin Fahd University, Saudi Arabia
Jood Abdulaziz Alhowaish, Prince Mohammad Bin Fahd University, Saudi Arabia
Hissa Al Mubarak, Prince Mohammad Bin Fahd University, Saudi Arabia
Khadija El Alaoui, Prince Mohammad Bin Fahd University, Saudi Arabia

Students, as most people, appreciate honesty. Circumstances (e.g., an impending deadline) however, may challenge otherwise honest students. The self-concept maintenance perspective argues that in addition to a cost-benefit analysis, compliance with one's internal value systems is an important factor in the decision-making process that will determine whether honesty is chosen. Research conducted in the Western world has shown that external reminders of the norms and values of one's society (i.e., priming) can be powerful deterrents, reducing the use of rationalizations that justify fraudulence (Mazar, Amir, & Ariel 2008). In the present investigation, college students in Saudi Arabia were tested to assess two contrasting hypotheses on the impact of context. It was predicted that the commonplace nature of Islam in Saudi Arabia would make not only religious reminders, but also opportunities to cheat ineffective (adaptation hypothesis). Alternatively, the commonplace nature of Islam would reinforce the effects of religious reminders but weaken the effects of opportunities since dishonesty is forbidden regardless of whether the culprit can be identified (reinforcement hypothesis). Students self-assessed their performance while believing that their assessment would either be anonymous, giving them the opportunity to cheat, or be linked to their names (control condition). In agreement with evidence of earlier studies conducted in the Western world, religious reminders reduced cheating, but regardless of whether reports were anonymous or identifiable.

53788

The Education of Dispute Resolution: A Case for a Culturally Engaging Pedagogy

Maura A. E. Pilotti, Prince Mohammad Bin Fahd University, Saudi Arabia
Hissa Al Mubarak, Prince Mohammad Bin Fahd University, Saudi Arabia
Tahani Alwaleed Algouhi, Prince Mohammad Bin Fahd University, Saudi Arabia
Jood Abdulaziz Alhowaish, Prince Mohammad Bin Fahd University, Saudi Arabia
Muamar Hasan Salameh, Prince Mohammad Bin Fahd University, Saudi Arabia
Khadija El Alaoui, Prince Mohammad Bin Fahd University, Saudi Arabia

In law and business schools, teaching dispute resolution is not an easy task to accomplish (Lewicki, 1997; Sander, 1984). It is particularly challenging if students' socio-cultural and religious traditions invoke a distinct paradigm for dealing with disputes, and their habits of information acquisition and communication emphasize reiteration. Frameworks that advocate active and meaningful learning (Novak, 2002), including culturally sustaining pedagogy (Ladson-Billings, 2014; Paris, 2012), agree that integration of new and old concepts is critical to learning (Ausubel, 1963) and that relevant educational materials can aid students' academic success by promoting conceptual integration. Integration can aid Middle Eastern students' learning in the following categories: cognition (e.g., comprehension and retention of information), motivation (e.g., cognitive, affective, and behavioral engagement), and self-image (e.g., socio-cultural perception). In this study, we examine, through focus group methodology, students' reflections on the use of culturally familiar narratives to illustrate principles and practices of dispute resolution (mediation and arbitration) in the Middle East as distinct or similar to those adopted by the Western world. Through narratives embedded in familiar historical and socio-cultural contexts, we find that students of Middle Eastern descent can achieve a greater understanding and retention of the curriculum as it is translated from theory into practice, exercise critical thinking skills, as well as enhance their motivation to learn. Teaching that taps into a reservoir of community knowledge can also become a transformative experience since it recognizes communities of origin as noteworthy, thereby making students' socio-cultural identities key ingredients of the instructional process.

53819

Application of Photovoltaic Power Generation in Agricultural Spaces of Japan: A Case Study

Ruth Anne Gonocruz, University of Tokyo, Japan
Tetsuya Doi, University of Tokyo, Japan
Yoshikuni Yoshida, University of Tokyo, Japan
Akira Tani, University of Shizuoka, Japan

Application of the photovoltaic system has recently been gaining attention in Japan due to current energy issues. The emerging dynamics of this system led to the investigation of its influence on agricultural spaces in the country. In our experiment, different factors such as temperature, solar radiation, and crop yield were directly observed and measured to evaluate the changes associated with placing PV panels above the crops. Introduction of photovoltaic power generation is a potential renewable energy source in Japan hence the Ministry of Agriculture, Forestry and Fisheries approved temporary diversion of agricultural land in 2013, making it possible to install solar panels in farmland - agriculture and solar power generation. The farming type photovoltaic power generation is achievable, although scientific pieces of evidence confirmed the influence of the panels on crop cultivation, given that light is limited due to the impediment of light absorbed. Therefore, this study will investigate on the influence of shading cast on the cultivation crops if there is a possibility to suppress deterioration of its growth, yield, and quality and by changing the amount of fertilizer and the panel distribution. This experiment would not only benefit the country but of those countries cultivating the same crops as Japan as they could utilize the use of their food and energy resources simultaneously without compromising its security.

54267

Implementation of Input Methods with Natural Language for Pictogramming

Mikihiro Ishii, Aoyama Gakuin University, Japan
Kazunari Ito, Aoyama Gakuin University, Japan

This paper proposes the extension of input method of "Pictogramming". We have been developing content creation environment using human pictogram, called "Pictogramming." It also leads to fit for educational use and it also has the advantage that an understanding of the concepts of programming such as sequential execution, parallel execution, variables, looping, conditional statements, etc. can be achieved through pictogram creation without much learning cost. This application can be accessed freely (web site URI: http://pictogramming.org/?page_id=470 and application URI: https://pictogramming.org/editor/). Pictogramming is coined from two words, "pictogram" and "programming". Pictograms are widely used in various fields such as counseling, safety, and facilities. Thus, the pictogram has been researched in various fields. Pictogramming is designed with the goal of creating pictograms, so its command set and functions are very simple compared to general programming languages. It supports three types of command inputs; 1) English or Japanese keyboard input, 2) dragging the body parts of a human pictogram, and 3) clicking the buttons for supporting command inputs. In this time, we had implemented further two input methods. 1) natural language sentence input, and 2) natural language speech input for smartphone use. First function allows users to input arbitrary arguments order, and it may useful for learning foreign languages. Second function may shorten the time to input and enhance efficiency.
We evaluate these new input methods through the experiment.

54273

Sustainability in Foreign Language Textbooks

Josef Hellebrandt, Santa Clara University, United States

The inclusion of sustainability topics and issues in college foreign language textbooks has and continues to be quite uneven. Whereas it is no longer unusual to read or hear about research aimed at connecting language learning to environmental issues, foreign language textbooks provide a different perspective in that regard, particularly at the elementary level. Applying content analysis to multiple editions of two college-level

textbooks for first-year learners of German and Spanish, this study examines the type and frequency of selected sustainability topics addressed in two different editions of the same textbook published between 2009 and 2019. This review further looks at where in the textbooks any given topics are mentioned and if the selection of topics differs between the Spanish and the German texts. Given that the majority of foreign language students do not continue beyond their language requirement, textbooks (and online platforms) that include sustainability topics may help students to decide otherwise.

54425

Narratives of Members in an Intentional, Self-Sufficient Community in Japan

Lilia Shahar Griffin, Kyoto University, Japan

An intentional community is usually a combination of people sharing the same social, spiritual or political visions that deliberately choose to live in the same locality in order to establish mutual life. The notion in the literature indicates that sharing the same beliefs facilitates sharing the same resources and responsibilities, as can be seen in the Kibbutzim, ecovillages, and some spiritual communes. It might be suggested that there are values that need to be revived, which are the values that attract members to an intentional community. In self-sufficient communities, this value is usually found to be environmentalism. However, no research has yet addressed the differences between the reason to join an intentional community and the reason to stay in it, or the possible shift of values. At the conference, I would like to present the findings of a study conducted over three months during late 2017 and early 2018 in a self-sufficient community in Japan. This will examine the narratives of the community members, focusing on the reasons they joined the community, their transformation while in the community, and the values the community helps them to achieve at present. Their narratives indicate that although the reasons to join were mainly related to environmental concern, the reasons to stay are different. The reasons to stay in the community are no longer related directly to its sustainable practices, but to the members' perception of its spiritual meaningfulness. The environmental and social conclusions that derive from these narratives will be presented.

54437

Early STEM Integration in the Classroom: Experiences of K-3 teachers with STEM Project-Based Approach

Esther Ntuli, Idaho State University, United States

The last decade has seen an increase in early STEM funding and research. However, current studies show that most teachers grapple with integrating STEM effectively into the classroom. This presentation will share results from a study completed in two phases. Using a survey instrument with both open-and closed-ended questions in the first phase, the study examined the STEM integration strategies used by current K-3 in-service teachers, comfort levels with STEM curriculum and tools, and barriers to STEM integration. In the second phase, findings from the survey data were used to inform a four-day workshop with K-3 teachers that focused on STEM project-based approach. After the workshop, data was collected using a qualitative approach. Findings from the study help identify the unique steps and processes required to make STEM project-based approach effective in early learning. This study also provides suggestions to minimize barriers and recommendations from teachers on how to improve early STEM PBL approaches.

54494

The Effectiveness of Pair Work Implementation and of Pair Combination Indices in Large Classes

Yoshihiko Oya, Nagoya University of Foreign Studies, Japan
Kimiko Uchida, Nagoya University of Arts and Sciences, Japan

Due to a decline in the population of 18-year-olds in Japan, a situation has arisen in which anyone may receive university education if they wish, and yet there has been decline in the level of university students. For this reason, since 2012, the Japanese government has recommended that methods of active learning be

incorporated into university classes, and such methods are now practiced at many universities. The authors have been introducing pair work, which is a form of active learning, into information literacy classes, and large sized classes. As a result, it has been found that for passive learners, who are common among Japanese students, pair learning increases their motivation, and improves their communication and thinking skills. In pair work, the way that pairs are selected is an important point in terms of enhancing learning effects. Previous studies in information literacy classes have revealed that gender is the most important combination index. However, the results of recent practical research on pair work in large sized classes have also revealed that pairing students who have not met each other previously is another important factor that enhances the effectiveness of pair work. Specifically, in 2017, pairs were selected randomly, whereas in 2018, pairs were selected so that, to the greatest extent possible, students were paired with a partner they had not met before. As a result, students' satisfaction, motivation for learning, number of utterances, and learning effects were all higher in 2018 than in 2017.

54537
Perception of High School Students in Different Grades Towards the Teaching Method for English Reading Class Under the New Curriculum Reform
Jing An, Japan Advanced Institute of Science and Technology, Japan
Eunyoung Kim, Japan Advanced Institute of Science and Technology, Japan

Under the requirements of the New National Curriculum Reform, student-centered learning has been widely implemented in China. However, the needs and learning goals of students vary across their grade level and it may influenced by extrinsic motivation. This research is to discover students' perceptions and attitudes towards the implement of student-centered learning in English reading class, to determine if it works at each grade level. We conducted a questionnaire survey with 306 students from 10th to 12th grade of Baotou No. 9 high school, in Inner Mongolia. The results show that students have a positive attitude toward student-centered learning. Students think they become more motivated in reading when they have the opportunity to interact with others, and also can practice their collaborative skills through group works. In spite of their positive perceptions, most of students still think it not as effective as traditional teacher-centered method, and they prefer the passive way of learning which have less engagement by themselves. From the interview, teachers are willing to practice the student-centered method, and believed that there is no need to design different teaching method for different grade students, each stage has its focal point, what difficult is being flexible in the given curriculum frame. Based on the results, the researcher suggested a sensible balance teaching model between traditional teaching method and student-centered method, set tasks properly, lead students accustomed to direct their own learning.

54544
Advances in Nuclear Energy Education: Thorium – an Energy Solution for the Global Environment
Jon French, Member of Thorium Energy Alliance, United States

Energy and Education go hand in hand to provide for our future. As energy demand rises along with population growth, we must satisfy the challenge of our times and create technologies that can sustain a positive global change to our world's energy requirements without harming the environment's fragile ecological system. This presentation offers the safest, lowest cost, and material efficiency that nuclear energy can solve the existing radioactive waste problem while ensuring the survival and progress of our modern world. Nuclear energy in a liquid medium using Thorium fuel in a Molten Salt Breeder Reactor is a sustainable energy source. The first 2000 years will be spent burning up existing radioactive waste using molten salt fast-burning reactors. Later Molten Salt Breeder Reactors will operate without the massive pollution of fossil fuels that have been shown to be detrimental to our Global Environment. Molten Salt Breeder Reactors will create more fuel than they consume. Discussion of course materials published since 2017 are for students whose interest and specialty areas focus on Nuclear Science and Engineering or High Temperature Salt Chemistry. Other technologies associated with Thorium based Nuclear Energy also includes Metallurgy, Electronics, Mechanics and Architecture, also Building Construction Skills. Given

projections that there will be a serious lack of food and water resources in the future, energy advancements through the use of Thorium alternatives will contribute to the production of processing both water desalination and electricity culminating in a reduced global competition and conflict for the distribution of basic resources.

54611

A Decision-Making Framework for the Investment of a Roof-Type Solar PV Project Using a Scenario-Based Feasibility Analysis
Kyeongseok Kim, Wonkwang University, South Korea
Hyeji Na, Wonkwang University, South Korea

Solar photovoltaics (PV) have the advantage that they can be installed anywhere, including water, land and roof, unlike hydropower and wind power. In 2015, solar PV has 227 GW capacity in the world. South Korea is the one of the top 10 solar PV generation countries in the world. The Korean government implements various policies and incentives for the production and supply of renewable energy including the Renewable Energy Portfolio Standard (RPS). This study proposes decision-making framework for the investment of a roof-type solar PV project using a scenario-based feasibility analysis. The case study is for a roof-type solar PV generation project of the steel mill in Dangjin-si, South Korea. This roof-type solar PV project operates 3MW facilities for 12 years and generates revenue from electricity sales and Renewable Energy Certification (REC) sales from Korea Electric Power Exchange. The feasibility analysis of solar PV generation project considers the generation time, electricity selling price, REC sales price, and project cost. However, each factor has its own volatility in the Korean electricity market. A scenario-based feasibility analysis reflects various and volatile conditions related to the electricity market in South Korea. If the project has more than 3.4 hours of solar PV generation time, more than 229.5 won/kwh REC unit price, and less than 6.7% annual interest rate loan rate, the solar PV project of the case study is feasible.

54708

A Design Expert System to Meet Both Economics and Energy Performance of Small and Mid-sized Buildings
Sean Hay Kim, Seoul National University of Science and Technology, South Korea
Seung Yeoun Choi, Seoul National University of Science and Technology, South Korea
Gayoung Kang, Seoul National University of Science and Technology, South Korea
Young Jo In, Seoul National University of Science and Technology, South Korea
Moon Ki Park, Seoul National University of Science and Technology, South Korea
Yena Chae, Seoul National University of Science and Technology, South Korea

While large sized and public buildings have pursued High Performance Buildings (HPB) domestically, architects have been given a tough task to design high performance, but small and mid-sized buildings, because owners tend to give up HPBs if the expected initial cost exceeds their budget. More than often design and construction expense of small and mid-sized HPB increase due to the conventional design practice that a set of building energy saving measures are uniformly applied without evaluating whether the selected measures are both affordable and performing, and thus whether they are really needed. Although performance simulation is a good design decision making tool that evaluates the performance of the selected measure, it is not that affordable for small and mid-sized buildings due to expensive modeling and analysis cost of simulations. This study presents a design expert system that would provide clear design paths backed up by quantitative performance evaluations and economic feasibility analysis of the energy saving measures for small and mid-sized buildings. The expert system has been developed by benchmarking actual design decision makings over domestic design practice. Eventually the system would alleviate architects' load to process simulations at every decision making event during early design phase of HPBs.

54709
Literature for Science
Yuko Hoshino, Tokyo University of Pharmacy and Life Sciences, Japan

In today's globalized world, it is not enough to know one's own culture and practices and to act within that boundary. However, it might be difficult for young people who have grown up in that boundary to fully realize that there is something beyond it. That is the precise reason that educators need to present multiple points of views, different interpretations of events thoughts, and encourage their students to question things surrounding them. The author will discuss her attempt to develop a class for college students of science to have them think differently from what they usually do through foreign literatures. Although the class is elective and the number of students who have chosen to take the class is small for two consecutive years, the result was a success. Those science students had none or very little experience reading literature at the beginning, they come to find hidden connotations of the writers from different cultures from their own and to enjoy the process. One of the students went out of class requirement and started reading extensively, has developed good reading skills. At science schools, students, at least in Japan, are often criticized for their over-simplified views of the world and of a poor command of language. However, if we can inspire them to read the work which presents various views, they can excel. At the presentation, the literature work introduced and how they were presented will be explained, and the students' feedback will also be discussed.

54711
Educational Impacts on Learners to Acquire the 'Agency' at a U.N. Affiliated Student-driven Organization in Higher Education Institutions
Shinichi Yamazaki, J.F. Oberlin University, Japan
Koichi Haseyama, Tsurukawa Women's Junior College, Japan

This qualitative study reports on educational impacts through projects of a student-driven organization, Action by Students to Promote Innovation and Reform through Education (ASPIRE), part of the United Nations Academic Impact projects. At ASPIRE, all of the educational activities are extracurricular, and planned, organized and managed based on student's autonomy and curiosity. OECD suggests the Learning Framework 2030 and 3 abilities, 'Taking Responsibility', 'Reconciling Tensions & Dilemmas', and 'Creating New Values', calling these as Agency. The concept and understanding of Agency play a critical role as guidance of how the students acquire such skills in ASPIRE, contributing to achieving the Sustainable Development Goals. Anchored in "authorial reflexivity" (Marshall, Clemente & Higgins, 2014), this study explores how the students' and postsecondary researcher-educators' social, educational and academic voices can be interwoven to realize their co-learning and co-investigation. This study takes advantage of a narrative approach. "Restorying" (Creswell, 2013) techniques let us form our multiple voices as learners, educators and researchers into one shared perspective. Empirical data was collected from the coordinator and senior students of ASPIRE through individual and group interviews, with fieldnotes. Our findings suggest that self-directed learning through autonomous awareness in global issues cultivates unique learning outcomes that are facilitated by each student's own academic interest and unique lived experiences. One of the key factors to improve the students' satisfaction in postsecondary education is having the students themselves to examine and assure what extent in the project each individual can commit and contribute in the overall projects.

54712

Enhancing Sustainability Awareness and Practice Using Bluetooth Beacons to Provide Location Specific Information to Learners

David Jennings, Southern Illinois University, United States
Meredith Wilson, Scottsdale Community College, United States

Studies linking sustainability, education, and technology frequently focus on how e-learning can reduce costs associated with transportation, facilities, and production of physical materials compared to face-to-face approaches to delivering information. A hybrid approach, where digital information and resources are directly tied to physical locations ("phygital"), potentially provides similar advantages to e-learning, but also expand sthe physical spaces that can be used to disseminate information. One of the primary technologies that can provide these links are Bluetooth Low-Energy beacons. These beacons emit signals that are picked up by mobile devices that then direct the user to site-specific information. One of the more common educational uses of this technology is in museum settings where beacons enable visitors to access resources directly related to the installation they're examining. The current work deployed beacons at sites on the campus of Southern Illinois University – Edwardsville that are related to sustainability practices or issues (recycling locations, green roofs, LEED building features, honeybee hives, artwork). While still in the initial developmental stages, beacons have already been incorporated into several class activities, and are targeted for inclusion in campus tours for students, parents, and the general public. The frequency of beacons access is recorded by each individual beacon and will be used to evaluate the effectiveness of specific locations in stimulating interest in sustainability.

55075

Special Needs Education in the Japanese Secondary School: Perceptions of Japanese Teachers of English

Christoper Hale, Akita International University, Japan
Satoko Ono, Akita International University, Japan

With the current emphasis on communicative language teaching (CLT) in second and foreign language teaching contexts, much of the discussion has been on curricular design and reform of traditional-learning delivery systems. This is particularly true in Japan, with the Ministry of Education, Sports and Technology (MEXT) placing heavy emphasis on students' communicative abilities over test-taking prowess. The rationale has been that communication should be the over-arching goal of English education. Overlooked in this environment of reform has been how students with special needs, such as those with learning disabilities like Dyslexia or ADHD, can be accommodated for within a system that emphasizes social interaction and willingness to communicate (WtC). In Japan, it is still relatively uncommon to separate students with special needs from other students, meaning that they are left to cope with language (as well as other) learning which is delivered at a pace that is often beyond their cognitive capabilities to maintain. This poster presentation represents preliminary research into how Japanese teachers of English (JTEs) perceive their readiness in addressing the needs of such students, and what specific concerns they may have in ensuring a productive and healthy classroom learning environment.

55129

A Need to Support Teacher Diversity Through Culturally Relevant STEM Education at the Elementary School

Neha Anand, University of Houston, United States
Ananthi Shankaranarayanan, University of Houston, United States

The United States and European nations are persistently engaged in advocating the need for culturally relevant practices for the diverse student population to achieve maximum student participation and engagement in mathematics and science (hereinafter referred as MSED). However, there exists a huge gap in preparing mathematics and science teachers who could implement culturally relevant practices for the diverse population in the United States (Menshah, 2010 & Sleeter, 2011). Students participation, from marginalized communities, in MSED depending on their family background, awareness of higher education courses, and assistance with preparation exams like SAT and ACT (Rawal & Decosta, 2019). This study argues that there are bright possibilities of increasing the marginalized students' participation in MSED through preparing teachers for culturally relevant practices from early grades, through lived experiences of two Indian teachers who are also doctoral candidates at a Southwestern university in Texas. This study investigated two female Indian teachers, engaged in teacher education preparation program in a tier one university in southeast Texas. Findings based on auto-ethnography identified culturally relevant mathematics and science education (MSED) as a tool to improve language learners' participation in the content areas mentioned. Preparing pre-service teachers with an MSED focus could promote a stronger foundation in mathematics and science for elementary level students, by eliminating their biases such as mathematics and science as a pre-dominate field for ethnically White or Asian students only.

55151

Design and Implementation of "Spoc Teaching Mode" for Fostering Creativity

Haiming Jiang, Japan Advanced Institute of Science and Technology, Japan
Eunyoung Kim, Japan Advanced Institute of Science and Technology, Japan
Xiaolin Sun, Dalian Polytechnic University, China

SPOC (Small Private Online Course) has been widely used in higher education all over the world for its ease of access due to advanced information technology. Pursuing the successful future career, students in the higher education needs to develop their creativity skills and professional knowledge. Therefore, higher education should focus on the cultivation of creativity and professional knowledge through SPOC. This study aims to establish a "SPOC Teaching Mode" for fostering students' creativity, by integrating online resources with classroom activities in order to develop a creative and professional education. The application of the mode is expected to encourage students to actively engage in autonomous learning activities, by practicing problem-finding and problem-solving skills, furthermore, facilitate students' professional knowledge learning as well as enhance their creativity in the professional field. A two-group experiment was conducted to evaluate the applicational effect, one group is a control group, the other group is an experimental group. The first group utilized the traditional teacher-centered strategy, while the second group utilized the SPOC teaching mode. Finally, a survey questionnaire was distributed to participants to test their creativity. Then an independent sample t-test was conducted to compare differences between the two groups in creativity and professional knowledge. Additionally, an extra questionnaire was distributed to the experimental group in order to evaluate participants' views about SPOC teaching mode. The findings suggest that the SPOC teaching mode may promote participants' creativity as well as specialized knowledge in comparison with a traditional teaching mode.

55264

Power System Reliability and Resilience: A Comparative Analysis of Challenges and Opportunities

Rajesh Karki, University of Saskatchewan, Canada
Safal Bhattarai, University of Saskatchewan, Canada
Prasanna Piya, University of Saskatchewan, Canada

Power system reliability is a well defined subject of study in engineering practice with established quantitative metrics, regulatory standards, compliance incentives and jurisdiction of responsibilities. The effects of high-impact low-probability (HILP) events such as hurricanes, floods, ice storms, earthquakes, geomagnetic disturbances, cyber-physical attacks, etc. are not generally considered in routine reliability evaluation. Growing concerns over severe power outages due to HILP events have motivated power utilities, policymakers, and regulators to consider resilience in system operation and planning. In contrast to reliability study, power system resilience is a relatively new area of study lacking widely accepted standards, assessment methods or metrics. This work explores and reviews models, methodologies, and metrics proposed in available literature for power system resilience assessment. A large portion of the literature present resilience models and metrics similar to that used in the reliability studies, which often creates delusion for researchers and engineers. There is a need to distinguish the models and metrics used in reliability versus resiliency assessments and narrow down the overlap. This paper provides a comparative analysis of reliability and resilience models and metrics in order to clarify the similarities and distinctions between them. The paper also presents discussions on the importance of applying resilience studies at different levels and jurisdictions of a power system.

55296

Analysis of Characteristics of Students' Inquiry Problem Finding Process

Bongwoo Lee, Dankook University, South Korea
Heekyong Kim, Kangwon National University, South Korea

Scientific inquiry, along with scientific knowledge, is the most important area of science learning. Although many countries make many efforts to increase students' inquiry ability, students have many difficulties in carrying out the inquiry. In particular, the greatest difficulty in carrying out inquiry activities is deciding the theme of inquiry. Why do students find it difficult when they try to determine inquiry questions? The purpose of this study is to analyze the students' process of finding inquiry problems. In this study, 33 university students conducted a group inquiry over about three months. We analyzed the interview with students, found some features. Here are some of the key features: First, in the inquiry of high school students, the steps such as 'selecting keyword, presenting a complaining, presenting a question, and finding a inquiry problem' were found, but, in the university student's inquiry, there was no stage of 'presenting an inconvenience'. Secondly, in the inquiry of high school students, strategies such as 'searching information, review of prior research, sharing of knowledge and experience, linking and extension of knowledge and experience, environmental awareness, expert consultation, discussion of suitability, elaboration' were used. But, in college students' inquiry, strategies such as 'searching information, review of prior research, conducting simulation tests and expert consultation' were mainly used. In this presentation, the characteristics of the process of selecting inquiry problems of college students are compared with those of high school students, and the results are presented along with actual cases.

55370

A Comparative Study of Three Mathematical Models for Predicting the Indoor Environment Quality (IEQ) in Secondary School Classroom

Zhiheng Li, Japan Advanced Institute of Science and Technology, Japan
Eunyoung Kim, Japan Advanced Institute of Science and Technology, Japan

Indoor environmental quality is considered as an important indicator to reflect the occupants' comfort level in buildings. However, it is difficult to evaluate the impact of physical parameters on the occupants' comfort

individually because of the coexistence of parameters and their interactions with each inhabitant. The objective of this research is to find out the best-fit mathematical model to predict comfort condition for secondary school by comparing three different models: Iordache's IEQ model, Wong's multivariate-logistic model and Ncube's IEQ model. The best-fit model is applied as a supporting theory for the subsequent interior environment design, which can improve the learning performance of students. In addition, this research can obtain the relevance and difference between models, which provide support for the model identical. This research collected data by combining objective measurement with subjective survey. The whole experiment was conducted in a secondary school classroom in northeast of China, with a sample of 45 students. Data were collected once a week during the two-month experiment. The relevant environmental parameters from the collected data were brought into three mathematical models to calculate the corresponding thermal index, air quality index, acoustic index and visual index. Meanwhile, Actual Mean Votes (AMV) and Actual Percentage of Dissatisfaction (APD) were measured by analyzing the questionnaire from subjective survey to obtain the corresponding AMV and APD curves. The results showed that Wong's multivariate-logistic model is best-fit comfort prediction for secondary school by comparing the calculated indexes and the corresponding AMV and APD curves through the SPSS and MatLab.

55371
Preservice Teachers' Beliefs about Teaching in Physical Education Classes in Japan
Kengo Kakazu, Okinawa University, Japan

Teachers' beliefs form an important background to their teaching practices and thought processes. These beliefs are particularly formed during the teacher training process. However, there are very few studies on teachers' beliefs in Japan, and the cumulative research data is insufficient. The purpose of this study is to clarify the beliefs of physical education student teachers (PESTs) regarding the teaching of physical education. In addition, this study aims to examine the formation of beliefs related to teaching practices using two PESTs as case studies. Twenty-eight PESTs nearing the end of their teacher training participated in the study. Data were collected through a description-type questionnaire, which included questions such as: 'What kind of physical education class are you aiming for? Please write your thoughts'. Data were analysed inductively via all participant text descriptions. The PESTs' beliefs about teaching physical education are divided in two domains: the aim and the environment of physical education classes. The former comprised fun classes, skill improvement classes, emotion and attitude improvement classes, and classes that understand the basics of skills and knowledge. As regards the latter, these classes had an environment of cooperation and active student engagement. The case study of two individuals suggested that the formation of student teachers' beliefs regarding physical education classes were influenced by the real situations of children and instructions from colleagues during the teaching practice.

55373
Promoting Autonomous Learning Through a Reflection Tool
Ross Sampson, Kanda University of International Studies, Japan

In order to be autonomous, students often need to learn how. In Japan many first students enter university lacking the necessary skills to self-direct their learning. Skills like self-evaluation and reflection. Boud, Keogh and Walker (1985) argue that reflective learning aims to develop learners to have the ability to monitor themselves in a variety of situations. The presenter will give details about an on-going research project at a university in Japan. In this project student participants reflect on their in class speaking, one aspect of their English language learning. The results so far have shown many student participants are able to self-evaluate their strengths and weaknesses, as well as express their thoughts about their feelings towards speaking English through writing and talking about it. This reflection tool started out digitally but then moved to being paper based. The researchers involved in this project are working to make the tool into a web application in the future. The intention is to have an attractive application for learners so they are able to reflect on a range of aspects of their learning both in and out of the class and become more autonomous.

55391

Applications of Multi-Walled CNT for Utilization of Solar Thermal Energy

SungWon Kim, Korea National University of Transportation, South Korea
Kyeong Hwan Go, Korea National University of Transportation, South Korea
Sae Han Park, Korea National University of Transportation, South Korea

There is a growing interest in the SHC (solar thermal collectors for heating and cooling) technology in order to produce energy of medium temperature below 300 oC such as gas preheating in industrial plant including thermal power plant which is responsible for a very high fraction of fossil fuel consumption and CO_2 emission. A directly-irradiated fluidized bed solar receiver is one of the best options for the SHC application in the industrial plant. The thermal efficiency of the receiver is strongly influenced by the physical properties of the heat-absorbing particles. Carbon nanotube (CNT) could be a promising candidate as bed materials due to its high specific surface area, high thermal conductivity and high thermal resistance under an inert atmosphere. However, it is difficult to handle the CNT powder in the fluidized bed because of the cohesive force between nanotubes on the particles. A method of multi-walled CNT beads preparation with a control over the macroscopic shapes has been proposed for application in the solar thermal collector. The CNT beads of 1.6-1.0 mm were prepared by ball dropping, drying and calcination steps after the CNTs dispersion using m-cresol as a cost-effective processing solvents. The CNT beads show much higher bed conductivity of 0.49 W/mK and lower repose angle (< 30o) with higher particle circularity compared to the raw CNT powders. Finally, the prepared CNT beads have good fluidization behavior in a fluidized bed solar system, indicating promising bed material suitable for the direct gas-solid heat transfer in the fluidized bed.

55393

Healthy Keiki Lifestyle Training for Dental Hygiene Students: Improving Oral Health and Reducing Obesity in Children

Deborah Mattheus, University of Hawaii at Manoa, United States
Maureen Shannon, University of California at San Francisco, United States
Katherine Burke, University of Hawaii at Manoa, United States

Childhood obesity is a major problem in the United States. Overweight children are at higher risk for chronic diseases and are often subjected to bullying resulting in low self-esteem. A positive relationship exists between diet and dental caries and therefore dental professionals have an opportunity to impact health through proper oral and nutritional assessments/education delivered to children and families. The dental hygiene program (DHP) at the University of Hawaiʻi at Mānoa (UHM) provides educational opportunities for individuals to obtain their BS and produces 80% of the state dental hygiene workforce. For dental hygiene (DH) students to gain clinical experiences with children the UHM SONDH developed a "Healthy Keiki Lifestyle Field Trip". The field trip allows for head start keiki to receive healthy lifestyle assessments/education and dental assessment/care at the UHM dental clinic. The healthy lifestyle session includes: obesity risk factor assessment; good and bad foods for teeth game; know your fruits and vegetables; and coloring station. With head start staff present at the healthy lifestyle session and dental visits, the education provided can be reinforced and discussed with family members at future encounters. The identification of obesity risk factors in children and delivery of healthy lifestyle education with children and families can be easily integrated at each and every dental encounter. Training our future dental hygienist and increasing provider's confidence in providing health promotion and disease prevention can increase the probability of successful implementation of these practice standards in their future work environment.

55475

How to Teach Clinical Assessment Skills Effectively: The Effects of Frequent Self-monitoring, Group Work, and the Use of Web Applications

Mayumi Hirozane, Teikyo Heisei University, Japan

Introduction: Teaching clinical assessment skills is difficult, even though frequent confirmation of understanding and group work facilitates active learning. These procedures are also time-intensive. This study aims to verify whether frequent self-assessments and group work facilitate active learning, and if web applications promote timesaving.
Experiment: 1. Participants: Forty-one third-year speech–language–hearing therapy students participated. Methods: 1) All students participated in a class on cognitive communication disorders (CCD) and the Cognitive Communication Checklist for Acquired Brain Injury, Japanese version (CCCABI-J). It included four lectures, one clinical practice, and three group work sessions. 2) Students evaluated their understanding of the CCCABI-J five times, and individual feedback was provided. 3) A questionnaire asked if the five self-evaluations were useful, and if the group work promoted active learning. 4) Quantitative and qualitative analyses were conducted. The KH coder (Higuchi, 2015) extracted frequently used words for the qualitative analysis. Results: Most (95%) students deemed self-evaluations useful, and 88% reported spending more time preparing and discussing than in other courses. The KH coder indicated that students who understand the CCCABI-J "well" or "well enough" "participated in group work in comparison with other courses," and "spent more time for the group work."
Method: Calculate the time required for teachers' typical preparation of self-monitoring and feedback and when using a web application. Results: On average, the web application saved one hour of work. 4. Conclusion. Frequent self-monitoring and group work influences students' motivation positively. The results suggest web applications are useful timesavers.

55495

An Image Study on the Outdoor Play of Pre-service Early Childhood Teacher in South Korea

Eun Ju Kim, Pusan National University, South Korea
Jeong Mi Kim, Pusan National University, South Korea

This study explores the outdoor play experiences of pre-service early childhood teachers'. We asked teachers to draw pictures of their outdoor play experiences in kindergarten. The study was conducted on 180 pre-service early childhood teachers attending the Department of Early Childhood Education at the University of B, South Korea. We analyzed the pictures and it was observed that, kindergarten outdoor play experiences that the teachers remember are as follows. First, they remembered this play as a dynamic experience as it was an outdoor activity. They also remembered it as encounting with various lives, as leisurely interaction with different people, as a special experience that they had for the first time. On the other hand, some of the teachers were unfamiliar with the experience as they did not have memories of outdoor play. People live on the memories of their childhood. Outdoor play memories of pre-service early childhood teachers' could have an impact on how they view and practice outdoor play as teacher. The results of this study show that positive images of outdoor play in kindergarten are important for outdoor play of early childhood. In addition, the fact that pre-service early childhood teachers who have not experienced outdoor play and can not familiar with the experience suggests that they need practical education to understand the value and practice of outdoor play.

55501

Language Program Evaluation from the Students' Perspectives

Reginald Gentry, University of Fukui, Japan

Evaluations are necessary to determine the value, worth, merit and/or significance of a program by collecting information to better communicate its impact on others, and thereby assisting decision-makers with judgments that affect a program. The current study describes how an evaluation was used to implement

feedback from twenty-two Japanese university students who participated in a summer intensive English language program in Japan. The participants completed a twenty-five item questionnaire upon completion of the program. Individual semi-structured interviews were held with the participants to reconfirm the reported information and to clarify any ambiguous replies. Results indicated which aspects of the program met the students' expectations; which aspects needed to be reviewed and revised; and which aspects of the program should be promoted. Additionally, the information was shared with program administrators who used the data to investigate specific aspects of the program, thereby increasing their active involvement in the program. Furthermore, the study highlighted the importance of using ongoing evaluations from the participants' perspectives to ensure that program administrators will be able to make informed decisions regarding learning objectives, goals, and outcomes while addressing the desired needs of the learners.

55514

Do Eye Movements Visualize the Thinking Process of the Mental Formation of Geometric Figures?

Naoko Okamoto, Ritsumeikan University, Japan
Yasufumi Kuroda, Kyoto University of Education, Japan

The relationship between solid figures and nets is an important topic in geometry education. Understanding the correspondence of the faces-to-faces, edges-to-sides, and vertices-to-vertices between the solid figures and the nets is crucial. However, to mentally imagine three-dimensional solid figures from two-dimensional nets or to mentally imagine two-dimensional nets from three-dimensional solids is one of the most difficult problems not only for students to solve but also for teachers to teach. The reason why teachers experience difficulties is because it is hard to capture students' thinking processes through outward observations. Furthermore, only a minor part of the mental process that students go through in search of a solution gets captured on paper. It is necessary to develop several ways to visualize the students' thinking processes. Measuring eye movements may be a useful means of visualizing the students' thinking processes. This is an objective method that allows users to record what people have looked at. The advantage of this method is that even unconscious eye movements can be recorded. The purpose of this study is to visualize the thinking process and to examine its characteristics by conducting an eye movement measurement experiment during the mental process of forming solid figures from nets. Based on the result of this experiment, conducted on 10 university students, we found that focus points differed between participants who were able to solve the task within a short time and those who took a long time.

55544

Relationship Between Mindfulness and Stress Response in Japanese Nursing Students: Focus on the Impact of Sense of Coherence

Yukako Ando, Nagoya City University, Japan
Kanako Yamauchi, Hiroshima International University, Japan
Ryoko Ohara, Aichi Prefectural University, Japan
Yuki Ito, Nagano College of Nursing, Japan
Shiho Hasegawa, Nagano College of Nursing, Japan
Shunsuke Aoki, Nagano College of Nursing, Japan
Toshio Kobayashi, Ishii Memorial Hospital, Japan

To help nurses preserve their mental health while working, mental health education must be imparted to nursing students. Mindfulness has been shown to be effective in reducing stress responses. Mindfulness aims to cultivate ways to cope with negative thoughts, but the mechanism for doing this is not clear. We examine how Sense of coherence（SOC）, a stress-coping skill, affects the relationship between mindfulness and stress response. Self-reporting questionnaires were distributed among the nursing students (n = 166) of two universities in Chubu, Japan. We measured stress response using the Perceived Stress Scale developed by Cohen et al., and mindfulness using the Mindful Attention Awareness Scale (MASS) developed by Brown et al. We used Yamazaki et al.'s short Japanese version of Antonovsky's SOC scale. From previous studies, we created a model where mindfulness affects stress response via SOC, and

calculated its degree of fitness for our data by covariance structure analysis. The valid response rate was 74.7% (130 of 174). By the covariance structure analysis, mindfulness was found to have an effect on SOC (β = 0.53, p < 0.001), and SOC on stress response (β = -0.72, p < 0.001). Thus, mindfulness is shown to influence stress responses by increasing SOC. The goodness-of-fit of the model is: GFI = 0.999, AGFI = 0.997, and RMSEA < 0.001. We conclude that mindfulness can help reduce stress among nursing students. We suggest that it should be a part of their mental health education.

55576
The Antecedents of Job Burnout in Korean Employees
Shine Eunji, Chungnam National University, South Korea

Job burnout is a psychological syndrome brought on by long-term, unresolved, work-related stress, and has important implications on employee well-being, effectiveness and growth. However, there is not much empirical study to identify which job demand(s) would be the major antecedents of job burnout in Korean employees. Drawing from conservation of resource theory and job demands-resources model, we hypothesized that job insecurity and job demands (i.e., role ambiguity, workloads, time pressure, emotional labor, and physical demands) are positively related to three sub-dimensions of job burnout: exhaustion, cynicism, and reduced professional efficacy. Multiple regression analyses of data from a representative sample of 29,830 Korean employees showed that job insecurity and job demands significantly predicted job burnout after controlling for demographic variables (i.e., gender, age, tenure, and income). However, the effects of the antecedents are different across sub-dimensions of job burnout. For example, job insecurity is the strongest predictor of exhaustion and cynicism, while role ambiguity is the strongest predictor of reduced professional efficacy. Further, time pressure is positively related to exhaustion and cynicism, as expected, but is negatively related to reduced professional efficacy. The implications and future research of these findings are discussed.

55608
Sustainable Disease Management in Aquaculture
Andrew Wargo, Virginia Institute of Marine Science, United States

World dependency on aquaculture is rapidly expanding, particularly in developing nations. Aquaculture recently passed fisheries as the primary source for aquatic based food and natural products worldwide. There is high potential for aquaculture to become one of the most sustainable sources of animal protein for human consumption. As with agriculture, disease management in aquaculture is a major hurdle for production. Various strategies are utilized to manage disease in aquaculture, such as antibiotic treatment and vaccination. However, many practices can lead to increased disease management problems in the long-term, thus reducing aquaculture sustainability. This presentation will provide an overview of some of the disease management sustainability challenges faced by aquaculture, and provide some possible solutions. Specific examples of antibiotic treatment and vaccination approaches will be highlighted, with quantitative data from research studies. This work is directed towards bolstering aquaculture and food security sustainability.

55823
The Strength Property of Amorphous Metallic Fiber Reinforced Mortar with Blast Furnace Slag Powder
Sejin Choi, Wonkwang University, South Korea
Tae gue Oh, Wonkwang University, South Korea

Blast furnace slag powder (BFSP), the by-product of steel industry, has been widely used in the production of cement mortar or concrete as one of the cementitious materials. The benefits of using BFSP in cement mortar or concrete are as follows: it can reduce the concrete production cost; it can reduce the green gas (CO_2) emission of cement industry; it can reduce the possibility of a thermal crack in mass concrete; and it

can improve the durability of cement mortar or concrete. In South Korea, blast furnace slag is produced about 15 million tons a year. However, much of this is treated as waste and dumped in landfills. In this study, the strength properties of eco-friendly mortar using BFSP and the amorphous metallic fiber (AMF), which has excellent corrosion resistance and mechanical properties, were investigated. The BFSP was used to replace 40% of the cement content by the weight. In addition, the AMF with 15mm length was used at additional content of 0, 10, 20, and 30 kg/m3. Test results indicated that the flexural strength of Af30 sample with 30kg/m3 of AMF was approximately 49% higher than that of the control sample.

Saturday Session I: 09:00-10:40

Room: *To be Announced in Final Schedule*
Session Topic: Learning Experiences
Session Chair: *To be Announced in Final Schedule*

53942
Learning Ecologies: From Past Generations to Current Higher Education
Cláudia Lima, Universidade Lusófona do Porto, Portugal
Heitor Alvelos, University of Porto, Portugal
Susana Barreto, University of Porto, Portugal
Eliana Penedos, University of Porto, Portugal
Nuno Martins, ID+: Institute for Research in Design, Media and Culture, Portugal

This paper reports on the ongoing establishment of a basis for a re-consideration of the way the contributions to knowledge, culture and social fabric of ageing Portuguese scholars may be recognized, communicated and activated in future contexts. The project stems from an analysis of the professional life and work of Portuguese scholars graduated at the School of Fine Arts of Porto (ESBAP), during the 1960s and 1970s, a period marked by the country's political Revolution of April 25th, 1974, with deep socio-cultural repercussions. The analysis was performed following semi-structured interviews carried out with informants who attended the School to later become professors. Their testimonies reveal a contrast in learning from being a student and being a lecturer; they provide valuable insights into their personal creative journeys in light of their commitment to education and how their efforts have helped maintain related formal and tacit streams of traditional knowledge, within rapidly changing cultural and socio-political environments. Despite the scarcity of means in the early days, most of the interviewees remembered their time as students with affection and a strong sense of belonging. The knowledge transfer from lecturers was often insufficient, but the creative environment and cross-fertilization was a long-standing asset.

53591
Transformational Leadership and Policy: Critical Times, Critical Issues
Dolapo Adeniji-Neill, Adelphi University, United States
Donna Elam, Elam Leadership Institute, United States

These are critical times in education, where increased accountability for achievement, new standards for rigor in curriculum are mandated while the achievement gap still exists for many groups of students from diverse backgrounds, abilities and disabilities. We examined strategies and structures that addressed these areas under strong and innovative leadership. Through qualitative inquiries, nine innovative and transformational leaders shared their successes on how to turn failing schools into effective and thriving schools. We concluded that Leadership matters. Introduction: Twenty-two percent of the children in the U.S. live at or below poverty level. Students living at or below poverty level tend to have the highest dropout rates. Studies show that students who do not get enough food or sleep are less likely to perform at their full academic potential. Schools know these truths first-hand, and despite efforts to provide students with basic essentials, teachers, administrators, and other policy makers know there is no equitable distribution of resources. Compounding these issues are poor environmental conditions of the schools in low-income neighborhoods. Our research emphasizes triumphs amid the aforementioned adversities. It features the stories of nine transformative leaders who created positive change in failing schools. Methodology: The research method used was Personal Interviews of educational leaders from principal to Superintendents and above. 9 leaders (Principal, superintendent, Commissioner) were interviewed for the purpose of the study. Each Interviewee were asked 15 Questions. Each interview was approx. 90 minutes.

54182

Adding Value to the College Experience: Using Co-curricular Transcripts to Enhance Student Learning

Leslie Scamacca, LaGuardia Community College, United States

In a 2017 college student Strada-Gallup survey, a mere one-third of the respondents believed that their college experience adequately prepared them for success in both the job market and in the workplace. By maintaining the academic status quo, the gap is widening between what students can synthesize and express about their college experience, and what employers hear during interviews. Thomas (2018) suggests bridging this gap takes more than updates to a resume. Student involvement provides a strong base for the development of leadership, interpersonal skills, and critical thinking; all high-demand skills with employers. The use of career-relevant education and the co-curricular transcript are tools that can help educators support students in building strong connections between academia and the workplace. The co-curricular transcript offers an official record of all student activities beyond the classroom, and how these college experiences truly complement their academic work (Thomas, 2018). The co-curricular transcript delves deeper than traditional participation in student clubs and organizations. Co-curricular learning includes experiential and service learning like intern- and externships, study abroad programs, volunteering, and attending conferences. For the employer, surely the co-curricular transcript can corroborate activities listed on a resume. However, well-developed and supported co-curricular learning encourages students to connect their in- and out-of-classroom experiences in a meaningful way. Students are able to articulate their learning outcomes in a way that demonstrates value to a potential employer. In this presentation, the author will discuss efforts at an urban community college to implement co-curricular learning through the Digication platform of ePortfolio.

53632

Developing Resilience and Life Mastery Skills in the Classroom – A Multiple-case Study Comparing a Norwegian and Peruvian Context

May Olaug Horverak, Birkenes kommune, Norway

Despite different circumstances, something is universal for pupils across the world; they need motivation and resilience to succeed. This is what the current study is about; how to facilitate for increased motivation and development of life mastery skills in the classroom so that pupils are resilient when they meet obstacles in their learning and in their lives in general. The study is part of a project called «A Systematic Approach – the five-step Motivation Method», which started in the southern region of Norway and has spread to new contexts such as Peru. The presentation aims at describing examples of what pupils around the age of 10-12 years in Norway are concerned with compared with pupils in a Peruvian context. The five-step motivation method applied in this study is based on Ryan's and Deci's self-determination theory, stating that in order to develop inner motivation, pupils need to feel autonomy, competence and relatedness. To support the pupils to achieve this, we ask them to go through the following five steps 1) define what is important in life, 2) define success factors; skills and what is positive in life 3) define possible obstacles, 4) decide what to focus on and 5) decide how to carry this out. This process is partly carried out as a class discussion and partly through anonymous individual writing. The pupils take control of their own lives and their own learning, and at the same time, they take active part in a learning environment, finding solutions to possible obstacles

Saturday Session I: 09:00-10:40

Room: *To be Announced in Final Schedule*
Session Topic: Foreign Language Education
Session Chair: *To be Announced in Final Schedule*

55397
English Language Teaching Innovation from the Learning Strategies of High-performing Students in a Government University in Ayutthaya, Thailand
Suwaree Yordchim, Suan Sunandha Rajabhat University, Thailand
Kantavee Wiengsima, Suan Sunandha Rajabhat University, Thailand
Rujika Thammalaksamee, Suan Sunandha Rajabhat University, Thailand

This study aims to (1) investigate students' English learning strategies, (2) analyze the learning strategies of high-performing students, and (3) construct innovative lesson plans based on successful learners. The purposive sample included 35 students majoring in English for International Communication who enrolled in 22 English-related subjects at Rajamangala University of Technology Suvarnabhumi. This study used a mixed-method research approach combining quantitative and qualitative methods. The two instruments were (1) a questionnaire and (2) focus group interview forms. They consisted of 50 items with six learning strategies: Memory, Cognitive, Compensation, Metacognitive, Affective and Social. Semi-structured interviews were conducted with five high-performing students. The research methods were (1) the questionnaire was filled out by the sample group (2) five high-performing students were selected for the focus group interviews, and (3) the findings from the interviews were utilized for the creation of the lesson plans. The data were statistically analyzed with mean and standard deviation values. The findings are: (1) students' English learning strategies are Memory ($\bar{x}$ = 3.55), Cognitive ($\bar{x}$ = 3.86), Compensation ($\bar{x}$ = 3.71), Metacognitive ($\bar{x}$ = 4.28), Affective ($\bar{x}$ = 3.6) and Social ($\bar{x}$ = 3.7); (2) the learning strategies of high-performing students are memorizing new vocabulary as pictures and connecting them with the context, building up new vocabulary and expressions by watching online game casting, and joining social network sites such as Tinder, Hello Talk, etc.; and (3) the six lesson plans based on the successful learners are as follows: Exploring the world, Vlogging yourself, etc.

54300
The Effect of Foreign Language on Moral Decision Making
Arnold Arao, Osaka Ohtani University, Japan

Would you sacrifice one person to save a group of five people? This kind of moral dilemma juxtaposes deontological ethics against consequentialism. It presents the problem of balancing doing what is right against the common good. Such morality forms the foundation of our identity as citizens. However, does this morality change when the problem is posed in a different language? This has been the focus of recent research into the effects of the Foreign Language Effect on moral judgement (MFLE). This experiment examined whether and how the MFLE affects moral judgement of non-native speakers of English. The findings suggest that foreign language does influence moral decision making. Moreover, there was evidence supporting the hypothesis that a problem presented in a foreign language attenuates cognitive functioning toward the deliberation of consequences rather than blunting the emotional and moral reactions to right and wrong. Such findings have a wider social implication, particularly in an increasing globalized world where individuals often engage in decision-making involving communication in a foreign language.

54637

A Case Study: Students' Expectations and Satisfaction in Short-term English Language Training Programs Abroad for Engineering Students

Tae Ito, Toyota Technological Institute, Japan

It is an urgent task for Japanese universities to foster students as "global human resources" in response to the competitive global economy. Engineering students often get a job at a multinational manufacturing company; therefore, it is important for them to improve English skills and have experiences abroad. However, a language training program in America is expensive and is not affordable for many students. Therefore, a program was started in Asia (Malaysia and the Philippines) as the cost is reasonable. The purpose of this study is two-fold: (1) to find out if there are any changes in students' English language skills before and after participating in a program and (2) to examine if there are any differences in students' expectations and satisfaction between students who studied in the different learning settings, America, Malaysia and the Philippines. For these purposes, pre- and post-English proficiency tests, TOEIC, and pre- and post- questionnaires including 22 questions were conducted. The result showed the difference between pre- and post-test scores of the group which went to America was statistically significant but not the other groups. The pre-questionnaire asked their degrees of expectations for English study and cross-cultural experiences. The post-questionnaire asked to what extent their expectations were fulfilled. The result revealed that the overall satisfaction of the three groups was almost the same and many participants found great values in their experiences and were motivated to study English, and to go abroad again. Therefore, a college should prepare various programs for various students' needs.

54232

The Effectiveness of Biology Modeling with English Learners: A Multiple Case Comparison Study

Kathy Malone, Nazarbayev University, Kazakhstan
Kristina Cameron, Westerville City Schools, United States

The use of Science Modeling, specifically Modeling Instruction, has been shown to be very effective in the learning of science content in multiple disciplines at the secondary level. However, the benefits of using this pedagogy with English Learners (ELs) has not been assessed. In addition, there is a need for research concerning methods that will help to close the science learning gap between ELs and non-ELs which is a social justice issue. This paper presentation attempts to fill these gaps. The effectiveness of this method with ELs was assessed using a mixed-methods comparison case study design. The three cases compared included an EL modeling biology cohort (taught in a sheltered classroom), a non-EL modeling biology cohort and a non-EL traditional biology cohort. The goal of this study was to examine shifts in conceptual understanding in all three cohorts. The High School Biology Concept Inventory was used to determine student gains in biology knowledge from pre to post-assessment. The normalized gain (Ngain) was calculated to assess the effectiveness of the pedagogy. The Ngains for both Modeling Instruction cohorts, EL and non-EL, were very close and significantly larger than that of the non-EL comparison (i.e., traditional) cohort (i.e., 0.17, 0.14 and 0.07, respectively). Thus, Modeling Instruction holds promise towards helping to decrease the science gap between ELs and traditionally taught non-EL students. MI could be one method that could help towards alleviating this social justice issue.

Saturday at a Glance
January 11, 2020

09:00-10:40   Parallel Session I

10:40-11:00   Coffee Break

11:00-12:40   Parallel Session II

12:40-13:40   Lunch Break

13:40-15:20   Parallel Session III

15:20-15:40   Coffee Break

15:40-16:30   Parallel Session IV

18:00-21:00   Conference Dinner (Optional Ticketed Event)
Meeting time & location: 17:15 at 317 (3F)
Group leaves for restaurant at 17:30

The International Academic Forum

Saturday Session I: 09:00-10:40

Room: *To be Announced in Final Schedule*
Session Topic: Lifelong & Distance Learning
Session Chair: *To be Announced in Final Schedule*

55575
A Practical Theory of Lifelong Learning Assistance for Promoting Community
Hidekazu Sasaki, Utsunomiya University, Japan

Lifelong learning is a concept that targets not only adults including the elderly but one that involves all generations from the time of birth to death. From an originally theoretical viewpoint, this concept should be accompanied by radical changes in the traditional concept of education and schooling. Politically, lifelong learning has been one of the most important elements of the Japanese educational reform for almost 40 years, since it was first provisionally defined in the Central Educational Council Report (1981) titled "On Lifelong Education." Of course, community promotion has never been the main aim of activating each citizen's learning activity, but it has very often been reported that promoting lifelong learning activities throughout a particular region led to effective promotion of the community. An accumulation of the richness of human relationships created through their learning activities, including mutual face-to-face encounters, seems to have resulted in optimal social efficiency owing to the active collaboration among citizens. It is for this reason that I insist that education in the new era must be redefined, not only as the teaching of individuals but also as the fostering of mutual trust, even though the content of educational evaluation tends to be exclusively restricted to each individual. In this presentation, I would like to share some theoretical ideas about lifelong learning assistance that can function as both analytical guidelines and pragmatic indicators and explore a new practical methodology of education, paying attention to educational efficacy in community planning.

55502
What is Missing in the Process of Poverty Alleviation?
Jianhui Zhang, University of Hawaii at Manoa, United States

Taking alleviating extreme poverty as the top priority, the World Bank has conducted many projects in achieving this goal, such as increasing health, promoting educational access for girls, and so on (World Bank, 2018). All these projects that invest in human capital work to boost the economy and reduce poverty. However, a close look at the World Bank projects revealed that that ethics education is missing in these projects. Even though the Bank has its own Ethics Department guiding the behaviors of its employees, the projects it conducted in countries in poverty does not involve ethics education, an essential element in poverty alleviation. Other than explaining why extreme poverty exists and why certain groups of people keep returning to the poverty stage while receiving support from the government, this article takes China as an example based on scholarly publications to explain why ethics education is necessary in the World Bank poverty alleviation projects. Based on the literature review, this article argues that it is crucial to offer opportunities for those who do not have access to discover alternative lifestyles due to limited resources and low socioeconomic status and to facilitate people to determine a life goal in order to eliminate extreme poverty effectively.

54655

Applying Critical Incident Analysis to Processes of Reengagement in Formal Learning

Tauri D'Eatough, University of Technology Sydney, Australia

The use of Critical Incident Analysis (CIT) as both a qualitative research method and a reflective teacher education and professional practice tool, has progressively gained relevance at all levels of education, since its early application to the training of American pilots during World War 2 (Flanagan, 1954). For example, in Australia, by 1993, CIT had been pioneered in both undergraduate teacher education (Tripp, 2012) to support educators in securing more diversified learning outcomes for higher education students. This presentation reports on a research project undertaken within a qualitative framework, adopting a critical interpretive emancipatory form of CIT analysis, and incorporating an Indigenous methodological lens described as the Cultural Interface (Nakata, 2007). It provides an expose of the development of the technique of Critical Incident Analysis, including the steps involved in the construction of critical incidents in an educational setting. It identifies how the resultant data may become a platform for subsequent analysis of approaches and strategies specifically designed to improve educational outcomes for mature-age Indigenous tertiary learners. The research addresses the complexity of using memory recall in research, and the related issue of utilising subjective evaluation and interpretation of criteria, as determined by the researcher, in seeking to define categories of 'criticality'. Lastly, the presentation sets out preliminary findings in relation to the application of CIT analysis to adult learning, particularly in relation to Indigenous adults re-engaging with formal learning based on a pattern of 'broken education', a phenomenon arising from dislocation in formal learning, often resulting in long-term disengagement.

55516

Legitimate Peripheral Participation (LPP) in Community-based Child-rearing Support Centers (CCSCs)

Atsushi Nishio, Aichi Toho University, Japan

Legitimate peripheral participation (LPP) represents how newcomers become experienced members and eventually experts of a community of practice (Lave & Wenger 1991). The purpose of this study is to investigate the developing LPP process in Community-based Child-rearing Support Centers (CCSCs) through qualitative research on the process that the participants (parents) experience mutual communications and acquiring knowledges and skills. The Japanese government has expanded child-rearing support via the Community-based Child-rearing Support Centers (CCSCs) in recent twenty years. They are open spaces for infants and parents in the community, where they can gather freely, communicate with each other, and share their anxieties and worries related to child rearing. We observed different types of social exchanges are prevalent among the participants including intern students and senior citizens in CCSCs. These kinds of practices embody the idea of the "socialization of childcare" by sharing it among families and people in the community. A community of practice is evolving naturally because it is through the process of sharing information and experiences with the group that parents learn from each other, and have an opportunity to observe the practices of volunteers and expert workers, and thereby to understand their own worries from another point of view. As the results of these interactions, some parents become the full time workers of CCSCs later. The results of this study show that these LPP empowering processes are important functions of CCSCs and CCSCs require to foster community of practice and involve broader community people in CCSCs.

Saturday Session I: 09:00-10:40

Room: *To be Announced in Final Schedule*
Session Topic: International Education
Session Chair: *To be Announced in Final Schedule*

55424
The Transformation of Students' Values after a Global Citizenship Program Including Short-Term Study Abroad at a High School
Akiko Harada, Keio Senior High School, Japan

The purpose of this study is to clarify the transformation of Japanese students' values and experiences several years after a Short-term Study Abroad (SSA) experience in Cambodia included in a high school Global Citizenship Education (GCE). Context: In Japan, the Ministry of Education has encouraged global human resource development in higher education since 2010. According to Rowan-Kenyon& Niehaus (2011), despite the growing popularity of increasingly SSA, little is known about how students make meaning of these experiences over the long term. This study examines a case study of a GCE at a Japanese high school, aimed to foster global citizenship through SSA in Cambodia, including one year each of prior and post learning supported by university students and teachers.
Research Methods: 1. Focused on the documents that students wrote after the SSA and their narratives eight years after the program's end. 2. Reviewed the literature on GCE to find an analytical framework. 3. Life history interviews were conducted to assess students' experiences.
Results: 1. Students' documents implied some elements of transformation among their sense of values. Some of them felt conflicted by the inequality between them and the Cambodian people. 2. Based on students' documents, we found that Andreotti's (2014) notion of "critical GCE" was suitable as an analytical framework. 3. Some of the interview data indicate that some participants' experiences in the program are still a part of in their daily lives, such as trying to understand things beyond their stereotypes.

53810
Extensive Practice with Verbatim Learning is not Destiny
Runna Alghazo, Prince Mohammad Bin Fahd University, Saudi Arabia
Khadija El Alaoui, Prince Mohammad Bin Fahd University, Saudi Arabia
Huda Almulhem, Prince Mohammad Bin Fahd University, Saudi Arabia
Maura A. E. Pilotti, Prince Mohammad Bin Fahd University, Saudi Arabia

The present investigation examined the study habits of college students whose educational past fostered verbatim learning. Its main goal was to determine the extent to which the distinctive demands of verbatim and analytical learning tasks map into different sets of study habits. The ancillary goal was to assess whether the trait of self-efficacy is reflected in particular sets of study habits. For both types of learning, we found that organizing study activities within a limited window of time was a major contributor to class performance. Active preservation of information and degree of attention to information being processed, however, differentiated verbatim learning and analytical learning, respectively. Self-efficacy was primarily related to the habits of actively preserving information and organizing one's study activities. The main implication of these findings is that students' main concern, when confronted with the heavy course load of a college-level curriculum, is the management of tasks within a constrained time frame. Yet, educational past is not destiny in the sense that college students adjust their information processing habits to the demands of qualitatively different assessment measures.

54380

Beyond the School Day: Exploring Refugee Youths' Perceptions and Participation in Out-of-School Activities

Ashley Cureton, Johns Hopkins University, United States

Out of School Time (OST) activities provide important contexts for children's development and well-being. As the number of refugee children and youth continues to grow, the educational and social emotional needs require more and sustained attention. OST programs have the potential to serve as an anchor for refugee youth and their families who lack familiarity with American schools and communities. This study employs an interpretivist paradigm, prioritizing students' meanings and understandings of their OST experiences. The study consists of 28 Muslim refugee youth (ages 13-17) from Syria and Iraq who resettled to the US in the last 5 years. Semi-structured, in-depth interviews and participant observations were collected through a secular non-profit organization assisting refugees from Middle Eastern countries. First, analysis of the types of OST programs youth participated in within their respective schools revealed that refugee boys were typically involved in sports-based programs while girls engaged in arts-based programs; for boys and girls, these activities reinforced their feelings of nostalgia for their countries of origins. Second, refugee students typically participated in OST programs within their local communities—but outside of their schools. Favored OST activities included programs offering academic support and homework assistance, encouraging refugee youths' engagement both civically and politically in their schools and communities, and promoting their cultural and ethnic identities. This study provides an empirical opportunity to learn about refugees' firsthand experiences in OST activities, their unique perceptions of the social context, and knowledge about what they need in order to feel supported within these settings.

53159

Setting Academic Standards in Intercultural Training at Universities Without Losing the Fluidity of Culture: The ECRI as an Example

Michelle Cummings-Koether, Deggendorf Institute of Technology, Germany
Sascha Kreiskott, Deggendorf Institute of Technology, Germany
Oscar Blanco, Deggendorf Institute of Technology, Germany
James Larson, Deggendorf Institute of Technology, Germany

As student populations become increasingly diverse, universities worldwide face a dual challenge: How to set standards for intercultural trainings that are designed to help international students and do so with respect for the diversity of individuals students' cultures. At ECRI (European Campus Rottal-Inn) in Bavaria – one of the most culturally diverse Universities of Applied Science in Germany, the intercultural trainings are designed to do just that. Intended to be conducted in 6 hours by any qualified educator, they provide each student with the same level of content. In addition, the students have an opportunity to interact with each other and exchange information about their personal expectations and values. The goal is to help the international students integrate as efficiently as possible into their new environment while offering local students an opportunity learn more about their international counterparts. The skills the training provides can then be applied to their regular programs, forming a foundation for international business and leadership skills. This presentation will present the framework that was designed for these trainings, one that provides relatively rigid academic standards with the flexibility to integrate "cultural fluidity". This design will be tested throughout the Fall semester of 2019, and the results will be presented at the conference. The speaker combines over 10 years of intercultural training experience with her experience as an academic to focus on forging new pathways in integrating both fields.

Saturday Session I: 09:00-10:40

Room: *To be Announced in Final Schedule*
Session Topic: Educational Research
Session Chair: *To be Announced in Final Schedule*

55282
Using the Delphi Method to Identify Technical Workshop Topics
Jon Jones, Pittsburg State University, United States
Greg Belcher, Pittsburg State University, United States

This research utilized the Delphi method to collect data from a selected panel to both identify and rank the importance of technical workshop topics in one of the sixteen Career and Technical Education (CTE) Pathways. The primary reason for selecting this research method was based on past research where it was utilized in gaining consensus on curricular items. Other reasons for selecting this research methodology included the diversity of the panel members being located in different areas of the United States, and the limited past research in this area. Also, items that were later rank ordered in round two and three were originally unknown in round one. The design of this Delphi study allowed researchers to gather information from 12 panel members. Diversity, within this panel, was utilized to ensure that input was provided from all aspects of this technical area. The final panel was comprised of four of the participants being employed by or owners of a related business and industry, four participants being graduates of a related CTE area within the previous four years and employed in a related occupational area, and four participants being educators teaching in a related pathway. The three round Delphi method accomplished the outcome sought, to identify and rank order a list of proposed workshop topics. It was also determined that the Delphi method had both advantages and disadvantages in developing this list. The researchers would propose to share the identified advantages and disadvantages.

55320
Variable Selection Using Decision Tree Models
Chansoon Lee, Liberty University, United States

Classification and regression problems characterized by the number (p) of predictor variables being relatively large to the sample size (n), called 'the large p small n problem', are common in educational sciences. Variable selection methods can resolve the problem by reducing variable dimensionality while maintaining prediction accuracy. However, traditional statistical approaches, such as stepwise regression models, cannot deal with the large p small n problem effectively. In this article, variable importance measures (VIMs) from decision tree models are introduced to educational research to select a parsimonious classification model as well as evaluate their properties under different conditions. In addition, this study proposes a cross-validated permutation (CV-permutation) threshold for random forest, which is a popular tree model, to identify informative variables. Using classification models, a series of simulation studies is conducted with four simulation factors: six VIM methods, four data models, two numbers of variables, and two samples sizes. Each combination of the four factors was replicated 1,000 times. In addition to the simulation studies, VIMs were applied to an education longitudinal study to select influential predictor variables on the prediction of six-year college graduation. As evaluation measures of VIMs, effectiveness, rank, and Brier score were used. This study finds that VIMs can effectively deal with the large p small n problem while preserving the predictive accuracy. Random forests VIMs with the CV-permutation threshold performed better in preserving prediction accuracy than the other VIMs. The case study results showed that most tree VIMs selected the top five cognitive measures.

54439

Some Important Considerations When Conducting Undergraduate Cyclical Program Reviews at a Small University

Oliver Franke, Concordia University of Edmonton, Canada
Colin Neufeldt, Concordia University of Edmonton, Canada
Elizabeth Smythe, Concordia University of Edmonton, Canada
John Jayachandran, Concordia University of Edmonton, Canada

Cyclical program reviews (CPRs), also called periodic or academic reviews at institutions of higher education, are undertaken to ensure that the programs meet a variety of academic, pedagogical, professional, credentialing, and quality assurance objectives. Preparing, reviewing and implementing a CPR involves a great deal of time and effort and potential pressure on those who are tasked with preparing one especially if the program has never had a CPR, or a long time has passed since the last one was undertaken. Much has been written on how to do a CPR (Bresciani et al, 2006), what measures are most useful in assessing programs (Jayachandran, Neufeldt, Smythe and Franke Canadian Journal of Higher Education, 2019) and some of the problems from the perspective of external reviewers (Halonen and Dunn, 2017). This presentation, however, draws on our experiences as faculty and administrators at a small university in Western Canada involved in reviews of several academic programs in the social sciences. Reflecting on challenges we faced our findings identify key issues and considerations that should be addressed when preparing to undertake a CPR, both from the perspective of administrators and faculty, especially at smaller institutions where the number of faculty may be small and the institutional supports to the review process more limited. Key issues include timing of reviews, the costs and benefits of tasking a team or an individual with preparing the CPR, the role of administrators, the importance of policy templates, and the need for clearly identified learning outcomes.

55294

Using Maximum Variation Strategy Within a Case Study to Explore Reasons Teachers Are Willing to Contribute Open Educational Resources

Kelley Manley, Pittsburg State University, United States
Julie Dainty, Pittsburg State University, United States

The intent of this exploratory study was to increase the body of knowledge and guide decisions regarding sustainability of Open Educational Resources (OER). Previous studies have reported one of the challenges facing facilitators of OER repositories is teachers' lack of willingness to contribute their instructional materials. This study, in contrast, investigated the reasons teachers are willing to develop and share OER instructional materials. Six cases (who were previous contributors to an OER repository) were chosen for face-to-face interviews using a maximum variation strategy. The goal of this unique strategy is to choose cases that will maximize learning by selecting individuals with a wide range of characteristics. Interview questions were developed to explore the question, "Why do CTE teachers contribute their intellectual capital to OER repositories?" Data condensation and data display strategies were implemented during data collection in order to interpret patterns and form conclusions. Inductive and deductive reasoning were utilized during data analysis, which included pattern coding. After pattern coding was finalized, cross-case analysis was conducted to enhance transferability and to deepen understanding. Triangulation was utilized to corroborate findings. One finding of this study was that all cases expressed an understanding of the significance of contributing to OER as a result of previous teaching experiences categorized into three areas: professional experiences, challenging experiences, and networking experiences.

Saturday Session I: 09:00-10:40

Room: *To be Announced in Final Schedule*
Session Topic: Clean & Affordable Energy
Session Chair: *To be Announced in Final Schedule*

54141
Performance Monitoring and Evaluation of an Air Source Heat Pump (ASHP) in Extremely Cold Climate
Getu Hailu, University of Alaska Anchorage, United States

This project implemented a comprehensive monitoring system to evaluate the performance of an air source heat pump (ASHP) in heating mode under Anchorage, Alaska weather conditions. A data acquisition system was built to monitor and acquire data in fall/winter. The data was used to establish heating performance curve for the ASHP. The results were found to be useful in establishing the performance and thereby determining the applicability of ASHPs in regions of Alaska with relatively moderate climates. In addition, important data was obtained for further study of the coupling of ASHPs with Building Integrated Photovoltaic/Thermal (BIPV/T) systems and thermal energy storage technology, such as gravel bed and concrete slab.

55619
A Content-Analytic Exploration of Contrasting Environmental Policy Outcomes: An Examination of the State Responses to 'Hydraulic-Fracturing' in New York and Pennsylvania
Dipanjan Chatterjee, Brock University, Canada
Damayanti Banerjee, Colorado State University, United States

In our research we adopt a content-analytic approach to address the question: Why did the governmental decisions and outcomes on 'Hydraulic-Fracturing' differ markedly in the neighboring states of New York & Pennsylvania. While Pennsylvania has allowed 'Hydraulic-Fracturing' (or Fracking) for extraction of mineral oil-and-gas resources, New York decided to ban fracking in 2014 after an extended period of regulatory and scientific study. The dissimilarities in government and regulatory responses to fracking across the two states especially assume significance when one considers the similarities in socio-economic conditions, industrial past, demographic resemblances and geological commonality of oil-rich Marcellus shale deposits on which both the sates sit. For students of public and environmental policy the contrasting outcome to an essentially analogous environmental policy question, provides a key opportunity to analyze and understand the dynamics of environmental policy formulation, when noticeably opposing outcomes materialize in largely similar decision-making contexts. While a rich body of literature has examined the social, economic, environmental & regulatory outcomes and antecedents of fracking, there has been no discernible exploration of the contrasts in policy outcomes related to fracking. Moreover, a few of the studies that do address the differing outcomes in NY and PA on fracking have largely occurred within the practitioner and trade publications, and there is a lack of rigorous theory-driven approach to understand the differing policy outcomes on Fracking in NY and PA.

54630
Prospects for Nuclear Energy Policy in Australia
Craig Mark, Kyoritsu Women's University, Japan

During the May 2019 national election campaign, Prime Minister Scott Morrison denied his Liberal-National Party (LNP) government had any intention to pursue nuclear power for Australia. An official ban on nuclear

power remains in place, but following the election, a parliamentary inquiry into nuclear energy was announced, to be delivered by the end of 2019. This announcement restarted a long-running debate on nuclear policy in Australia. Under the Liberal-Country Party government in the 1950s, Australia hosted the UK's atomic weapons testing, and considered developing Australia's own nuclear weapons arsenal. However, after the election of a Labor Party government in 1972, Australia signed the Non-Proliferation Treaty (NPT), and has relied on the extended deterrence protection of its US ally ever since. Australia has nevertheless been a major exporter of uranium, and has maintained a small research reactor. In 2006, the LNP government of John Howard commissioned a report into nuclear power, which found it was uneconomic, given Australia's preponderance of coal-fired energy. A Royal Commission held by the South Australian state government in 2016 found nuclear power would still be uneconomic, compared to renewable energy sources. Nuclear power advocates argue that small modular reactors (SMRs) could deliver baseload energy for Australia, while reducing carbon emissions. The opposition Labor Party remains opposed to nuclear power though, particularly over where to site power plants, and disposal of nuclear waste. Any future Australian nuclear power industry is therefore a very long-term prospect, as renewable energy becomes more widespread, efficient, and affordable.

55379
Will Germany Continue to be the World's Leader in Fighting Climate Change?
Peter Yang, Case Western Reserve University, United States

Germany has been a long time leader with its energy transformation and the related innovative renewable energy promotion policies in the world fighting the climate change. However, with its upcoming nuclear power phaseout by 2022 and the expiration of generous renewable energy feed-in tariffs in the 2020s, Germany's energy transformation is confronted with uncertainty. Will Germany continue to be a leader in the world's fight against climate change? This study takes a holistic approach to answering this research question. It will not only analyze current statistic data on renewable energy production and consumption, but also examine current and future projects, as well as future trends in the renewable energy development and energy efficiency. The results of this study will help us gain a better understanding the future dynamics of the energy transformation and carbon reduction in the world's early leading country.

Saturday Session I: 09:00-10:40

Room: *To be Announced in Final Schedule*
Session Topic: Health & Wellbeing
Session Chair: *To be Announced in Final Schedule*

55072
Application of Google Street View Application for Footpaths' Inspection in Nakhonratchasima City Municipality, Thailand

Pornthip Ueathammataworn, Rajamangala University of Technology Isan, Thailand
Yaowaret Jantakat, Rajamangala University of Technology Isan, Thailand

Walking is one way to increase physical activity regardless of whether the purpose of walking is for transportation or leisure. Therefore, this paper aims to inspect urban footpaths in term of infrastructures and facilities based on data of Footpath Standard Inspection (FSI) from the Ministry of Transport (MOT). This study selected 5 routes of Nakhonratchasima City Municipality (NCM) that were reported as a quality footpath along public transport routes from The Study of Traffic Management and Public Transport Development Master Plan in Nakhon Ratchasima Urban Area, Thailand. Moreover, Google Street View (GSV) was used for footpaths' investigation in NCM. GSV was implemented to help with prior inspecting process by allowing prospective researches to take a virtual tour before visiting. The results showed that all inspected 5 routes above-based GSV still was lacked curb ramp and obstacles arrangement. These results are consistent with the currently true ground. Moreover, footways are now not provided facilities for disables such as protective rails and braille block. Consequently, the results of footpaths' inspection in NCM will be able to take action for planning and improving footpaths in NCM toward health and wellbeing further.

55307
Healing Village: Implementing Biomimicry, Natural Architecture to Promote Sustainability in Healthcare

Rana Bazaid, Texas Tech University, United States
Hamed Yekita, Texas Tech University, United States
Amani Khan, Texas Tech University, United States
Debajyoti Pati, Texas Tech University, United States

Sustainability in healthcare is essential to have many beneficial outcomes. Healing Village is a healthcare project in Tehran, Iran which was designed for all people living in the surrounding community as well as patients. This project aims to spread long-term health and well-being among neighbors and takes advantage of the surrounding resources from biomimicry and natural architecture for sustainable solutions. In this redesign process, we present a new healthcare center completely adaptive with its surrounding environment. This center will produce, consume, and recycle based on its resources and needs. Analyses of the surrounding neighborhoods and the climate reveal challenging issues like air pollution, as well as other characteristics such as limitations, weaknesses, and strengths. The function of the hospital in the Healing Village is considered as a prospective example of biomimetic architecture operating similar to natural organisms that create a living structure which is transforming, breathable, and self-cleaning to protect the indoor building and help the users to have better outcomes. The biomimicry and natural architecture methods make Healing Village a good example of well-being for the city of Tehran and other polluted cities in the world.

55606
Communicating Sustainability
Claudette Artwick, Washington and Lee University, United States

This paper examines contemporary mediated communication on sustainability, encompassing strategic messaging and news. Using case study analysis, it explores how information about sustainability is being communicated by a range of actors—from environmental non-profits to Fortune 500 companies—and how those messages and stories flow through mainstream and social media. Situated in a political climate where tweets that cast doubt compete with science, how do citizens and consumers navigate this information, and what is its potential impact? The concept of sustainability guiding this work draws from the UN document, Our Common Future, which defines it as development that "meets the needs of the present without compromising the ability of future generations to meet their own needs." Adopted by myriad organizations, the concept of sustainability extends beyond development to include a range of practices—from natural resource stewardship to supporting human health and economic vitality.

53490
Effects of Work–family Interface, Flexible Employment Modes and Work–life Balance on Family Satisfaction: A Moderated Mediation Model
Randy Chiu, Hong Kong Baptist University, Hong Kong

Living and working in a fast-pace international city, people in Hong Kong are said to experience low work-life balance and therefore low family satisfaction. In order to promote family-friendly employment policy, local academics and NGOs emphasize the importance of introducing flexible employment modes to the city; however, there is a lack of empirical study supporting this will work in Hong Kong. The present study examined the relationship between work–family interface and family satisfaction, by illustrating the mediating effect of work–family balance and the moderating effect of satisfaction with work schedule flexibility. Based on a sample of 201 full time employees in Hong Kong, we found that work–family conflict negatively affected family satisfaction, while work–family enrichment was positively related to family satisfaction via work–family balance. Our moderated path analysis pointed out that there was stronger negative relationship between work–family conflicts and work–family balance when low satisfaction with work schedule flexibility existed. The result also indicated that high satisfaction with work schedule flexibility weakened the above-mentioned negative relationship. Furthermore, this study found that the positive relationship between work–family enrichment and work–family balance could not be further empowered when high satisfaction with work schedule flexibility existed. As shown by this study, flexible employments modes improved both work-family role balance and family satisfaction. The encouragement of flexible employment modes in Hong Kong should hence be urged, while non-governmental organization and the government need to take active roles in implementing relevant policies.

Saturday Session I: 09:00-10:40

Room: *To be Announced in Final Schedule*
Session Topic: Foreign Language Education
Session Chair: *To be Announced in Final Schedule*

54733
Utilizing U.S. TESOL Undergraduate Internship Students to Improve Japanese College Students' English Skills and the TESOL Students' Teaching Skills
Nobuo Tsuda, Konan University, Japan

The purpose of this presentation is to demonstrate how utilizing U.S. TESOL undergraduate internship students can help improve Japanese college students' English skills effectively in an EFL environment as well as help develop the interns' teaching skills. The internship students spend about six weeks at Konan University during the spring semester during which they are involved in teaching, co-teaching, observing, tutoring, lesson planning, and having individual conferences for a total of more than 120 hours. The biggest benefit to our students is to increase their opportunities to communicate with the interns in class as well as outside of class through tutoring. The presenter will give detailed information about how he usually recruits interns and organizes the schedules for different classes and how each instructor supervises them. Furthermore, he will talk about student survey results that show how they felt about their interns and how interacting with the interns has helped improve their language skills. The presenter will also explain how the interns' experience at Konan will help them prepare for their teaching at any institution in the States and overseas in the future.

54688
Eye Movement Characteristics in Reading Foreign Language Text Based on Mind Mapping Training
Ting Liu, Japan Advanced Institute of Science and Technology, Japan
Takaya Yuizono, Japan Advanced Institute of Science and Technology, Japan

Mind mapping training is a way to visualize thinking process to stimulate students' interest in learning and to improve their reading ability. This research aims to compare and analyze the reading ability of students who were given reading teaching integrated with mind mapping training (experimental group) and the conventional model (control group). Eye tracking is a sensitive and effective technique for recording online reading behavior, showing eye movement indicators during reading and providing sufficient data support for the reading comprehension process. In this research, reading ability was analyzed from eye movement indicators measured by eye tracking during reading of foreign language articles. The results showed that for experimental group, numbers of fixation, fixation frequency, average fixation time and re-reading frequency were all less than control group. The hotspots of experimental group showed convergence, mostly focused on the position of keywords and subject sentences, with relatively large distance of saccade amplitude and more information obtained by one gaze. In addition, there was no significant difference in reading comprehension rate, but in reading speed and reading efficiency, the former was obviously superior to the later. It indicated that mind mapping training was helpful for identifying keywords and subject sentences and accurately understanding their meanings during the process of reading. The attention and time used on the reading unit can be reasonably allocated, while key points can be selected for skip reading to improve reading teaching effect and students' reading ability.

54519
Learner Centered Visual Representation of Articulatory Distances of Vowels
Florent Domenach, Akita International University, Japan
Shunsuke Nakata, Akita International University, Japan

This study presents a visual representation of the articulatory distances amongst vowels centered around learners' insight, with a focus on French vowels, the target language of our students, and of Japanese vowels, our learners' native language. The aim of the study is to facilitate their understanding of their own pronunciation's learning by offering a tool which allows learners to visually and intuitively grasp the distance between two vowels. The distances are calculated based on the number of articulatory gestures needed to attain a target vowel starting from specific vowels in the learner's language. Our previous research had shown that these distances are obtained when the distinctive articulatory features (aperture, tongue position, roundness, nasalization) are well specified. Our perception data had also indicated that perceptive similarities could be misleading since a perceptually close sound can be articulatorily far and thus not appropriate as a starting point to reach the target sound. Our visual representation of the articulatory distances can invite learners to discover such counter-intuitive but phonetically more efficient vowels for pronunciation learning. Possible future avenue for our research including the refinement of the distance calculation criteria will be also mentioned.

55041

The Effects of Task Repetition vs Task Sequencing on L2 English Speaking Performance
Jin-Hwa Lee, Chung-Ang University, South Korea
Joo-eun Hyun, MINDs Lab, South Korea

Arguing that tasks need to be considered as a part of a sequence in the context of a syllabus rather than one-off activities, this study explored the issue of grading in designing a task-based syllabus. Specifically this study compared the effects of task repetition (Bygate, 2001) and complexity-based task sequencing (Robinson, 2011). A total of 46 Korean high school students were divided into three groups and performed a series of English speaking tasks. The first group repeated the same task three times. The second group performed three tasks whose complexity was manipulated along the resource-dispersing factor (- planning time) first and the resource-directing factor (- few elements) later. The last group performed three tasks whose complexity was manipulated in the opposite order of the second group. Three groups' third task performances were compared in terms of complexity, accuracy, and fluency. Also, each group's performance trajectory was examined across the repeated or sequenced tasks. The results will be discussed along with pedagogical implications.

Saturday Session II: 11:00-12:40

Room: *To be Announced in Final Schedule*
Session Topic: Assessment
Session Chair: *To be Announced in Final Schedule*

54634
Assessment in Higher Education, Federated States of Micronesia – Towards an Ecological Approach
Caroline Kocel, College of Micronesia-FSM, Micronesia

Many higher education institutions suffer from linear thinking and 'siloing' – characteristic of a mechanistic view. By contrast, an ecological view based on systems thinking focuses on relationships. Program review is one tool that can help make visible connections between interconnected parts and to ensure that reliable evidence exists to support decision-making. This research facilitated a critical self-assessment of non-academic operations within the College Of Micronesia-Federated States of Micronesia (COM-FSM). Best practices developed in the context of assessment of instructional programs were applied for non-academic units. The researcher assumes that staff are learners and that the pedagogical approaches used within staff development are no less important than those used by faculty in our classrooms. Participants were selected from under each Vice President and each of our campuses across the four island states of FSM. They were engaged as a community of practice to evaluate the extent to which the program review process effectively assessed operations across COM-FSM. This process was then analyzed to demonstrate those elements which were characteristic of a mechanistic view, and those characteristic of an ecological view. Analysis shows that assessment of non-academic operations at COM-FSM has characteristics of both a mechanistic view and an ecological view at two levels: learning and pedagogy, and management. The findings from this research contribute to better understand how systems thinking can be practically applied to assessment practices to move towards an ecological approach in education.

54197
Attitude, Perceptions and Development of edTPA as an Assessment Process Among ECE Senior Cohort Students
Anuja Roy, University of Cincinnati, United States
Marcus Johnson, University of Cincinnati, United States

edTPA serves as a teacher performance assistance and support system that measures new teachers' readiness to teach young children. Even though it is not mandatory for the teaching license in Ohio, the University of Cincinnati makes edTPA mandatory in order for teacher candidates to graduate. This study tries to determine the change in attitude of the teacher candidates towards edTPA throughout the academic year while gauging the relationship between the edTPA support sessions provided by the university and the candidates' attitude towards edTPA. The quantitative results from all 63 participants across five sessions throughout the academic year indicate that the attitude of the teacher candidates was highest for edTPA in the second session of data collection (November) and it was lowest after the submission of their portfolios while the candidates waited for their scores. There was a weak positive correlation between the candidates' attitude and the edTPA support sessions provided by the university. Overarching themes that have surfaced during the qualitative interpretation of 12 candidates' responses were taken into consideration. The negative feedback focused on lack of time to complete edTPA assignment and the high fee for assessment. Few positive themes include, but not limited to, providing individualized attention to the children by the teacher candidates, and video recording as a good indicator of one's teaching practices. These findings suggest that edTPA can be useful in enhancing skills among teacher candidates. Suggestions have been proposed to motivate teacher candidates towards edTPA.

54803

Quantitative Quality Assurance Model (QQAM) to Enhance Engineering Education Performance Indicators

Mohamed Askar, Southern Utah University, United States

The quality of engineering education is a vital factor that relates to the long-term strategic development of engineering education's infrastructure. The most common technique of evaluating the quality of engineering education is through a range of qualitative indicators, sometimes as a part of department assessment. Common qualitative assessments embrace contribution measurements of students and faculty, such as interviews, surveys, course evaluation, peer evaluation, and faculty annual activity reports. The main objective of this paper is to design a Quantitative Quality Assurance Model (QQAM) for engineering education in order to create a statistical and mathematical reference that would optimize the processes of the evaluation and help students to receive the high standards of education they need to meet the demands of the international employment market. A constructive QQAM framework was designed that considered plenty of control criteria selected from the teaching standards and methods, the degree of importance, the control methods description, the quality assurance assessment, and the statistical analysis. The model was tested by implementing quality circles for teaching inside the institution. Second, the individual items within the model were examined to identify the correlations of the quality with the performance indicators of engineering education. Finally, QQAM comprehensively considered the complexity and practicality of engineering education, which had provided a powerful evaluation tool for effectiveness analysis of QQAM. As a result of the model design, a matrix of twelve dimensions was obtained and implemented in the engineering education programs.

Saturday Session II: 11:00-12:40

Room: *To be Announced in Final Schedule*
Session Topic: STEM Education
Session Chair: *To be Announced in Final Schedule*

54279
Research Trends in Science Education Through LDA Modeling Based on the Web of Science
Hunkoog Jho, Dankook University, South Korea
Junhaeng Lee, Seoul National University, South Korea
Seungcheol Chae, Seoul National University, South Korea

Recently, there is a growing demand for textual analysis using text mining, machine learning, and natural language processing. This study aims at investigating research trends in science education using Latent Dirichlet Allocation (LDA). A total of 7,516 papers registered in SSCI (Social Science Citation Index) were selected through the Web of Science. The abstracts of the selected papers were preprocessed by NTLK package in Python, and the LDA modelling was operated by using Gensim package. As a result, nine topics were found as cross-cutting issues since 1991. In terms of chronological trend, there was a big shift in the year of 2009 and 2015. This study is helpful for young science educators to understand the whole pictures of science education research and for senior educators to have some implications for future research.

55160
Development and Validation of an Electronic Module in Linear Motion for First Year College Students of Iloilo City
Donna Gabor, University of the Philippines Visayas, Philippines

This study aimed to develop and validate an electronic module in physics for first-year college students taking introductory physics of Iloilo City and find out if there would be a significant difference in the performance of students before and after using the electronic module. The e-module was composed of one topic with two sub-lessons in linear motion. The participants of the study were classified into three groups: the Subject Matter Experts who are physics instructors who suggested the content, physical appearance, and limitations of the e-module; the IT experts who are active both in teaching and developing computer programs, and 28 students divided into two groups, 15 in the pilot group and 13 in the final test group. A researcher-made checklist form containing 30 items was prepared and validated for use in gathering data. To test the difference in student performance in physics, the researcher prepared an achievement test containing 25 items, multiple choices. The findings revealed that there was an increase in the performance of students in the pre-test and post-test. T-test results revealed that there was a significant difference in the test scores of the students before and after using the module.

54172
Machine Learning to Guide STEM Learning: Relative Importance of Social vs Technical Competencies for STEM Students from Underrepresented Groups
Patricia Brockmann, Technische Hochschule Nürnberg Georg Simon Ohm, Germany
Karin Maurer, Technische Hochschule Nürnberg Georg Simon Ohm, Germany

Students interested in STEM professions are often unsure about exactly will be required of them upon graduation. Academic planning is made even more difficult by the fact that STEM fields evolve quite rapidly. In addition to technical qualifications, such as programming, employers increasingly demand soft-skills, such as communication, self-reflection, conflict management and team work. Underrepresented groups in STEM include women, ethnic minorities and students from non-academic families. Although they may lack role

models to help them in academic planning, they can offer employers unique advantages. As minorities learning to integrate into the majority group, they may have learned to switch roles and see alternative perspectives. University job market portals could further aid STEM students from underrepresented groups. Ads placed by potential employers describe the competencies required for entry-level positions. Text mining of job ads enables the extraction of these competencies. A job market portal supported 15 German universities is analyzed using two different machine learning tools: linear regression and neural networks. The analysis of thousands of job ads over 10 years enables the identification of specific competencies desired by potential employers in STEM fields. By tracking the changes in employer demands, trends can be identified showing which skills are becoming more and less desirable over time. This analysis demonstrates how the relative importance of social competencies to technical qualifications changes over time. The probable future importance of individual qualifications can be predicted. This can help students from underrepresented groups in their academic planning.

Saturday Session II: 11:00-12:40

Room: *To be Announced in Final Schedule*
Session Topic: Foriegn Language Education: Writing
Session Chair: *To be Announced in Final Schedule*

54236
Syntactic Complexity and EFL Writing Proficiency
Cheng Luo, Brock University, Canada
Meisu Wang, Brock University, Canada

Syntactic development as an important component of writing proficiency has often been studied in terms of the relationship between syntactic complexity and writing proficiency. In assessing syntactic complexity, a frequently acclaimed indicator is the T-unit or error-free T-unit. However, some studies have failed to find significant correlations between T-unit length and writing proficiency; and others have disclaimed T-unit as a viable index of overall written language development. Given such inconsistencies, this study further explores the relationship between syntactic complexity and English as a Foreign Language (EFL) writing proficiency by comparing the use of various syntactic structures by adult Chinese EFL learners at different proficiency levels, to identify the most viable syntactic correlate(s) of EFL writing proficiency that can guide EFL teaching and learning. 101 corpus-based compositions by adult Chinese EFL learners were graded into two proficiency groups in comparison to a native speaker group, and analyzed in terms of non-finite verb constructions, nominalization, ellipsis, comparative structure and relative clauses, as well as T-units. The results indicate that while clause length is not indicative of EFL learners' developmental writing proficiency, non-finite verb constructions, T-units, and some other structures are. Further analysis show non-finite verb structures as the most significant indicator of syntactic maturity in adult EFL writing, which not only accounts for the vagueness of T-unit that indiscriminately subsumes a number of syntactic structures, but also pinpoints embedded structures as more essential to syntactic maturity in writing proficiency development.

55569
Contrastive Interlanguage Analysis of Modal Auxiliary Verb Usage by Japanese Learners of English in Argumentative Essays
Shusaku Nakayama, Meiji Gakuin University, Japan

This research concludes that Japanese non-native English speakers (JNNSs) use modal auxiliary verbs in a way that differs from what native speakers (NSs) use from two perspectives: frequency of occurrence and verb phrase structures (VPSs) where modals occur. To lead this conclusion, JNNSs' usage of nine central modals ('can', 'could', 'may', 'might', 'shall', 'should', 'will', 'would', and 'must') is compared with NSs' in the International Corpus Network of Asian Learners of English, which is one of the largest freely-available corpora of Asian learners' English. Among several modules the corpus contains, this research adopts the 'Written Essay' module only, which is the set of 200-300 words essays. Frequency analysis reveals that both JNNSs and NSs use 'can' with the most frequency, followed by 'should' and 'will'; however, as for all the other modals except 'shall,' there are no similarities in frequency order. Besides, a log-likelihood test uncovers the JNNSs' overuse of 'can' and 'must' as well as their underuse of 'will' and 'would'. Analysis regarding VPSs reveals that JNNSs use most of the modals with bare infinitives or in the passive voice only. Although several of them are used in other VPSs, the number of such cases are very few. Overall findings suggest that teaching materials explain these gaps in use to JNNSs in order to bring their modal usage close to the native-like usage, and present more examples of the modals occurring in a wide range of VPSs to help learners to express their opinions from a variety of viewpoints.

54690

Effects of an English Essay Writing Module on the Attitudes of University Students in Japan

Madoka Kawano, Meiji University, Japan

Among four skills of language, writing requires more time and energy to acquire than other skills such as listening and speaking. Writing in a second/foreign language poses a major challenge to learners, as it involves deep cognitive engagement and advanced language proficiency. First-year university students in Japan often feel anxiety towards various types of academic writing tasks including reports, exams, and essays, especially at the beginning of the academic year. This paper reports on an English essay writing module planned and implemented at a private university in Japan and discusses its effects on students' attitudes towards writing. The objectives of the module was to teach logical thinking skills in line with paragraph writing and essay writing. The module was embedded in two first-year English classes for science-major students in 2018. The pre-survey and the post-survey, both of which contained 5-scale questionnaire items and open-ended questions, were conducted to explore their attitudes towards writing in English. The responses were analyzed with descriptive statistics and a text mining scheme. According to the pre-survey, most students expressed anxiety about learning writing in English, since they had only experienced translating tasks and sentence-level grammar practices at high schools. The post-survey showed that most participants learned basic steps of essay writing and that they gained confidence in writing in English via activities in the academic writing module. A few students seemed to require more class time and supports, which revealed the necessity to incorporate more of academic writing to English curricula for science students.

Saturday Session II: 11:00-12:40

Room: *To be Announced in Final Schedule*
Session Topic: Teaching Experiences: Diversity
Session Chair: *To be Announced in Final Schedule*

55091
Positive Outcomes of Feminist Pedagogical Practices in the Undergraduate Classroom
Fiona Green, University of Winnipeg, Canada

This presentation addresses the positive outcomes of using elements of feminist pedagogies and interactional theory in teaching Canadian undergraduate students. Using reflections from my own teaching experiences over the past 3 decades, and those of students themselves, I demonstrate how feminist pedagogical approaches open intellectual spaces within the classroom that assist students in witnessing a more inviting and substantive way to critically engage with the course material and the world around them. The initial segment outlines various elements of feminist pedagogies central to my feminist teaching, such as creating a participatory classroom community where critical thinking, empowerment, and leadership skills are valued, developed and practiced. Part two demonstrates how the most basic feminist inquiry into how and what we know, particularly when using a lens of intersectionality, exposes students to the ways in which knowledge structures and systems have influenced their understanding of themselves, the world they inhabit, and their relationship with it and with others. The final section draws upon the written experiences of students themselves to demonstrate how the practice of engaging in these specific elements of feminist pedagogy and intersectionality assist students to participate in engaged ways of critical thinking. I conclude by examining examples of student reflects of how their experiences of feminist pedagogies and intersectionality have fostered their interests in and practices of pursuing and participating in political and ethical acts of resistance to bring about progressive social change in a world that needs their intelligence, commitment and participation more than ever.

53889
Successful Instructional Approaches for Contemporary Students – A Case Study
Chris Chamberlain, California State University, East Bay, United States
Nancy White, California State University, East Bay, United States
Heather Vilhauer, California State University, East Bay, United States

California State University East Bay (CSU East Bay) in Hayward, California has one of the most diverse student bodies in the United States including a large first-generation population. In recent years, faculty have noticed a shift in the make-up of today's contemporary student. At CSU East Bay, most students work at least one job, experience financial, food insecurity, housing, and transportation challenges in addition to shouldering a variety of family responsibilities. Given these challenges, it became apparent that a different approach in teaching was necessary to meet the needs of today's contemporary students. In 2019, faculty in the Department of Hospitality, Recreation and Tourism at CSU East Bay conducted a study to explore teaching styles, learning from each other's style; how those styles have changed over time to meet the needs of today's student; and the types of assignments and modes of delivery that produced the greatest learning impact on a diverse student body. This internal study helped faculty learn more about what drives them as instructors to be successful purveyors of educational, and experiential knowledge. Findings of the study revealed a department pedagogical style or culture in teaching that employed different types of experimental, practical, and problem-based activities in online, in-person and hybrid classes, which resulted in students showing greater retention of the material that better-prepared students for the working world beyond graduation.

53821

Relationship Between Gender, Culture Adaptation and Employment Equity – the Case of Foreigners in Japan

Cecilia Ikeguchi, Tsukuba Gakuin University, Japan

This paper explores two issues: the relation between gender and adaptation and gender and job equity of international students in Japan. The continued increase in the number of international students has caused a corresponding increase in a variety of problems and challenges regarding overseas study (Gebhard, 2012; Li et al., 2014). The problem of adjustment, particularly in the tertiary level is of gigantic importance, since foreign students need help in adjustment beyond intellectual progress. What is unclear is the amount of impact gender has on adjustment. Do male students adjust better and/or faster compared to female students? This study uses two assessment scale the Index of Life Stress (ILS) and Index of Social Support (ISS) to measure the degree of life stress and social support (Ikeguchi, 2007) available to two groups. ILS measures three areas of stress, while ISS attempts to measure the degree of social support available to foreign students. This paper likewise deals with employment equity. How many foreign student graduates choose to work and live in Japan? JASSO data indicates, as of 2017, 55.9%, of foreign students studying in Japanese universities are male, while 44.1% are female. Labor Ministry reports 1.5 million foreign workers in Japan (2018). How many foreign female student graduates get a job in Japan? The scope of the foreign labor market in Japan goes beyond the retail, restaurant and manufacturing industries. This paper hopes to provide insights on gender equity in labor opportunities to foreign born graduates of Japanese universities.

Saturday Session II: 11:00-12:40

Room: *To be Announced in Final Schedule*
Session Topic: Interdisciplinary
Session Chair: *To be Announced in Final Schedule*

55161
Society 5.0 and the Shifts in English Education in Higher Education in Japan
Yuri Jody Yujobo, Tamagawa University, Japan

Global higher education policies in Japan has shifted in order to fit the driving force of innovation and global competitiveness through increased interdisciplinary and multidisciplinary education such as STEM and STEAM education to match the higher sophistication of the Internet, AI, and cyber society of Society 5.0' (Cabinet Office 2018). A new area in Japanese university is inquiry-based learning, but with English as a Lingua Franca (ELF) as the goal rather than native-speaker competence. ELF communicative capabilities by repurposing English not as a single discipline but for multidisciplinary education and also for non-academic communication to enhance everyday communication which is the vital tool for economic development to cultivate competent global human resources. Textbooks to teach these life skills and 21st-century skills are difficult to find with ELF-informed teaching. This presentation focuses on adapting general ELT textbook themes to relevant and necessary life skills through inquiry-based learning projects (PBL, PrBL, Active Learning) and expose students to deeper learning of the multidisciplinary educational themes. ELF-informed teaching materials focus on helping students to understand that English is not a monolingual provincialism for native speakers but is appropriated by multilingualism in this multilingual world (Ishikawa 2019). Through such materials and methodology, students will ideally notice, refine, adapt, and adjust their language depending on their foreign interlocutors which is the foundation for becoming better ELF-aware global communicators.

55119
Learning With, From and About One Another
Cassie Prochnau, MacEwan University, Canada

Human interaction and communication are key to successful professionals engaged in the 'helping professions'. For students preparing for these careers, the development of interpersonal skills provides the foundation for good working and social relationships. They are the building blocks for learning to collaborate effectively, to work in teams, and to develop relationships with colleagues and clients. Interpersonal skills can be cultivated and developed throughout our lifetime and are shaped by our experiences. Institutions of higher education, engaged in preparing students for these critical roles, are expected to deliver quality instruction, dynamic curriculum and opportunities for personal and professional growth in a concerted effort to produce a well-skilled workforce. Professional programs prepare graduates for eventual practice in an interprofessional team, yet disciplinary concentrations in undergraduate programs socialize education in the context of respective disciplinary norms. Students benefit from multiple perspectives, from interaction with and learning across interprofessional boundaries. It is through this lens that we can provide a unique learning experience to engage students in the practical application of these expectations in the educational context. With support and collaboration from senior administration and program faculty, interprofessional education can not only meet the learning outcomes of an interpersonal skills course; but, more importantly, this model provides a unique opportunity for learning that engages students across disciplines in learning with, from and about one another.

52442

Screening Diversity through Southeast Asian Films: The Pedagogical Value of Film in Teaching Multiculturalism

Darlene Espena, Singapore Management University, Singapore

This paper explores the pedagogical value of film to help students understand multiculturalism and diversity in the context of Southeast Asia. Based on the premise that films are powerful tools to understand the entangled and intimate histories, politics, and cultures of diverse communities, this paper examines whether watching Southeast Asian films facilitate increased knowledge and understanding of the diversity of the region. This paper also assesses whether watching Southeast Asian films affects students understanding and appreciation of cultural diversity. This paper focuses on the case of Southeast Asia to highlight how using various Southeast Asian films reinforce students' understanding of Southeast Asian narratives and cultures. First, I establish the theoretical and pedagogical basis for using audio-visual tools in classroom teaching. Second, I explain the difficulties in teaching multiculturalism in the case of Southeast Asia given its diversity and divergences in history, cultures, and political systems and then assert that screening films from the region can enhance student's understanding in an interdisciplinary way. Finally, I will explain and discuss the use of the film Nasi Lemak 2.0, as a case material to unpack the complexities of multiculturalism in the context of Malaysia, and by extension, the region of Southeast Asia.

Saturday Session II: 11:00-12:40

Room: *To be Announced in Final Schedule*
Session Topic: Climate Change
Session Chair: *To be Announced in Final Schedule*

54572
Improved Representative UV Index Forecasting in Qatar Through Incorporation of Aerosol (Dust and Ozone) Dispersion Models and Ground-based Measurements
Dillan Raymond Roshan, Hamad Bin Khalifa University, Qatar
Christos Fountoukis, Hamad Bin Khalifa University, Qatar
Muammar Koc, Hamad Bin Khalifa University, Qatar
Rima Isaifan, Hamad Bin Khalifa University, Qatar

The accurate monitoring, modeling, and forecasting of ultraviolet (UV) radiation from the sun is vital to regulate its exposure to humans. While healthy doses of UV radiation is required for vitamin D synthesis, excessive exposure leads to several harmful health impacts on the skin, eyes, and the immune system. One parameter to gauge UV radiation is the UV Index. However, a key limitation with UV index forecasting today is the limited accuracy in modeling the impact of atmospheric mineral dust concentrations on UV radiation, making UV Index measurements in the earth's high UV radiation-receiving and dust-belt regions such as Qatar, non-representative. With climate change and increased forecasts of drying and dust generation around the region, the need to accurately account for its effect in UV index forecasting to reduce the radiation's negative health impact on its population is indispensable. In this research, a three-dimensional air quality model that combines a well-established numerical weather prediction model with a state-of-the-art pollution (dust) dispersion model, will be used to accurately simulate and forecast UV index in Qatar and the greater area at high resolution. To the best of our knowledge, this is the first study considering an advanced dust representation in the calculation of UV index. Additionally, the data are validated with modeling simulations with (i) ground-based UV radiation measurements from outdoor test facility in Education City, Qatar, and (ii) NASA's satellite data of daily global gridded Aura-OMI Spectral Surface UVB Irradiance and Erythermal (skin-damaging UV radiation) Dose product (OMUVBd).

54545
A Tale of Two Planets: The Uninhabitable Earth vs The Regenerative Earth
James Stone, Mt. San Antonio College, United States

My paper will involve a critical analysis of the messaging of two recent books on climate change, "The Uninhabitable Earth" by David Wallace Wells and "Drawdown" which had several contributors, but was edited by Paul Hawken. The reason for the focus on these two books is that they were both on the New York Times Best Seller List and each book played a pivotal role in reshaping the prevalent narrative about climate change in the United States. Most notably, "Drawdown" was an inspiration for the 2019 documentary film "Ice on Fire" directed by Leila Conners and narrated by Leonardo DiCaprio. Based on my analysis of the contrasting narratives about climate change found in each book I will turn to an analysis of public opinion polling data in an effort to assess which message or which combination of messages is most likely to be most effective in influencing public opinion regarding climate change and policies to address it as the United States heads into the 2020 election.

55073

Hydrogen the Future Fuel? A Review of the Technical Challenges in Replacing Natural Gas With Hydrogen for Heating

Abhishek Asthana, Sheffield Hallam University, United Kingdom
Mukesh Goel, Sheffield Hallam University, United Kingdom

Hydrogen is being seen as a key fuel for reducing our carbon emissions and governments are seriously considering repurposing existing gas networks to pure hydrogen so that it can be used by industry, in homes and businesses, and in the energy sector. However, unlike other energy vectors such as electricity, hydrocarbon gases and district heating, high-purity hydrogen has not been deployed at large scales anywhere in the world. This puts hydrogen at a distinct disadvantage. Any attempt to replace natural gas with hydrogen will require a compelling case to compensate for this lack of experience. This article explores the importance of natural gas to our energy systems and the benefits of hydrogen, which could significantly decarbonise our heating and reduce over-dependency on natural gas. These include: (i) Hydrogen can use much of the existing gas infrastructure, (ii) Hydrogen is a very versatile fuel which can be used by households, industry and businesses (iii) Hydrogen can be produced in large volumes (iv) Hydrogen compares well with other low-carbon heat technologies. This paper considers 15 key questions which need to be addressed before attempting any large-scale deployment of hydrogen to retrofit homes and businesses.

Saturday Session II: 11:00-12:40

Room: *To be Announced in Final Schedule*
Session Topic: Education Symposium
Session Chair: *To be Announced in Final Schedule*

54656
No-Level Brick Japanese Language Education: Understanding Learning as Participation in Practice Through a Communities of Practice Perspective
Takuya Kojima, Ca' Foscari University of Venice, Italy

Drawing upon No-Level Brick (NoLBrick) Japanese Language Education (JLE) project at an Italian university, this study explores how a group of undergraduate students interested in JLE develops their JLE Communities of Practice (Wenger 1998; CoP) and what effect the CoP comes to have on their view of JLE. CoP which views learning as participation in social practice guides this study. NoLBrick project thematises 'dialoguing and thinking' by using Japanese instead of memorising linguistic information as it assumes that our language develops in sustained attempts to make ourselves understood (Mariotti forthcoming). In NoLBrick project, 12 'student-facilitators' 1) supported students in a 15-weeks dialogic Japanese language course and 2) conducted action research about the course. For their research, the student-facilitators regularly reflected on students' learning and their facilitation during pre- and post-meetings and online discussions using Japanese. While the studies informed by CoP has investigated second/foreign language learning in varied contexts (e.g. Morita 2012), little study has explored the above-mentioned way of undergraduate student language learning. This case study employed thematic analysis (Nowell et al. 2017) to examine two focal student-facilitators' 15 weekly journals, final reports and online discussions. The result informs that focusing less on correctness but more on contents throughout the project turned their communication into active and respectful dialogues, which turned the group of students into the JLE CoP. The CoP encouraged them to view JLE as not an object to learn but a resource to think and communicate within social practice e.g. a conference presentation after the course.

54658
No-Level Brick Japanese Language Education: Expectations Toward Language Teaching
Chiara Alessandrini, Ca' Foscari University of Venice, Italy

This study explores dynamic relationships between students and student-facilitators, aiming to explore how student expectations influence their relationship and thus language learning experience and outcomes in No-Level Bricks (NoLBrick) dialogic Japanese as a foreign language course at an Italian university. This research focuses on participants' expectations toward language education as they profoundly influence their learning processes and outcomes (Bernat & Gvozdenko 2005), In particular, their expectations towards language teachers. In adult language education, facilitators are expected to 'support' student learning achievement while respecting their autonomy and thus allowing students to take responsibility within the learning process (Umeda 2005; Balboni 2014). However, the facilitators are often seen to fulfill the role of the teachers who often take an initiative in guiding student learning. The NoLBrick dialogic Japanese language course in this research asks us to reconsider such aforementioned expectations towards 'facilitators' in language classrooms when the facilitators are peer-students whose role is to promote its dialogic approach in and outside the classroom. This qualitative case study (Duff, 2008) explores the data from the reports produced by students and student-facilitators', relating it to researcher's participant observation and own experience as a facilitator within the course. This research found that the student expectations toward the facilitators were dynamically negotiated and changed or unchanged. Findings highlight a variety of relationships among the participants, ranging from friendship to evasive ones, which differently impacted the cooperativeness and the quality of dialogues in the class.

The International Academic Forum

54657

No-Level Brick Foreign Language Education: Definition of the Field and Explanation of the Purposes – Japanese Language Classroom as Case Study

Marcella Mariotti, Ca' Foscari University of Venice, Italy

Today, we frequently observe social discriminations. These are tightly connected to stereotypes and intolerance toward others' values differing to ours. Many of us do not have/take the chance to become aware of and question even our own values and ideologies behind them. Dialogue through a (foreign) language is considered as a 'must' toward social cohesion and mutual understanding (Council of Europe 2001). In much needed citizenship education, foreign language teachers can play a key role (Hosokawa, Otsuji, Mariotti 2016). This presentation aims to demonstrate that 'active learning' language classes where learners are asked to think and choose the theme which each of them cares, whatever the themes and language proficiency levels are, can empower learners and teachers to became aware of their own values given they are guided to question the reasons behind their choices and to share their thoughts in meaningful dialogues (Hosokawa, 2019) between them and outside the classroom. This approach can move our classes toward more inclusive ones. The data to support the claim came from interviews, participant observation and submitted texts in three case studies: absolute-beginners (2016), undergraduate (2018), master (2019) Japanese language courses at an Italian university. The analysis focuses on a) interrelations between language proficiency and chosen themes; b) changing awareness toward own and others' values; and c) relationship with peer-facilitators. The showcase will leads to No Level-Brick (NoLBrick) language education project, which suggests a de-standardized transformative-critical language education, where teachers and learners are seen as subjects of a reciprocally empowering citizenship formation process.

Saturday Session II: 11:00-12:40

Room: *To be Announced in Final Schedule*
Session Topic: Economic & Social Inequality
Session Chair: *To be Announced in Final Schedule*

54689
Positive + Evidence
Mark Taylor, University of Illinois at Urbana-Champaign, United States

This presentation charts the opportunities and frustrations of working with a non-for-profit organization as they work to acquire a derelict building that used to house the evidence of crime and transform it into a hub for urban agriculture and employment opportunities. From a series of small-scale design build projects that included the creation of compost bins, and the conversion of a school bus so fresh produce could be sold locally students increasingly got to know the needs of the non-profit organization to a point where they could conduct a needs and program analysis for future growth. An obvious need that was identified was the non-profit would require approximately $120,000 if they were to renovate the derelict building and establish a facility to prepare produce for sale. To assist with this fund-raising effort students prepared material in video format to communicate the needs the organization had to potential supporters. In addition, the organization's website was revamped, merchandise materials created, including a recipe book that could be sold to generate revenue for the renovation project. A transition of leadership occurred in the summer of 2019 and an intentions has been expressed to proceed with the renovation of the former evidence building and provide daily employment on a $10 an hour basis for homeless members of the community that have little opportunity to work their way out of poverty.

53633
How to Support Immigrant Entrepreneurs to Succeed in a Foreign Culture? – A Multiple Case Study from a Norwegian Context
May Olaug Horverak, Birkenes kommune, Norway

With increased globalisation and immigration, multiculturalism is the status quo for many western societies, and with this, challenges concerning integration and equality arise. In Norway, we generally have a low unemployment rate, 2,7% in 2018, but, the situation is somewhat different for one group; immigrants. For this group, the unemployment rate was 6,4% the same year. This shows that people with an immigrant background have challenges succeeding with getting a job, and as a result, many of them turn to entrepreneurship. This is the background for the current study which is part of a project called «Multicultural value creation» run in the southern region of Norway by the Agder-county in cooperation with the EVA-centre (a centre for giving guidance to entrepreneurs). The project is supported by the Norwegian Directorate of Integration and Diversity. When being an immigrant and starting as an entrepreneur, there may be many challenges that occur, for example difficulties with the language, understanding taxation rules and other regulations and understanding the potential customers. Of the many businesses that are registered in general, only a small percentage survives. To support immigrants in a tough market, we have carried out motivation courses for those who have recently started or are about to start a business. We will present qualitative data from these courses which aimed at building resilience in the process of starting and running a business, by identifying and discussing goals, success factors and hindrances, and deciding on focus and necessary action to succeed.

54543

A Legacy of Hate: The Flourishment of Antisemitism in Current Times

Patricia Levy, Fort Hays State University, United States

Contemporary antisemitism through increasing incidents of violent acts and verbal slander constitutes what has become part of a normative phenomenon of intolerance expressed within the American social, economic, and political arenas. This presentation will focus on an in-depth analysis of the psychology of prejudice, discrimination by way of the means used to produce fear and division while ensuring the continuation of hatred and scapegoating stereotypes from the past into the present-day lives of Jewish Americans. Noted psychological theories will be discussed as applied to issues related to the sanctioning of antisemitic aggression, perceived threat, ethnocentric racial and religious identity socialization, and the perpetuation of social disenfranchisement. Research findings exploring strategies of strengthened societal resiliency related to the defusing of attitudinal antisemitic prejudice and the cessation of violent discriminatory attacks will also be examined.

Saturday Session III: 13:40-15:20

Room: *To be Announced in Final Schedule*
Session Topic: Teaching Experiences
Session Chair: *To be Announced in Final Schedule*

54687
Teaching Experiences, Pedagogies, Practices and Praxes in Subject of Applied Geo-information System Technology
Yaowaret Jantakat, Rajamangala University of Technology ISAN, Thailand

This paper is presented as an important point for teaching experiences from 2012 to 2019 based on pedagogies and praxes in subject of applied geo-information system technology (AGST) for graduate students, is under Master of Science Program in Applied Information and Communication Technology, Faculty of Sciences and Liberal Arts, Rajamangala University of Technology ISAN, Thailand. These main purposes are to share teaching experiences, pedagogy and praxis with tactics for instructors or lecturers and to share teaching outputs-based graduate students' assessment from thesis or independent study (IS). The sequential topics for teaching has started with a basic and theoretical approaches of geo-information (such as Geographical Information System, GIS; Remote Sensing, RS; Global Position System, GPS or called, '3S') including pre-and post-test. In pedagogy and praxis, lecturer has given assignment for graduate students who have to find a variety of their interested three or five case studies using geospatial technology (GT) and present to lecturer before they will implement for small-geographic inquiry project. This teaching has been found that graduate students during 2012-2019 are able to use these pedagogies and praxes for operating their theses and ISs about 80% while 20%, who do not lead to do thesis or IS but need just knowledge. Furthermore, over eight periods above, lecturers have faced to advances of geospatial technology including cloud-based GT applications and increasingly sophisticated software, etc. Consequently, lecturers and graduate students have to develop or improve and learn using such advanced GT for research, thesis or IS too.

55378
Exploring Hindrances to the Development of Clinical Judgment during Clinical Experiences
Nicole Hoffman, Athabasca University, Canada
Kimberley Lamarche, Athabasca University, Canada

Rationale/Background: Clinical judgment is recognised as an essential skill for competent nursing practice. Nursing students develop clinical judgment throughout their program. The clinical setting is an ideal place for students to explore clinical judgment. Clinical instructors have an integral role in these experiences. Research Questions: 1) How do experienced clinical nursing instructors understand clinical judgment? 2) How do experienced clinical instructors facilitate the development of clinical judgment in their students? Methodology: Experienced clinical instructors were invited to participate in semi-structured interviews. Open, axial, and theoretical coding were used to analyze responses. Trustworthiness was addressed through thick, rich description, member checking, negative case analysis, statements of researcher motive and positioning, and the use of an audit trail and reflexivity journal. Results/Findings: Five study participants with over 50 years of collective teaching experience participated. Participants identified student, instructor, course constraints, and interpersonal conflict as potential hindrances in the clinical setting and discussed strategies to minimize the impact of these factors. Managing hindrances can be one of the most challenging aspects of teaching, and can have considerable impact on student experiences. Implications: Study results can help new and experienced instructors to explore their practice on how to guide and support students during their endeavors in learning to 'think like a nurse'. The results could also be used by new clinical instructors to help them during their first year or two of practice while they are adapting to their new role.

55477

Students Perspectives of Experiential Learning in a Technical Education Program

Andrew Kline, California Polytechnic State University of San Luis Obispo, United States
Scott Kelting, California Polytechnic State University of San Luis Obispo, United States
Stacy Kolegraff, California Polytechnic State University of San Luis Obispo, United States

This paper discusses students' perspectives of the impact that hands-on experiential learning laboratories have on both technical understanding and soft skill development. The hands-on experiential learning laboratory exercises provided opportunities for teams of students to build assemblies outside the classroom on full-scale projects by applying knowledge first learned in class. These exercises have been designed to reinforce course comprehension by combining them with additional instructional delivery methods allowing students to "learn by doing." Each hands-on experiential exercise followed a lecture and incorporated concepts learned in class; these exercises included wood and steel stud framing, exterior systems, door and window flashing and installation, and concrete. A survey was conducted to determine student's perspectives on how these exercises impacted and reinforced both technical skills and soft skills, including an increased understanding of systems and assemblies and greater appreciation for trades, interpersonal relationships and increased confidence. The results of the student surveys are presented and discussed. This information may assist technical education programs that are interested in developing hand-on experiential laboratory exercises to prepare students for careers.

54001

Leadership Skills Development in Higher Education Courses: A Case for Experiential Learning

Thomas C Padron, California State University East Bay, United States
Matthew Stone, California State University Chico, United States

Leadership skills are essential in many professional fields. These skills that are required for each field differ by a number of factors as ideal and prescribed leadership skills that are required by one field may not suffice for others. Northouse (2012) states that the demand is strong for effective leadership in society today from local and community levels to national and international levels. According to Doh (2003), leadership knowledge, skills and attitudes can be taught, and formal classes and experiential learning environments may lead to skill development. Different people learn in different ways, but skills are developed through practice and through relating learning to one's own personal experience and background (Katz, 1955). For students, experiential learning activities are an ideal opportunity to develop, practice and enhance their leadership skills. The effectiveness and value of mixing conventional knowledge teaching approach with experiential learning has been empirically researched in different disciplines (Hoover, Giambatista, Sorenson, & Bommer, 2010; Lei, Lam, & Lourenco, 2015; Ng, Dyne, & Ang, 2009). Utilizing theoretical frameworks from Katz's (1955) leadership skills theory, and Kolb's (1984) experiential learning theory, an exploratory study introduced the concept of implementing leadership skills as a core objective in a hybrid, experiential event management course. Through a cursory overview, insights from the study will be shared along with results that can be applied to most all types of higher education courses in most all disciplines.

Saturday Session III: 13:40-15:20

Room: *To be Announced in Final Schedule*
Session Topic: Learning Experiences
Session Chair: *To be Announced in Final Schedule*

54049
Beyond Design Thinking Use in Conceptual Framework Development in Nursing Informatics
Reynold Padagas, Jose Rizal University, Philippines

Historically, learning was strictly confined in a typical brick-and-stone classroom solely purposive to enable knowledge transmission from the teacher to the learners. The traditional classroom is highly teacher-centric where the students act as obedient receptacles of knowledge transfer until massive technology disruptions emerged during the fourth industrial revolution. One strategy that has been used exponentially in education is design thinking (DT), a human-centered approach in problem solving. In this pre-test and post-test experimental research, DT enabled randomly paired nursing informatics (NI) students to construct their conceptual papers or frameworks addressing significant challenges that affect healthcare. Pre- and post-surveys were conducted after the completion and oral presentations of their conceptual papers. Key informant interviews were also conducted to generate qualitative data, which were believed to expand understanding of the perceptions and expectations of the students in NI through DT. The findings revealed that design thinking was an effective strategy in developing conceptual papers or frameworks. The nursing students valued design thinking as a tool that enhances team diversity, collaboration, patience to listen, openness to honest feedback mechanisms, openness to learning new things, social awareness and sensitivity, inquisitiveness, keenness to details, and uses mistakes as opportunities to learn. The areas of improvement, however, were in the areas of data analysis, time management, technical writing, problem-solving, conducting literature review using online platforms, reading comprehension, concentration, critical thinking, cultural sensitivity, innovations, adaptability, following prescribed formats, and creativity. Generally, while DT can be adopted as an effective teaching tool, enhanced utilization is further required.

55182
A Conceptual Analysis of Various Challenges Facing by Business Management Education in the Middle East, With Special Reference to UAE
Ambili Sunil, University of Fujairah, United Arab Emirates
Munther Talal Momany, University of Fujairah, United Arab Emirates

This study is an investigation into the conceptual framework for Business Management education, the challenges and issues concerning the modern business education in Middle East. This paper analysis the innovative strategies and policies of UAE in bringing up the best educational experience to its people. This paper also analyses the various needs of the diverse group of people in the country so as to identify the problems and prospects of technology embedded education system in the country. Research Questions: What are the challenges that the Business Management education face in the Middle East? How can the technology embedded system of education be effective in teaching-learning process. What is the importance of Blended learning approach in teaching and learning? Research Objectives: To understand the innovative strategies of UAE in bringing up the best educational experience. To evaluate the effectiveness of technology embedded education system. To identify the problems and prospects of technology embedded education system in the country. Research Methodology: The first two objectives have been studied by analyzing the policies and strategies of UAE ministry of education. Secondary data sources have been utilized for the same. One case study has been undertaken in one of the Universities in UAE so as to understand the problems and possibilities. The study utilized the available secondary data and the case study reveals all the aspects of the teaching-learning process and the level of understanding of the students.

53599

The Culture of Journal Writing Among Manobo Senior High School Students

Jessevel Montes, Pigcawayan National High School-Senior High School Department of Education, Philippines

The study explored on the culture of Journal Writing among Manobo Senior High School students.The purpose of this qualitative morpho-semantic and syntactic study was to discover the morpho-semantics and syntactic features of the written output through morpho-semantic and syntactic categories present in their journal writings.Also, beliefs and practices embedded in the norms, values and ideologies were identified. The study was conducted among Manobo students in the senior high schools of Central Mindanao particularly in the Division of North Cotabato, Philippines. Findings revealed that morphologically, the features flourished are the following:subject-verb concordance, tenses, pronouns, prepositions, articles and the use of adjectives. Syntactically, features are the types of sentences according to structure and function,and the dominance of code-switching and run-on sentences. Lastly, to the beliefs and practices embedded in the norms, values and ideologies in their journal writing,the major themes are:valuing education, friends and families as treasures, preservation of culture,and emancipation from the bondage of poverty. The study has shed light to the writing capabilities and weaknesses of the Manobo students when it comes to English language. Further, such an insight into language learning problem is useful to teachers because it provides information on common trouble-spots in language learning which can be used in the preparation of effective teaching materials.

54664

Cultivating Global Competence in Teacher Preparation Programs: Preparing Students and Educators for a Changing World

Lotta Larson, Kansas State University, United States

Today's students face an unprecedented future in which they will navigate a global society. To prepare global-ready students, teachers must also be global-ready. This qualitative study explores the collaboration between 85 American preservice teachers, 25 Swedish preservice teachers, and 100 Swedish ninth graders. Goals of the study included 1) develop ninth graders' English language skills , 2) encourage preservice teachers from two continents to collaboratively to create and assess literacy lessons, 3) to cultivate globally competent teachers and students. All instruction and communication took place in online environments. Data sources included recorded Zoom/Skype meetings, visual representations (images, videos), written communications (Google Docs, social media), assignments, assessments, and narrative feedback. Findings include evidence of ninth graders' progress in English, ways Swedish and American preservice teachers collaborate, and ways the three groups interacted and developed global competencies and diverse perspectives. General suggestions for raising global-ready students and teachers and resources for international, online collaborations will also be shared.

Saturday Session III: 13:40-15:20

Room: *To be Announced in Final Schedule*
Session Topic: Foreign Language Education
Session Chair: *To be Announced in Final Schedule*

55505
Developing Note-taking Skills for EMI Courses in Japan
James Broadbridge, J. F. Oberlin University, Japan
Yoko Kusumoto, J.F. Oberlin University, Japan

With the progress of globalization and internationalization in the 21st century, English is being used as a medium of instruction in content courses more and more at universities in foreign countries. However English Medium Instruction (EMI) courses differ vastly to English as a Foreign Language (EFL) courses and all too often presumptions are made about the level of readiness students possess when they progress from EFL courses to EMI courses. Note-taking is an activity that distinguishes learning at university from learning at secondary school (van de Meer, 2012), and the importance of note-taking has been well-recognized by educators. Note-taking is a complex action which involves comprehending aural input, identifying important information, and recording information all being undertaken under real time constraints. This difficult task is amplified for those doing so in their second language and therefore the explicit teaching of the skills required to do so should be beneficial to these learners in order to help them prepare to participate successfully in EMI courses. Although some recent EFL textbooks include note-taking practices, classroom techniques for teaching EFL note-taking and empirical studies are insufficient. This presentation will introduce attendees to these issues by highlighting the current situation in Japan regarding the move from EFL to EMI classes. It will describe research carried out by the presenters into ways to help Japanese students succeed in EMI courses by improving their note-taking skills, and offer a qualitative analysis of the improvements students made in their note-taking following instruction.

55205
Language Learning Behind the Screen: Movies for Second Language Acquisition
Tetyana Kucher, University of North Texas, United States

Teaching English through movies, TV-shows, and video clips is a relatively modern way of enhancing language acquisition. The benefits of using American movies for improving students' English language proficiency have been studied by many researchers (e.g., Webb, 2011; Gormly, 2013; Lavaur & Bairstow, 2011; Etemadi, 2012) who supported the idea that, unlike traditional ESL instruction, authentic American movies are able to target all major language aspects as a unit without separating each individual skill, thus increasing the effectiveness of language instruction. This presentation explains the benefits of using video materials for English language instruction. It will cover the organizational process of implementing movies into an ESL classroom which include (1) relevance and appropriateness, and (2) genre selection. The presenter will also talk about the principles of developing the course structure, which will consist of different types of pre-watching, while-watching, and post-watching activities. The session concludes with recommendations for effective incorporation of American TV-shows in English teaching programs. Attendees will leave the presentation informed and inspired to use authentic TV-shows in their classrooms for effective second language acquisition.

55530

An Exploratory Study about Korean Students' Perceptions of the Effectiveness of English Medium Instruction Courses and Their Use of Language Learning Strategies
Hyunjung Lee, University of Arizona, United States

English Medium Instruction (EMI) in university courses is expected to have positive effects on university students' English language learning in non-English-speaking countries since they can learn English on campus (Macaro, 2018). For successful second language learning, efficient use of L2 learning strategies is essential (Oxford, 2017; Cohen & Wang, 2018). The goal of this study is to investigate, through qualitative research, how the experiences of EMI impact students' learning strategies for effective English learning. The data for this research were collected through class observations of 88 students in two EMI classes and in-depth interviews with two focus groups of five students and instructors at a Korean national university from April, 2019 to June, 2019. One of the classes was for first-year students who were taking an EMI course for the first time and the other for second or third-year students who had taken more than two EMI classes before. My data analysis has brought out the following findings: (1) students who had taken more EMI classes used more learning strategies than the others, (2) students used social strategies more often than the other strategies to understand complicated subject matters such as syntax, and (3) students combined different strategies to increase their understanding. The conclusion this research leads to is that students perceive EMI courses as effective and helpful for their English language learning and that more experiences of EMI can increase their use of learning strategies, which would facilitate their English learning.

54855

Efficient Teaching and Learning of a Second Language: Comparing "Desirable Difficulties" and "Cognitive Load Theory" in the Language Learning Classroom
John Duplice, Sophia University, Japan

Although second language learning goals can be clearly defined in the form of can-do statements, theories behind how students best learn material to reach these goals is not as clear; thus it is crucial that both teachers and learners understand effective ways of acquiring the material and skills to reach the language learning goals. Two seemingly opposing theories on how best to learn have derived from psychology research. These are "Desirable Difficulties" and "Cognitive Load Theory". Desirable difficulties theory is based on the idea that including some difficulties in student learning may help students` longer-term retention and their ability to transfer knowledge to other skills or settings. In contrast, "Cognitive Load Theory" is built upon the premise that the brain, specifically short-term memory, is limited and intentional study methods are best to reduce the amount of cognitive load when learning. Research has been conducted into these theories investigating their effectiveness, but little has been done in comparing the efficacy of the two theories in a controlled setting. Furthermore, there is need for empirical research with focus on the second language learner. In this proposed presentation, I address these two conflicting theories and my ongoing research on the dichotomy of desirable difficulties and cognitive load theory in the second language learning classroom. Data from this research comes from university students learning English in Japan.

Saturday Session III: 13:40-15:20

Room: *To be Announced in Final Schedule*
Session Topic: Health & Wellbeing in Education
Session Chair: *To be Announced in Final Schedule*

55068
Using Visual Communication Analysis (VCA) to Treat Maladaptive Behaviors and Teach Communication
Aileen Herlinda Sandoval, The Chicago School of Professional Psychology, United States
Gary Shkedy, Alternative Teaching Strategy Center, United States
Dalia Shkedy, Alternative Teaching Strategy Center, United States

The number of students with disabilities served under the federal law of the Individuals with Disabilities Education Act (IDEA) in public schools has increased from 6.4 million to 7.0 million students. Current curriculum offered is eclectic, and inconsistent as they vary across students, classrooms, districts and throughout the nation. Additionally, curriculum also does not typically provide any therapeutic benefits, communication or behavioral support. Furthermore, according to the Centers for Disease Control, approximately 31% of children with Autism Spectrum Disorder (ASD) are classified as intellectually disabled and between 25 – 50% of children with ASD do not develop functional verbal communication. As a result, this subset of nonverbal children is considered "severe" or "low functioning." Researchers conducted two studies to test the effectiveness of Visual Communication Analysis (VCA) as a method to teach communication and reduce maladaptive behaviors, in both non-verbal children with severe Autism, and verbal children with Intellectual Disability, and/or Speech and Language Impairment. Researchers used changes in letters correct per minute (LCPM) when typing, as a measure of learning. An additional measure used was frequency of maladaptive behaviors at the beginning of the study compared to the frequency at the end of the study. Using both of these measures, VCA showed statistically significant improvements with communication and a decrease in maladaptive behaviors in the individuals tested. In addition to demonstrating the efficacy of VCA, these results lead to the questioning of the validity of the original diagnosis of intellectual disability given to this subset of children with ASD.

55588
Examining the Sentiments and Practices of Math-anxious Parents of Preschool Children
Anastasia Betts, University at Buffalo, SUNY, United States
Kelly Sheehan, Age of Learning, Inc., United States

International measures of assessment have shown that math anxiety is associated with lower achievement in mathematics. Additional studies have shown the presence of intergenerational effects of math anxiety, which can be passed from parents to children, thus continuing the cycle of low math performance. Yet, very little is known or understood about the nature of parent math anxiety, or the ways in which the beliefs, attitudes, and practices of math-anxious parents contribute to the development of math anxiety in their children. This mixed-methods research examines the sentiments and practices of parents of preschool age children (4 and 5 year-olds) through surveys (total n = 225) and semi-structured interviews (n = 23), in order to gain a better understanding of the factors that contribute to the presence of math anxiety in parents. Findings identify factors that influence math anxiety in parents, such as income and education, as well as negative early experiences with learning mathematics leading to diminished confidence and math avoidance. This presentation further discusses the impacts of these factors on each other and on the underdevelopment of math competencies in learners and calls for new research to explore the ways in which math-anxious parents may unintentionally transmit math anxiety to their children, and potential strategies that may mitigate the effects of that transmission.

55125

Wellbeing Warriors: A Randomised Controlled Trial Examining the Effects of Martial Arts Training on Secondary Students' Resilience

Brian Moore, Macquarie University, Australia

Mental health is a significant issue across international education systems. In the past 12 months, an estimated one in seven Australian youth experienced a mental health disorder and school-based mental health services were the most commonly accessed service supporting this population. Universally delivered preventative approaches to mental health are an important component of school-based mental health services, and interventions promoting resilience fit within this model. While research has suggested that resilience can be learned and that schools play an important role in developing resilient youth, rigorous evaluation of interventions promoting resilience is limited. Martial arts training has been found to have psychological benefits such as increased confidence and self-esteem, and was the basis of a preventative mental health intervention delivered in the current study. The study examined the effects of a 10-week martial arts based intervention which was evaluated using a randomized controlled trial. The intervention was delivered to 283 secondary school students aged 12-14 years, who were recruited from schools in New South Wales, Australia. The program was delivered in a group format at participating schools, and had an intervention dose of 10 x 50-60 minute sessions once per week for 10 weeks. Quantitative data was collected pre-intervention, post-intervention, and at 12-week follow-up. Results found a consistent pattern for resilience outcomes, where all primary and secondary measures improved for the intervention group and declined for the control group. The study provides robust evidence that students' resilience can be improved using martial arts based interventions delivered in school settings.

54665

Health Inequality Between Humanities Majors and Science Majors in Japan

Yoshihide Terada, Keio University, Japan

This study analyzed health inequality between humanities and science majors using the "Keio Household Panel Survey." The study compared the averages and estimated the functions of "health" and calculated the difference in health inequality factors using Blinder-Oaxaca decomposition. First, the average of "health" for humanities majors was lower than that of science majors. The following results were obtained: (i)the coefficient of "income" in the estimation of "health function" of "Total" was significantly positive, (ii) the coefficient of "graduate school dummy" in the estimation of "health function" of humanities majors was significantly negative, but the same coefficient was not significant regarding science majors, and (iii) the coefficient of "junior college and technical collage dummy" in the estimate of "health function" of humanities majors was negative, but the same coefficient was positive regarding science majors. Third, an explained component of "income," an unexplained component of "graduate school dummy," and an explained component of "junior college and technical collage dummy" were significant factors. From the above results, we suggest that labor supply is reduced and advance to graduate school and junior college in humanities.

Saturday Session III: 13:40-15:20

Room: *To be Announced in Final Schedule*
Session Topic: Professional Training
Session Chair: *To be Announced in Final Schedule*

54954
Bloom Where You're Planted: Spreading the Seeds of Leader in Me Everywhere
Carol Bennett, Brigham Young University-Hawaii, United States

Research has indicated that the Leader in Me process has shown success in raising academic scores and reducing behavioral referrals in multiple schools in the US mainland and several other countries. Numerous studies followed strict evidence standards required by What Works Clearinghouse (WWC) and the Collaborative of Academic, Social and Emotional Learning (CASEL). In March 2018, the Collaborative for Academic, Social, and Emotional Learning (CASEL) endorsed Leader in Me as a "CASEL SELect" program (their program-certification title). This designation is notable as it identifies Leader in Me as an approved social and emotional learning (SEL) approved program. This body of research is impressive, yet to date, no studies have been conducted to review the effects of the Leader in Me process on schools in Hawaii. Of the over 4,000 schools in the Leader in Me process worldwide, currently there are ten elementary schools which have officially been designated as in the Leader in Me process in Hawaii. Specifically, this study explored the Leader in Me process in schools in Hawaii, to discover if it has had a positive effect with academic achievement indicated by state test data in reading, math, and science, as well as, improved behavior according to participating school principals' perceptions of the number of behavior referrals. Principals' perceptions of overall satisfaction and additional indications of school improvement were also noted. These findings could greatly impact principals' decisions to become involved in the professional development and financial commitment needed in becoming a Leader in Me school.

53464
The Importance of Context in Teacher Development Programs – The Macao Context
John Wheeler, MPI Macao, Macao

This paper outlines focuses on a teacher development program delivered at a Middle School in Macau. The participants on a teacher development course on the teaching of reading skills were asked to complete a questionnaire about the course. Teachers who indicated their willingness then took part in semi structured interviews. The aim of the study was to determine how suitable and useful the professional development had been for the particular context of the school. It was also hoped that the research could inform the planning of future teacher courses, many of which are conducted by my Centre. Overall, the findings of the research indicated the vital importance of context knowledge in the delivery of such courses, since teachers who were often well versed in theories of teaching, doubted whether some theories could be applied in their teaching situation. The findings also supported the idea that a teacher development, rather than teacher training focus should be adopted in professional development, drawing wherever possible on the superior context knowledge of the participants in teacher education. While findings from this small scale study are not generalisable beyond Macau they do provide some insight in the teacher education field. In this field course titles such as 'how to teach reading' are not uncommon, while there is no research based evidence that an answer to this question has been identified.

55601
Professional Teacher Associations – The Third Side of the Triangle of Support for Teachers' Work
Joe Alvaro, The University of Sydney, Australia

Teaching is a complex, demanding and time-consuming task. Professional teacher associations play an important role in building teacher capacity and bringing teachers together to boost performance. In addition to university qualifications and employer support, professional teacher associations add a third side to the triangle of support for teachers which is empowering for teachers and enables them to keep going on a path of continuous improvement. Using an Australian case study approach this presentation will focus on research about this third side of support for teachers' work and how we can use professional teacher associations to increase the quality of teaching and learning and teacher wellbeing in our educational institutions.

54440
Advancing Teacher Agency and Meaningful Professional Development
Sara Zimmerman, Appalachian State University, United States
Melanie Mikusa, Morganton Day School, United States

In recent years, schools have started rethinking professional development and the increasing need to provide meaningful, effective teacher learning that changes teaching practices and improves student outcomes (Mizell, 2010; Wunderlich, 2018; EdSurge, 2019). Research on teacher agency and the power to make learning choices to achieve individual goals has shown potential for teacher learning, teacher contributions to the growth of their colleagues, and support of student learning (Calvert, 2016). In this study, we describe a school where teachers take charge of determining their own professional development. The principal's assumption is that teachers can identify the knowledge and skills they need to more effectively address student learning concerns. Financial support and assistance is provided to the teachers. Questions that are important to this study include: how do we listen to teachers to help guide their individualized learning, how do we encourage teachers to identify their student needs, and are there additional benefits to teachers and schools when teachers are given more power to make decisions regarding professional development. Ultimately, as is the case with any professional development, the most important question is how should we analyze the effectiveness of the individualized professional development. In an effort to address these questions, teachers were surveyed and teacher feedback was analyzed using Darling-Hammond, Hyler, & Gardner's seven features of effective professional development (2017). In this session, the researchers will describe methods and provide a summary of this study's findings.

Saturday Session III: 13:40-15:20

Room: *To be Announced in Final Schedule*
Session Topic: Industry/Innovation & Infrastructure
Session Chair: *To be Announced in Final Schedule*

55046
Can Chocolate Be the Key to Sustainable Agricultural Development?
Jeana Cadby, University of Tokyo, Japan
Tetsutya Araki, University of Tokyo, Japan

Cacao is produced predominantly in smallholder farming systems in equatorial regions around the world, with many farmers living below the poverty line. The craft chocolate and specialty cacao industries make up a very small share of the total chocolate and cacao markets, and often seeking high-quality cacao beans through direct trade strategies, which can prioritize farmer welfare. These markets may provide cacao farmers with considerably more sustainable resources than the traditional cacao marketplace in addition to increased opportunities for environmental conservation. Direct trade prices offered by specialty cacao buyers were found to be on average 251.63% more than world trade commodity cacao farm gate prices, and 169% more than fair trade farm gate prices (not inclusive of fair trade premiums). Specialty cacao production also encourages understory cropping agroforestry systems and the conservation of genetic diversity. Specialty cacao and craft chocolate can demand higher price premiums in addition to opportunities for environmental conservation when compared to commodity cacao, potentially contributing to improvement of farmer livelihoods and sustainable development in cacao production regions.

54171
The Impact of Air Pollution Levels on Bikesharing in Seoul, South Korea
Hyungkyoo Kim, Hongik University, South Korea

Bikesharing is increasingly being favored in many cities in the world for its benefits on the urban environment and public health. Seoul's public bikeshare program, the Seoul Bike, was first launched in October 2015 and has become widely spread around the city. As of 2018, it is supported by 20,000 bikes and 250 stations and attracts more than 27,000 riders daily. However, concerns are being raised as rising air pollution levels in Seoul, usually represented by PM10 and PM2.5, in the recent years may discourage citizens from using bikesharing and put them back in cars. This study investigates the impact of PM10 and PM2.5 levels on bikesharing in Seoul using daily air pollution and ridership data. Statistical analyses, which take into account control variables like season, weather, and calendar events, are adopted to empirically measure the impact. Findings present that air pollution levels have a significant impact on bikesharing in Seoul and call for new approaches in its future planning and policymaking.

55607
Engineering Complex Systems: Do Parts and Interactions Receive Equal Attention?
Katelyn Stenger, University of Virginia, United States
Leidy Klotz, University of Virginia, United States

Engineering complex systems remains a difficult task, (Lade and Peterson 2019). Those engineering complex systems for resilience often begin by identifying the systems' parts, interactions, and environment, (Meadows 2008). To achieve resilience, experts suggest managing interactions – such as increasing absorption of water in stormwater systems, (Elmqvist, Andersson, and Frantzeskaki 2019). Engineering with interactions can be difficult because they have lower salience when compared with a system's parts, (Higgins 1996). While resilience research shows the need for managing interactions, current resilience

research does not address how we might overlook interactions. This research fills the gap in understanding how we might overlook interaction, in favor of parts, when engineering complex systems. We tested between-subjects using a factorial design in an in-lab, behavioral experiment to quantify how we engineer complex systems. Participants (est. n = 150) were randomly assigned a control or manipulation group, and provided a written description and visual of a stormwater system. Participants in the manipulation group saw labeled interactions on the visual to increase the interactions' salience. All participants were asked to engineer the stormwater system, and decrease run-off water. Data collection is ongoing; we hypothesize participants in the manipulation group will engineer more often with interactions than the control group, and the control group will engineer more often on parts than interactions. Our findings fill the gap in understanding how interactions can be considered while engineering complex systems. Our research contributes to identifying potential blind spots in our process engineering a more resilient infrastructure.

53187
What is Green Real Estate Management? An Emerging Adult Perspective
Erin Hopkins, Virginia Tech, United States

There are many different definitions of sustainability and environmental sustainability. When examining this from the built environment context, the different definitions continue to cause confusion among stakeholders. As building operations represent the largest portion of the building lifecycle, a common definition regarding green real estate management can be beneficial. While research has looked at these varying definitions and the issues which arise because of these differences, it can be instructive to survey students as this cohort will be entering the workforce and will help to shape environmental sustainability from a property management perspective. The research question of how undergraduate students define green real estate management will be answered through a content analysis of questionnaires from an undergraduate multifamily property management and operations course from Fall 2016 and Spring 2018 semesters. These two semesters were chosen to try and capture both millennials and post-millennial generations for a more comprehensive examination among younger generations. The themes discovered through this research will be compared and contrasted with existing definitions put forth by various reputable sources and recommendations put forward for a standard definition taking into account emerging adults.

Saturday Session III: 13:40-15:20

Room: *To be Announced in Final Schedule*
Session Topic: Consumption/Production & Waste
Session Chair: *To be Announced in Final Schedule*

55617
Don't Consume Less, Just Recycle More: Public Perceptions About Waste Generation and the Recycling System

Michaela Barnett, University of Virginia, United States
Patrick Hancock, University of Virginia, United States
Shahzeen Attari, Indiana University, United States
Leidy Klotz, University of Virginia, United States

As waste generation and its environmental costs increase globally, do Americans have any idea how much waste they generate? What do people think are effective personal actions they can take to reduce waste? In a national online survey, 932 participants reported their perceptions about waste behaviors and the recycling system. When asked about what they and other Americans could do to reduce landfill waste and, in a second question, reduce plastic pollution in the ocean, most participants cited disposal behaviors (e.g., recycle more, donate clothes, or compost) rather than source reduction behaviors (e.g., purchasing products with less packaging, not buying unnecessary items). Similarly, when thinking about how they would change their behaviors if recycling were no longer available, most participants reported that they would either drive farther to recycle or throw away recyclable goods rather than reducing purchase of single-use items that require disposal. This contrasts with EPA and UN waste management recommendations to minimize waste production by focusing on source reduction and reuse. Although recycling will be an important part of a sustainable circular economy model, recycling alone and as currently practiced is not an effective waste management strategy. The misperceptions revealed in this research indicate the need for better public understanding about what happens to waste after it is thrown "away" and increased emphasis on waste reduction strategies.

55480
Net Zero Energy Building Design as the Challenge of the Current Agenda

Essraa Fatani, Eastern Michigan University, United States
Shinming Shyu, Eastern Michigan University, United States

This paper reviews the emerging literature on Net Zero Energy Building characteristics in office buildings. Recently, the frequency and intensity of energy building performance has penetrated into every aspect of the architecture industry including its design. Net Zero Energy Buildings aim to reduce energy consumption by transforming renewable energy into power supplying buildings' needs. While there have been few successful real projects of Net Zero Buildings, case studies have noted to the existence of multiple failed cases. Our knowledge concerning the factors contributing to the challenge of reaching Net Zero Building is limited at best. Using a systematic review approach of the literature, this research has mined the available scholarship on Net Zero Buildings features in the architecture literature and classified the barriers of implementation of Net Zero Buildings into few categories. Those categories are building design factors and energy generation factors. Building design factors is composed of passive and active design. Energy generation factors are constructed of renewable energy sources. The findings are significant due to the increasing emphases put on energy consumption of office building. The results suggest that designs of Net Zero Energy Buildings in office building must take more into consideration the building envelop, lighting system, and HVAC as important aspects in the ZNEB design.

53774

Effect of Carbonization Temperature and Reaction Time on Non-Recyclable PET Bottle for Char Formation

Chiaweefern Jennifer, University of Tokyo, Japan
Sawai Osamu, University of Tokyo, Japan
Nunoura Teppei, University of Tokyo, Japan

Japan has reported a high recycling rate of 84.5% for PET bottles in 2017. However, out of the total bottles collected, approximately 15 wt% consist of non-recyclable PET bottles. Here, non-recyclable PET bottles are referred to materials consisting of colored pigment, materials with impurities such as oil on surface and materials exposed to long-term UV-degradation. Due to the zero-recycling value of non-recyclable PET bottles, it is difficult to purify and recycle these materials. As a result, non-recyclable PET bottles are still being processed through thermal treatment. Thermal treatment of plastic materials is the least desired approach in waste management due to environmental and health concerns involving the emission of toxic PAH and greenhouse gases during the incineration of plastic wastes. Incentives should be taken to decrease the dependency on thermal treatment for non-recyclable PET bottles through improvement of processing routes of PET bottle recycling. The aim of this research is to provide an alternative route to improve the material value of non-recyclable PET bottles for the enhancement of the PET bottle recycling cycle. In particular, we plan to treat the non-recyclable PET bottles into char through carbonization, followed by activation of the carbonized product into activated carbon. Current experiments were conducted using commercial PET bottles as model feedstock to give a better understanding on the factors in the carbonization of PET using a bench-scaled batch reactor to obtain high char yield. Studies include the effects of operating temperature and reaction time on char, wax and gas yield.

54029

Empirical Analysis of Chinese Environmental Citizenship: Citizens' Awareness of Environmental Issues and Environmental Protection Activities

Tomomi Hamada, Chubu University, Japan
Makoto Shimizu, Chubu University, Japan

China has experienced rapid economic growth over the last thirty years. However, owing to such rapid growth, China is facing various environmental issues that need to be addressed. Numerous researchers believe that Chinese citizens' cognizance regarding pollution can play an important role in protecting the environment by incorporating social changes, which is termed as "environmental citizenship." The objective of this study is to investigate Chinese citizens' awareness of environmental issues, pollution in cities, and environmental protection activities (EPAs), and thereby identify the determinant factor for an individual to participate in activities that protect or pollute the environment. Based on questionnaire-survey data, aspects such as civilians' knowledge of environmental protection laws (EPLs), rules for sorting garbage-waste, awareness of the severity of China's environmental issues, participation in EPAs, and prioritization of EPAs in daily life were analyzed. Mathematical distributions of the said aspects were statistically analyzed through factor analysis and regression analysis. Obtained results indicate that most Chinese citizens understand the severity of environmental issues and recognize the need for changing citizens' activities and outlooks. However, few citizens adhere to EPLs. Furthermore, Chinese citizens do not prioritize EPAs in their daily lives, and regional inhabitants do not refrain from polluting the environment. However, Chinese citizens are shifting their focus from rapid national development to sustainable development. Hence, the obtained results demonstrate the implications for the education sector and national/local government to raise public awareness toward EPAs.

Saturday Session III: 13:40-15:20

Room: *To be Announced in Final Schedule*
Session Topic: Higher Education: Gender
Session Chair: *To be Announced in Final Schedule*

54654
Matriarchs Matter: Family Influences to Scientific Thinking of Women of Color in the Community College
Melo-Jean Yap, San Diego State University, United States

In the University of California system, community college transfer students comprise of 48% of graduates with STEM bachelor's degrees (Community College League of California, 2015). This demonstrates that two-year colleges help pave the career pathways of community college students, many of which are students from underrepresented backgrounds in STEM fields. To cultivate the potential of women of color in pursuing STEM fields in the community college, focusing on their standpoint will empower them in centering their own perspectives in their own retention and success. Learning more about their standpoint also highlights their knowledge production as future producers of knowledge in the STEM fields (Harding, 2004). To obtain the influences to their scientific thinking development, 35 women of color STEM majors answered a social network questionnaire by nominating these influences. Social network analysis was used to analyze their influential social networks. Results demonstrate that family members have the highest frequency of influence to scientific thinking, regardless of educational attainment at the high school or lower levels. These relatives also heavily consists of matriarchal figures, such as mothers and grandmothers, especially as influences to scientific observation and scientific justification. These findings signify the importance of family in cultivating intellect, whether or not the relatives obtained college degrees or higher. Significance also supports emphasis on the students' standpoint in self-determining their own success, and creates a campus culture that celebrates family-inclusiveness. Creating campus programming that caters to students' strong relationships with their families may promote even more persistence in their STEM career trajectories.

54473
Dishonest Self-Monitoring and Relationship Conflict of Undergraduate Students: The Effect of Gender
Takt Shishido, Musashino University, Japan

1. Research Goal: Self-monitoring (the ability to regulate behavior to accommodate social situations) is required for a good relationship, and thus universities try to improve the student's self-monitoring ability. It is assumed there that the self-monitoring is beneficial; however, the quantitative data collected from undergraduate students surprisingly showed that the self-monitoring significantly increased unfavorable relationship conflicts in classroom. The goal of this study is to explain the counter-intuitive results. 2. Hypothesis Development: Dishonest person may try to utilize self-monitoring for a relationship building strategy, but his/her self-centered hidden agendas and motivation are sometimes detected by others and this may lead to relationship conflicts. This means that self-monitoring, when combined with low honesty, can increase relationship conflicts. In addition, we predict a moderator role of gender, because men and women are expected different roles in interpersonal relationships, according to social role theory. 3. Method: Data were collected from 187 Japanese undergraduate students (48.1% men and 51.9% women; mean age = 19.65 years) by questionnaire. 4. Results: The regression analysis showed a significant three-way interaction effect between self-monitoring, honesty, and gender on relationship conflict in classroom, in which self-monitoring significantly increased relationship conflict only among male students with a lower level of honesty. 5. Conclusion and Discussion: Dishonest self-monitoring worsens interpersonal

relationships among men. Therefore, universities should be aware of a negative side effect of teaching "strategic" self-monitoring to male students.

55597

Female Leadership for Higher Education in the Progressive Era in the US: An Analysis of Identity, Gender Roles and Agency

Limin Su, The University of Iowa, United States

From the colonial period to the twentieth century, the identity of women, as well as gender role expectations, have evolved with the advancement of higher education for women. Identity determines self-autonomy, including educational motivation and achievement. From "republican motherhood", "ideal woman", to "new woman", different identities and images of women have influenced institutional efforts, educational ideals, and achievements of female educators and students in higher education institutions. To better understand the role of identity and gender roles in women's agency for higher education, the paper examines the experiences of female educators in the progressive era from the 1880s to the 1920s when higher education for women rapidly expanded. Influential female educational leaders of the time include Marion Talbot, Alice Palmer, Lucy Sprague Mitchell, Ella Flagg Young, Margaret Haley, and Martha Carey Thomas. The research, looking into biographies, primary documents and published works of these female educational leaders, casts light on the gender roles and values that they had fostered and that had influenced their propositions for women's education. The characteristics of female educators' experiences in the progressive era include intellectual aspiration for advanced learning, active engagement in public affairs, and progressive attitude towards marriage. The gender roles and values these female educators harbored and acted on had become part of their agency for educational reform.

54477

Female Labor Force with Higher Education and Economic Growth in Japan: Prefecture Panel Data Approach

Keiji Hashimoto, Otemon Gakuin University, Japan

As a consequence of the demographic change due to aging population combined with the diminishing number of children, the shortage of labor force is a serious problem in Japanese economy. At the same time, the shares of the people of both sexes highly educated keep constantly increasing. In this study, with a focus on the labor market participation rates of female with university education, its impact on the macroeconomic performance is considered. Based on the Okun's Law which is the standard tenet on the relationship between unemployment and economic growth, the impact of the number of people not working, classified by sex, age and education attainment, on the economic growth is empirically investigated. The panel data on all 47 prefectures (1982-2017) for empirical estimation of Okun's Law are from two main sources for population aged 15 and older (excludes those ""in school"") and GDP: Employment Status Survey (Statistics Bureau of Japan) and Prefectural Economic Calculation Annual Report (Cabinet of Office, Government of Japan), respectively. Our estimating results show that there is a noticeable difference between men and women with higher education in the relationship with real per capita prefecture income growth. We argue that the main cause of such a difference is the point that the labor force participation rates of women become lower as the education attainments of them become higher.

Saturday Session IV: 15:40-16:30

Room: *To be Announced in Final Schedule*
Workshop Presentation

53061
Unlocking Implicit Bias: How Our Hidden Attitudes are Affecting How We Teach Our Students
Jabraan Pasha, University of Oklahoma School of Community Medicine, United States

Unlocking Implicit Bias weaves humor, poignant stories from national headlines and personal experience into a rich learning experience. Participants leave with a sense of relief in knowing that even good people have unconscious attitudes that affect the decisions they make. By removing the feelings of guilt, we open the door to constructive discussions that help begin to combat the effects of implicit bias. We guide participants through enlightening experiential exercises to deepen understanding of the power of automatic associations which serve as the foundation of implicit bias. After introducing participants to the landmark tool that can reveal unconscious attitudes, the Implicit Association Test, our attention is then focused on the evidence-base, where we demonstrate key findings from the substantial literature on the nature and effects of implicit bias. By facilitating refreshing and productive large and small group activities on personal experiences with implicit bias in everyday life, we begin to peel away the feelings of shame and guilt that many people associate with implicit bias – allowing for constructive discussion about combatting implicit bias.

Objectives
1. Understand implicit bias as it impacts the personal, professional and societal relations we all have.
2. Interpret the impact of implicit bias from shared experiences.
3. Formulate a personal list of methods to combat implicit bias.

Saturday Session IV: 15:40-16:30

Room: *To be Announced in Final Schedule*
Workshop Presentation

53493
The English Language Classroom: A Place for Changing Hearts and Minds?
Mark Rebuck, Meijo University, Japan

For some teachers the classroom is not only a place for focusing on language, but one where students engage with issues. This presentation revolves around such an issue-orientated class; specifically, a disability awareness lesson, taught in a Japanese pharmacy faculty. The lesson covers several topics, including an introduction to chromosomal abnormalities, and the concerns of parents of children with the most common chromosomal abnormality, Down syndrome (DS). Also covered is NIPT (non-invasive prenatal genetic testing), a revolutionary method of prenatal testing. With over 90 per cent of pregnant women in Japan choosing selective abortion after a positive NIPT result for DS, the test raises profound ethical issues. The presenter is the father of a child with PWS, a rare chromosomal disorder; however, in creating and teaching the lesson he did not seek to further any particular agenda. Nevertheless, a questionnaire survey of 237 first-year pharmacy students, conducted before and after the lesson, showed a significant increase (of 23%) in the number of students who would choose to abort following a positive NIPT result for DS. After outlining the lesson's content, the presenter will discuss how it could have influenced the students' attitude change on selective abortion. This will lead to a wider discussion on pertinent issues in the teaching of controversial issues. One question the presenter will ask is this: Why would many teachers consider it acceptable to create a lesson designed to deter students from smoking, but not one that sought to sway their views on selective abortion.

Saturday Session IV: 15:40-16:30

Room: *To be Announced in Final Schedule*
Workshop Presentation

53325
LOL – Laugh or Learn?: An Investigation into the Potential of Adopting Popular Cultural Material into Mainstream Academia
Esther Laryea, Ashesi University, Ghana
Ayawen Asuinura, Ashesi University, Ghana

Established conventions in pedagogy have been shown to elicit reducing qualities in responses of students. Research attributes this to a number of factors including paradigm cultural shifts, the rapid rise to prominence of technological advancement and with it, diminishing attention spans. It follows that new methods of teaching are required to meet students in a pedantic space suited to them while providing effective results. This paper proposes an extensive integration of popular cultural media into teaching material; with a focus on memes and short videos, to the end that they may illustrate academic concepts to students in a clear and engaging manner. The methodology involves purposive sampling of appropriate short videos and memes and an illustration of how to use them in teaching effectively, as well as benefits and potential downsides associated with this method. It is crucial to highlight ways in which popular culture can be adapted into mainstream academia if we are to reach out to the young people we educate today effectively. The stark reality that Africa will witness a doubling of its population by 2030 is one that most young Africans today are oblivious to. Educators need their attention to impart critical thinking and problem-solving skills if they are to face this challenge properly. We propose that one of the most effective ways to do this is to get the full attention of students to transmit these skills will be to integrate popular cultural media into mainstream academia.

Saturday Session IV: 15:40-16:30

Room: *To be Announced in Final Schedule*
Workshop Presentation

54244
Pictogramming Workshop (Learning Programming Concepts with Pictogram Contents Creation)
Kazunari Ito, Aoyama Gakuin University, Japan

We have been developing content creation environment using human pictogram, called "Pictogramming." This application can be accessed freely (web site URI: http://pictogramming.org/?page_id=470 and application URI: https://pictogramming.org/editor/). Pictogramming is coined from two words, "pictogram" and "programming". Pictograms are widely used in various fields such as counseling, safety, and facilities. Thus, the pictogram has been researched in various fields. Pictogramming also has aspects of a programming learning environment. Pictogramming is designed with the goal of creating pictograms, so its command set and functions are limited compared to general programming languages. It leads to fit for educational use and it also has the advantage that an understanding of the concepts of programming such as sequential execution, parallel execution, variables, looping, conditional statements, etc. can be achieved through pictogram creation without much learning cost. Our past research proved that posturing human-shaped pictogram by this application generates humour and surreal emotions, which also promotes communications between learners. Hence, this application has widely used at from many elementary schools to universities with various learning context in Japan. This time, we would like to introduce this application and show off some practice examples and after that we held short workshop that each participant makes pictogram signs and we shall discuss programming learning method for student and the further educational use of various symbols not only pictograms but also emojis, diagrams, and so on.

Saturday Session IV: 15:40-16:30

Room: *To be Announced in Final Schedule*
Workshop Presentation

55887
Embracing Difference: A Card Game to Inspire Creativity and Foster Multiple Perspectives
Arina Eichelberger, University of Hawaii at Manoa, United States
Meng Fen Grace Lin, University of Hawaii at Manoa, United States

Creative people are often people who embrace differences, bring about original and novel ideas with fluency, and be able to articulate their ideas to others with detail. The ability to view problems from multiple views and develop creative solutions is an essential skill in today's fast-changing society. Interestingly, these same skills are also essential in empathizing with others. Empathy is the capacity to understand or feel what another person is experiencing from within their frame of reference. In other words, the capacity to embracing differences allows one to see from multiple perspectives with fluency and to relate to others by using imagination. In this professional development workshop, we will use simple card games to dive into the complex concept of embracing differences. Through three rounds of games, we hope to inspire creativity and foster multiple perspectives. We will provide the cards, you just need to show up ready to play. We will have two rounds of hands-on, small-group activities focused on creativity and multiple perspectives. In round three, participants will discuss possible applications for these activities in their own environments.

Saturday Session IV: 15:40-16:30

Room: *To be Announced in Final Schedule*
Workshop Presentation

54940
Spanish for Specific Purposes: The Training of Spanish Interpreters
Graziela Rondon-Pari, SUNY Buffalo State College, United States

Throughout the decades, the teaching of languages has undergone transformations, from rote memorization of grammatical rules, to free spontaneous language without error correction. At the same time, during the 20th century and beginning of the 21st century, language classes in higher education centered around grammatical reviews, culture and the study of literary works written in the target language. As language enrollments started to decline, colleges realized the need to offer students language classes that enabled students to be competitive in the global market. With that thought, universities started to focus on the teaching and learning of languages for the professions and specific purposes. Some of the specific purposes fields that are currently in great demand in the United States are court and medical interpreting, as well as legal and business-related translation, with the legal field being the one in higher demand. This workshop provides an overview of skills needed to be an interpreter, practical tips on legal discourse learning, ethical issues and an overview on how to become state and nationally court certified. The workshop will be in English, with Spanish examples.

Saturday Session IV: 15:40-16:30

Room: *To be Announced in Final Schedule*
Workshop Presentation

54366
Transformation through Embodiment of Pancha Maha Bhutas (Five Great Elements)
Jelena Vasic, Independent Scholar, Canada

This holistic and experiential workshop explores transformation through the embodiment of the five elements: space, air, fire, water, and earth, intersecting Eastern and Western epistemologies. According to Samkhya Philosophy, whatever exists in the cosmos resides within us. We are the physical manifestation of consciousness through the five elements. In this workshop, the participants are guided through the movement inspired by the elements in order to explore the body as a place of knowing, while connecting movement to self-reflection. This eco-spiritual pedagogy challenges the participants to re-examine their worldviews and re-evaluates our education systems that are still heavily influenced by Western patriarchal mind/body dualism. Through the embodiment of the elements, as well as the exploration of the fundamental concepts of Samkhya Philosophy, the participants are encouraged to explore embodied self-inquiry and critical self-reflection. They may also reflect on feelings and emotions that are catalyzed by and released through the movement and gain a deeper understanding of themselves and their lived experiences. This session uses a holistic, integrative and cyclical learning model of embodiment, self-reflection and transformation. It also intersects theories of adult education with both personal and environmental sustainability. Lastly, it is rooted in a belief that once we become aware of the individual spiritual connection to our inner world -through both cerebral and embodied inquiry -we can begin to heal our collective connection to our external natural world.

Saturday Session IV: 15:40-16:30

Room: *To be Announced in Final Schedule*
Session Topic: Poverty
Session Chair: *To be Announced in Final Schedule*

55524
Efficient Distribution of Wasted Food Using Smart Phone Application – Foodzo – An App Under Development
Ann Leelu George, Tata Elxsi, India
John Victor Christy, United Arab Emirates University, United Arab Emirates

This research aims at reducing food wastes and food storage losses due to mishandling. On average, about one-third of the food produced is lost or wasted globally. According to UN estimates, 40 percent of the food produced in India is either lost or wasted. At the same time, a report by the UN's Food and Agricultural Organisation states that every third malnourished child is Indian. This shows the need for the world's second-most populous country needs to reduce its food wastage to feed the 194 million Indians who go hungry daily. FoodZo aims at alleviating these two problems at the same time. It is an app platform where one set of users (food chains, restaurants or individuals) can post pictures as well as quantity available of extra consumable food, and another set of users can see the availability of food at low prices, and get connected. The cost of the food will be half the market price. The consumers can locate the food available near them via the app, and choose to drive themselves and get the food, or can choose to get it delivered for a nominal delivery fee. In India where the number of smartphone users is expected to reach 84% of the total population by 2022, FoodZo will be the perfectly in-hand solution for lessening wastage as well as alleviating poverty.

54384
High Energy Usage, Low Income Households, and Disadvantaged Communities: The Case of Southern California Edison's Care and Fera Program Customers
Melanie Edel, Southern California Edison, United States

This presentation examines the dynamics of "high energy usage," i.e. usage of at least 400.5% of baseline allocation, in households residing within "Disadvantaged Communities" (DACs) specifically among Southern California Edison's (SCE) low income customers enrolled in either CARE (California Alternate Rates for Energy) or FERA (Family Electric Rate Assistance) programs. The Clean Energy and Pollution Reduction Act of 2015 (or Senate Bill 350) mandates the California Public Utilities Commission (CPUC) "to help improve air quality and economic conditions" in DACs defined as communities "which most suffer from a combination of economic, health, and environmental burdens. These burdens include poverty, high unemployment, health conditions, asthma and heart disease, as well as air and water pollution, and hazardous wastes" (http://www.cpuc.ca.gov/discom/). In particular, this endeavor employs logistic regression to identify socioeconomic and demographic factors that significantly influence the propensity towards high usage among SCE's low-income customers particularly taking into account how such behavior varies by household vulnerability as measured by residence in DACs. From an operations standpoint, the statistical findings sheds light into more responsive programs and policies that can better address the unique configuration of needs related to reducing the incidence of high usage among these customers, especially living in DACs. From a broader national perspective, this presentation highlights the importance of using a more holistic approach in profiling vulnerability among low-income customers, one that duly recognizes the vital role played by the environment and public health, among others, as these variables impinge upon the proclivity towards high energy consumption.

Sunday at a Glance
January 12, 2020

09:00-09:40   **Featured Cultural Presentation | Room 318A**
Lei Making Workshop

09:40-11:20   Parallel Session I

11:20-11:35   Coffee Break

11:35-12:50   Parallel Session II

12:50-14:00   Lunch Break

14:00-15:15   Parallel Session III

15:15-15:30   Coffee Break

15:30-16:45   Parallel Session IV

16:45-17:45   **Closing Panel | Room 318A**
The Future of Liberal Education
David P. Ericson, University of Hawai'i at Mānoa, USA
April Goodwin, University of Hawai'i at Mānoa, USA
Reed Dasenbrock, University of Hawai'i at Mānoa, USA

Sunday Session I: 09:40-11:20

Room: *To be Announced in Final Schedule*
Session Topic: Education & Difference
Session Chair: *To be Announced in Final Schedule*

55540
Teaching English as a Foreign Language to Japanese Learners With Learning Difficulties
Mutsumi Iijima, Gunma University, Japan

Compared with learners in several other countries, it is said that the ratio of learners with Dyslexia is much lower in Japan. This might be true in a prospective of the orthographic depth, but there exists learners with Dyslexia in Japan, too. This fact is often unmarked even at school. It has been shown that learning will be built up on the development of phonological awareness at early stage. And learners with the insufficient development of it cannot acquire or achieve learning successfully. The problem is that learning is going on without being noticed. Then at the fifth year of the primary school, those who suffer from Dyslexia start to learn English without enough support or self-awareness. Their learning will collapse sooner or later. And according to several literatures, difficulties in the mother tongue should bring problems in learning a foreign language. Therefore, all the pupils at the very early stage of primary school, should be assessed of the ability of reading and writing their mother tongue, Japanese. This study examines possible causes which may hinder Japanese learners of English as a foreign language who have some difficulties, including learners with learning disabilities (LD), developmental disorders, hearing impairments or lower achievements. Those learners have several problems or difficulties caused by various impairments, but this study focuses on phonological awareness as a crucial factor in learning a language. And also this study suggests how TEFL at a primary school in Japan should start and what should be noticed.

55552
Math Readiness: Early Identification of Preschool Children Least Ready for Formal Mathematics Instruction in School
Anastasia Betts, University at Buffalo, United States
KP Thai, Age of Learning, Inc., United States
Daniel Jacobs, Age of Learning, Inc., United States

Key mathematics competencies mastered in kindergarten are associated with higher mathematics achievement in later elementary and middle school. Unfortunately, deficits in math understanding can begin before students enter school, often due to home environments that lack sufficient mathematics enrichment. Moreover, the gap between students who begin school behind and their more prepared peers only widens as students move through successive grades. As a result, developing ways to quickly assess and address gaps in students' mathematics foundations at school entry is critical to ensure future success in math. The present study evaluated the implementation of an adaptive digital mathematics program designed to assess and teach number sense skills to 292 low-SES children in 20 preschool classrooms in Southern California. Analyses revealed that children with low prerequisite knowledge and possibly low executive functioning skills were unable to progress effectively in the program. This study explores early identification of children who may not yet be fully ready to take full advantage of school mathematics instruction, and calls for educational programs that can quickly detect children who may benefit from early mathematics remediation, before the onset of formal schooling.

54723
Parental Perspective of Play in Children with Disabilities
Connie Ellen Gualberto, Department of Education, Philippines

Play is an innate feature of childhood. For children with disabilities, play is viewed from another perspective due to their limitations, as they tend to demonstrate play skills that are distinct from their typically-developing peers. Therefore, this study aimed at generating a broader understanding of play among children with disabilities, particularly those with Autism Spectrum Disorder, Down Syndrome and Cerebral Palsy, from the perception of their primary caregiver. Specifically, this study investigated two problems: (1) what are the lived experiences of parents or guardians with their children during play and (2) what model of play can be generated from the analysis of their play experiences. Using a qualitative, descriptive-interpretive approach, the narratives of nine participants who shared the play stories of their children through semi-structured interviews were analyzed through thematic analysis. Through the analysis, the parents and guardians' lived experiences were given more meaning. In particular, the research findings showed eight themes: a) Panagay-ayam (Play as paglalaro), b) Pannakiay-ayam (Play as pakikipaglaro), c) Pagaayat (Play as laro ayon sa gusto), (d) Panagtulad (play as imitation) (e) Paglaingan (Play and the child's strengths), (f) Pagkapsutan (Play and the child's limitation), (g) Panagadal (Play as learning); and, (h) play and parents' wishes for their children's play. Based on these results, the Progression Spin Model of Play was generated that puts children with disabilities at the center of play. This model of play serves as an intervention tool for use at home, in school and in the community.

55585
Instructional Strategies That Could Foster Musical Creativity of Students With Intellectual Disabilities
Marina Wong, Hong Kong Baptist University, Hong Kong

Background: In Hong Kong, students with intellectual disabilities [ID] are commonly placed in special schools. Under the principle of "one curriculum for all", students with ID are expected to achieve the same learning targets as their counterparts in mainstream schools. Music is a subject that is offered to all students (Age 6 to 14). One of the major learning targets is "developing creativity and imagination".
Purpose of study: The purpose of this study is to explore special schools music teachers' reflections on the instructional strategies that could foster musical creativity of students with intellectual disabilities.
Methodology : This is a qualitative multiple-case study. Purposeful sampling was used to select nine cases of special schools music teachers. Face-to-face interview technique was used for soliciting music teachers' reflections on the instructional strategies that they believe to be useful for fostering musical creativity of students with ID. An identical semi-structured interview guide was repeated to all nine cases. All interview data were transcribed and checked by the participants. All data were coded, categorized and analyzed.
Findings: The instructional strategies that could foster musical creativity of students with ID are branched out through various music learning activities, such as listening and performing, instead of limiting to composing activities. The design of these instructional strategies must be meaningful and interesting to the students with ID; otherwise they would not be able to respond nor demonstrate their learning outcomes in the music lessons.

Sunday Session I: 09:40-11:20

Room: *To be Announced in Final Schedule*
Session Topic: Innovation & Technology
Session Chair: *To be Announced in Final Schedule*

55536
Evaluation for Children's Internet Literacy for Cultivating Competencies and Resilience Abilities to Internet Risks
Nagayuki Saito, Kio University, Japan

Modern societies benefit greatly from the Internet. The Internet has become indispensable for not only adults but also for children. However, Internet use by children carries risks. In terms of childrens' Internet use, there have been a number of problems, such as encounters with illegal and harmful content, leaks of private information, encounters with criminals, problematic e-commerce transactions, Internet dependence, etc. In order to address such social problems, Japan developed an internet literacy assessment program for youth that aims to realize an evidence-based policy for making the internet environment safer for youth. This indicator specifically focuses on the ability to respond to the threats and dangers on the Internet from the viewpoint of making a safer and more secure Internet environment for youth. From the analysis results, while the category with high literacy was "inappropriate usage", "improper transactions" and "privacy risks" showed lower literacy than the other categories. Therefore, it will be necessary to increase these literacies. Regarding the relationship between smartphone usage time and literacy, as the smartphone usage time increased, the correct answer rate tended to decrease. This will require efforts to promote appropriate screen times. In addition, in terms of the relationship between online trouble experience and literacy, subjects with trouble experience tended to have higher literacy. In particular, the trend was stronger in the security risk category than in other categories. For this reason, it is considered effective not only to develop youth Internet competencies but also to increase their resilience.

54110
Technology Acceptance Model for Pre-Service Teachers of Region I
Maria Theresa Forneas, University of Northern Philippines, Philippines

The study determined the profile of College of Teacher Education Faculty and Pre-service Teachers; Adequacy and extent of ICT – Based Instruction along hardware, software and peopleware; degree of Perceived Usefulness, Perceived Ease of Use, and attitudes towards the use of ICT in teaching; level of assessment of the respondents in terms of technological practices; degree of difficulties on frequency of use by pre-service teachers in the school; developed ICT-based instructional materials used by the pre-service teachers in practice teaching; and propose a Technology Acceptance Model for Pre-Service Teachers. This study used descriptive research design. The findings revealed that majority of the respondents were female, have graduate or postgraduate degrees or have earned units towards a higher-level academic degree, and were in the Instructor level. The Level of adequacy and extent of utilization for ICT-based instruction was found to be Moderate Adequacy / Moderately Extent. Perceived Usefulness is Strongly Agree as supported by the rating very useful in using ICT-based instruction. Assessment in terms of Technological Practices is excellent in surfing the internet for educational research. For the Degree of difficulties concerning frequency of use, they used ICT-based in teaching activities four times a week. For Utilization and availability of the developed ICT-based instructional materials, PowerPoint presentation with audio and animation and using traditional-based instructional material ranked first in the availability of the developed ICT-based instruction.

From these results, a Technology Acceptance Model is proposed to address the 21st-century education and Sustainable Development Goal of 2030.

54460
Learning Economics with Mobile Cartoons Among Undergraduates
Yin Yin Khoo, Sultan Idris Education University, Malaysia
Wai Bing Khuan, Sultan Idris Education University, Malaysia
Zainizam Zakariya, Sultan Idris Education University, Malaysia

The Ministry of Education Malaysia has spent more than RM 6 billion to leverage the Information and Communication Technology (ICT) over the past decade. Utilizing the ICT in education institution becomes one of the main shifts in Malaysian Education Blueprint 2013-2025. The economics students are facing the problem to think critically in the learning activities. Since the users of smartphone have increased tremendously among the undergraduates, there is a developing trend in mobile learning to provide increased interaction and engagement in undergraduate education. This study conducted to examine the effect of mobile cartoons on the students critical thinking ability and performance. A survey design was selected in this study. A total of 102 undergraduates was taken as samples. The findings showed significant result on students critical thinking and performance. Future research may focus on the up-scaling of the cartoons and the large sample will be employed.

53959
The Use of Digital Videos, LMS, Peer and Self-feedback to Improve Presentation Skills
Jeremy White, Ritsumeikan University, Japan

An issue with conducting presentations in class is the one-off nature of the activity. Students present their topic and have little idea of how their own performance was except for their feelings and the grade they eventually receive from the teacher. However, improved access to mobile technology for both educators and students, coupled with the enhanced functionality of higher education learning management systems (LMS), has provided additional opportunities for the teaching of presentation skills in the classroom. One such opportunity is combining mobile devices, YouTube, and LMSs to allow students to record, upload, watch, and give both peer and self-feedback on in-class presentations. This presentation will at first outline the need for peer review with oral presentations, focusing on the skills students can improve by watching and giving comments on both their own and their classmates presentations. The presenter will then outline the results of a survey related to the use of video and peer review by 45 students in a private university in Western Japan. The results of the survey in general demonstrated that students felt positive towards the use of video and receiving feedback from their peers in this format. However, some were concerned about the privacy of the videos while others worried about receiving critical feedback from their peers. The presenter will conclude by outlining which skills the students believed would benefit the most from video-based peer feedback.

The International Academic Forum

Sunday Session I: 09:40-11:20

Room: *To be Announced in Final Schedule*
Session Topic: Educational Policy
Session Chair: *To be Announced in Final Schedule*

54598
The Impact of Georgia Charter School Systems' Governance Teams
Barbara Roquemore, Georgia College and State University, United States
Larry Newton, Georgia College and State University, United States

Charter schools and systems are a growing trend in the United States. In 2007, The Georgia State Assembly passed the Charter Systems Act. Georgia's charter school movement, however, evolved in a unique direction in the 2000's. In an effort to expand the tenets of the original charter school concept, one that is centered on the ability to innovate, freedom/flexibility from state regulations, and a greater emphasis on self-governance, entire school systems were given the opportunity to apply to the State of Georgia to become charter systems. Local boards of education were able to apply to become Charter Systems in exchange for increased academic accountability. The Georgia Department of Education defines a charter system as:
"a local school district that operates under the terms of a charter between the State Board of Education and the local school district. The system receives flexibility from certain state rules and regulations in exchange for greater accountability. There is an emphasis on school-based leadership and decision-making." The purpose of this study is to determine the level of the impact the school-level governance teams have on Charter Systems' use of flexibility, innovation and governance at the school level. The School Governance Team (SGT) members in 46 districts are surveyed to determine the impact of governance on the Charter School systems. The study is a mixed method study. It includes surveying the SGT members to provide quantitative data. Additionally, open-ended questions provide qualitative data.

54230
A Generational Study of Chinese Educational Value Transformations in the Past 70 Years
Aili Guo, Intercultural Institute, China

Chinese educational value has undergone significant transformations from 1949 to 2019. By interviewing three generations of Chinese people, this paper reports the distinct features of Chinese educational value transformation in the past 70 years in terms of the focus of education and the student-and-teacher relationship. It is found that Chinese education is consistently related with politics, but its significance in real educational practice varies during different historical periods. The focus of Chinese education has generally changed from political belief to intelligence. Moral education is neglected in real practice today, though it is promoted by policy. The relationship between teacher and student is becoming loose and secular. Teacher's authority has been challenged by students, and the traditional Chinese value of respecting teacher is declining. Equality between teacher and student is defined as the ideal type of teacher-and-student relationship by new generations of Chinese students. The research findings allow a nuanced understanding of Chinese indigenous educational psychology. Their implications for global education are also discussed.

53748
Estimating Returns to Education in the Philippines: A Quasi-experimental Approach
Ma. Laarni Revilla, National Graduate Institute for Policy Studies, Japan
Jonna Estudillo, National Graduate Institute for Policy Studies, Japan

Since the late 1950s, various studies have shown the positive relationship between schooling and income. Most of these, however, are conducted in developed countries and rarely in developing economies. My

paper, thus, contributes to the extant literature on returns to schooling in a developing country. I follow a quasi-experimental approach called regression discontinuity design (RDD) using survey data from the Philippines in 2008 and 2011. RDD deals with the endogeneity problem of schooling in the income regression model using an instrumental variable (IV). My selected IV is exposure to free and subsidized secondary education programs that were implemented in 1989. I conduct the analysis on the whole sample of workers and subgroups of workers based on sector and gender. The main results are as follows. First, overall, an additional year of schooling significantly increases income by about 17 to 23 percent. More years of schooling, thus, yield higher income. Education investment pays off. Second, we find significant returns to education among men in the formal sector. Since the global financial crisis in 2008 to 2011 led to the contraction of mostly female-dominated industries, we find an increase in income among men and not among women. Finally, we observe significant returns to education among women in the informal sector. Women workers who were laid off in the formal sector opted to engage in informal activities, such as self-employment and managing small businesses. This led to a substantial rise in women's informal income, which means that education matters even in the informal sector.

54196

The Associations Between the Perception of Helpfulness of Teacher Induction Programs and Anticipated First-year Teacher Retention in China

Xiaotian Han, Shanghai Normal University Tianhua College, China

The purpose of the study was to: (a) determine to what extent the formalized teacher induction programs (TIPs) are perceived to be helpful for first-year public primary school teachers in Shanghai, China; (b) measure anticipated job retention of first-year teachers; and (c) examine the degree to which these TIP helpfulness and anticipated job retention are associated. In this study, retention is defined as remaining in a Shanghai public primary school. Shanghai TIPs are one-year long, mandatory programs for first-year public primary teachers. The conceptual framework of TIPs includes four main components (orientation, mentoring, professional development, and teacher evaluations) as found in Horn, Sterling, and Subhan's (2002) high-quality teacher induction program component model. The study employed a non-experimental, correlational design and used survey responses from teachers to address the research questions. An on-line survey was completed by 408 participants who held a bachelor's degree or higher along with a teaching credential and who were within their first year of teaching in a Shanghai public primary school. Results of the study include: (1) Overall, Shanghai public primary school teachers perceived the level of TIP helpfulness to be relatively high; however, the levels of helpfulness varied across the four components; (2) The majority of participants expressed agreement with plans to stay in the same position; and (3) The perception of overall TIP helpfulness was a statistically significant predictor of anticipated teacher retention.

Sunday Session I: 09:40-11:20

Room: *To be Announced in Final Schedule*
Session Topic: Higher Education: Multiculturalism
Session Chair: *To be Announced in Final Schedule*

54820
Deconstructing and Reconstructing Self: A Journey to Decolonization Indigenization and Reconciliation
Gloria Ramirez, Thompson Rivers University, Canada

In 2015, the Truth and Reconciliation Commission of Canada (TRC) completed the five-year national inquiry into the truth of survivors, families, communities and anyone personally affected by the Indian Residential Schools (IRS). Through the voices of the survivors, the TRC report informs Canadians and the world on what really happened and the ongoing impact on Aboriginal people, hoping that this guides Canadians to reconcile through a process of mutual understanding and respect. The TRC calls for action hold every Canadian accountable. Some have ignored them, others resist them, and others are taking action. For me as an educator, teacher educator, researcher, and visitor in Secwepemcúlecw, the TRC report and its calls for action have strong resonance. The TRC report has shaken me and driven me to a deep exploration of my own identity and my role in the process of reconciliation. This paper reports on an auto ethnographic examination of my identity, my positionality and my role in decolonizing and indigenizing the academy through my research and teaching practices. Intersectionality (Crenshaw, 1991), critical (Bhabba,1998) and indigenous theories (e.g., Little Bear, 2009; Smith, 1999, 2012) and First Nations Principles of Learning guide this examination.

54134
Management and Multiculturalism in Romanian Universities: A Case Study at the University of Medicine and Pharmacy "Grigore T. Popa" Iasi
Gabriela Marinescu, University of Medicine and Pharmacy "Grigore T. Popa" Iasi, Romania

The paper aims to highlight the role of university management and multicultural education in an irreversibly interconnected world. The research objectives were related to the testing of the fundamental hypothesis according to which management and culture influence individuals and vice versa. The results showed that the academic management influences the multicultural community, and the relations between its members are always under the sign of change; both technologically and culturally. The conclusions of the research highlight that, first of all, in universities, people and technology influence and blend cultures. Multicultural education removes the barriers to communication and makes people understand others who are different from them. Self-determination is an essential dimension for this interconnected world in which multicultural educated people learn to work in teams (collectivism), learn to tolerate, understand and respect cultures very different from their own. The independence of the educated individual who makes his own decisions implies interdependence and multiculturalism. Culture and education will make the difference between those who understand what academic management in the multicultural world is and those who believe that management is only leadership, privileges and benefits.

53838
Many Minority HS and College Students Think Better with "Distractions": Culture, Verve and Task Presentation Format
Eric Hurley, Pomona College, United States
Shawn Trimble, Pomona College, United States
DeAndre Turton, Pomona College, United States

Recent evidence suggests that individual and group differences influence what level of immediate and ambient stimulation and stimulation variation supports optimal performance on cognitive tasks. The matter is relevant to education because schooling pedagogies generally assume that academic environments should be configured to allow students to concentrate without "distractions". Several studies have suggested that many minority students thrive in high verve task environments (Boykin & Bailey 2001; Cunningham, et. al. 2017). Verve describe the effects of cultural socialization on one's psychological and behavioral preferences concerning such stimulation. In 3 studies high school and college aged students completed 4 different tasks in high or low verve task environments. In the first study Black HS students performed better on tasks presented in high-verve than in low-verve formats, while White students performed best in low verve contexts. In the second study LatinX college students performed better in high-verve than in low-verve contexts while White students performed best in low verve context. In the third study Black and White college students performed best in the high or low verve condition depending on the strength of their ethnic identity. Implications for schooling will be discussed.

54204
Reconciliation with Indigenous Peoples in University and Colleges
Pamela Palmater, Ryerson University, Canada

Reconciliation has become the buzz word of the decade ever since the Truth and Reconciliation Commission (TRC) of Canada published their report on residential schools in Canada.* The TRC, headed by (then) Justice Murray Sinclair, heard from residential school survivors, families and native communities from all over Canada about their experiences in residential schools and their lives afterwards. These schools lasted for over 100 years, with the last one only closing in 1996. Despite being called schools, residential schools were actually designed to separate native children from their parents, extended families and communities, for the express purposes of assimilating them into, what the TRC describes as "Euro-Christian society". Thousands of children were starved, neglected, tortured, medically experimented on, mentally, physically and/or sexually abused or even murdered. Their experiences have had long-lasting, inter-generational impacts on many more thousands of children, grandchildren and great-grandchildren. The TRC offered 94 Calls to Action directed to the federal and provincial governments, churches, businesses, the media, the public at large and, specifically, universities and colleges. This research looks at how universities and colleges need to engage in reconciliation with Indigenous peoples on a substantive basis and not the superficial gestures currently offered by most.

Sunday Session I: 09:40-11:20

Room: *To be Announced in Final Schedule*
Session Topic: Challenging & Preserving
Session Chair: *To be Announced in Final Schedule*

54089
Implementing the Japanese Dental English Core Curriculum: Enhancing Cultural Competency through Prepared and Impromptu Role Play Activities
Omar Rodis, Tokushima University, Japan

Background: A study funded by Japan's Ministry of Education conducted a needs analysis, proposed a solution, and implemented an active learning approach for the Dental English course. Its goal was to prepare future Japanese dentists to be globally and culturally competent. Three activities were introduced into the course and one of it is the role-play activity. The activity focuses on students playing the role of a Japanese dentist and non-Japanese patients. The aim is to report student compliance and acceptance of this active learning activity in a Japanese dental school. Methods: Two hundred and three 3rd-year undergraduate dental students participated in an active implementation-learning role-playing activity, which was included in the Dental English course in a classroom setting at a dental school in Japan, over a 5-year period from October 2013 to March 2017. Students had to do the prepared role play and impromptu role play. At the end of the course, the students evaluated the active learning activities and wrote their comments in a free entry survey. Results: All 203 students decided to participate in the active learning activities confirming the changing learning needs of Japanese students. The most common comment was that the class was interesting, fun, an easy way to learn other culture and common/dental terms, and a non-threatening way to express themselves in English. Conclusion: The majority of Japanese students preferred the active learning style. The study revealed that students reported greater engagement and better learning with proper guidance and time to prepare for the activities.

55593
Intercultural Communication and Education for the Future in Japan – How We Correspond with Newly Revised Immigration Law
Masako Mouri, Toyohashi University of Technology, Japan

Along with aging society and decreasing birth rate in Japan, the government of Japan decided to revise Immigration Law to invite foreign national workers easily. This law intends to welcome foreign national workers and the fourth generation of Japanese offspring. Some, however, say that the general public or society in Japan have not been prepared enough to include "foreign national workers" in general, and they seem to have a kind of hesitation or anxiety. In addition, social and educational approaches to interculturality, international understanding or intercultural communication have not provided enough to comprehend differences among people. This is because Japan has not accepted immigrants or refugees historically and officially. Furthermore, due to the revision of previous immigration law to have the third and fourth generation of Japanese offspring, especially from Brazil or Peru, many people has come to Japan, but unfortunately this has caused several problems and challenges in society, such as gangs, organized crimes, low school attendance with little Japanese language skills, thereby leading to worries, anxiety, racism and discrimination among the Japanese. Based on those issues, this paper will elaborate on the current situation and circumstances in Japan, and would like to focus on and explain how the society and education have to correspond to the prospective future with foreign nationals including Japanese offspring, who look like Japanese but don't understand Japanese.

55063
Mutual Support Activities for Chinese Immigrants in Multicultural Society Singapore
Yuki Yokohama, Kanto Gakuin University, Japan

This study analyzed by intensively reading main literatures while focusing on a study of social organizations in Chinese community in Singapore and clarified its establishment process, activities and future issues."Chinese clan associations" were founded for each hometown or kin from the middle of the 19th century in order to support many immigrants from China. Cultural events of their hometown, religious services, and the support of the social welfare, the medical care, and educational activities were provided there. And the founding of "Chinese clan associations" made many immigrants' lives stable, and they developed to the point that they formed various networks between China and Singapore. Some "Chinese clan associations" founded schools famous in Singapore, and they developed to what affected not only educational activities of Chinese residents in Singapore but political activities. On the other hand, after Singapore became independent in 1965, it was clarified that the role of "Chinese clan associations" weakened gradually as new government promoted speak mandarin campaign. And it was clarified that many of the youth of Singapore were less concerned about activities of "Chinese clan associations" in recent years, too. It was paid attention to in the future what kind of influence the education policy of Singapore or southeast Asia has on identity of the youth of Chinese residents and Chinese descents under the globalization.

52789
Visibility as Validation: Culturally Responsive Materials Development: A Case Study
Padmini Boruah, Gauhati University, India

"When you don't see yourself on the page, it's harder to imagine yourself as a person" (gay Indonesian poet Norman Pasaribu, quoted by John Gray, IATEFL plenary 2019). Erasure and negation in teaching materials is not limited to representations of gender and sexuality; in most ESL/EFL course books in India, non-dominant cultural and ethnic representations are absent or superficial, and hardly meet UN Sustainable Development Goals 2015-30 (#4,5, & 16). In this backdrop, preliminary results of a study of state-mandated English textbooks being developed for Upper Primary level (grades VI to VIII) by a state education department in India show that using appropriate self-check rubrics, materials developers can identify sites of diversity-blindness or lack of responsiveness to inclusivity and design materials with inclusive cultural representations of both target learners and 'Others'. In this presentation, using NYU Metro Center's Culturally Responsive Curriculum Scorecard and the Fairness, Bias, and Cultural-Responsiveness Checklist of the Centre for Collaborative Education, Boston, (modified), I examine whether, and to what extent, the draft textbooks reflect culturally responsive and inclusive pedagogy as a response to the multilingual, multicultural education needs of North-East India. Preliminary data collated from responses of materials developers and reviewers reveal areas where cultural interventions (ethnic, religious, linguistic, perceptual, gendered) could be rendered both inclusive and transformative, moving beyond overt manifestations like festivals, holidays, and (mainstream) family traditions. I argue that appropriate inclusivity self-checks at the pre-development stage of materials preparation can contribute effectively to the development of culturally responsive teaching materials for multicultural contexts.

Sunday Session I: 09:40-11:20

Room: *To be Announced in Final Schedule*
Session Topic: Foreign Language education: Korea
Session Chair: *To be Announced in Final Schedule*

55531
A Critical Discourse Analysis of English Listening Sections of Korean College Scholastic Tests
Yoonjung Lee, University of Arizona, United States

I conducted a critical discourse analysis of the English listening sections of the 2019 and 2018 Korean College Scholastic Ability Tests (hereafter CSAT), which are national college entrance examinations in Korea for the year of 2019 and 2018 with the following two research questions: 1) Are the ways of speaking socially determined and appropriate in sociocultural contexts? 2) Do the dialogues in the English listening test appropriately reflect real life communicative interactions? My goal is to investigate whether the dialogues in the English listening test are appropriate for sociocultural interactions, which is important in language learning, and whether they are presented in meaningful communicative contexts to help the students to understand and develop interpersonal communication skills. I examined three dimensions of communicative events between speaker and hearer: 1) discourse structures, 2) discursive practices 3) social practices. The Korean Ministry of Education has made tremendous efforts for revision of the English language education policy and teaching methodology to enhance Korean students' English communicative competence. To help to achieve the goal of enhancing the students' communicative competence it is important to develop good English tests. For this purpose, it is necessary to analyze the English listening sections of the CSAT and assess their validity. I hope my research will be helpful for both English teachers and examiners in making improvement of the English listening tests.

54663
The Psychological Effectiveness of Gamified English Speaking Program Applied to Adventure Based Counseling Activities for Korean Secondary Underachievers
Junghye Fran Choi, Walden University, United States
Seung Ho Bang, Ahyoen Polytechnic School, South Korea

This study investigated Korean secondary students who are academic underachievers' affective domain of gamified English speaking program implemented Adventure Based Counseling (ABC) activities. Gamification is to apply the game elements and mechanism to non-game context for active participation and reinforcing motivation (Deterding et al., 2011). ABC is a counseling method to promote positive changes as learning by doing, including experiential learning, outdoor education, and group counseling (Glass & Myers, 2001). This study adopted survey and face-to-face interviews to explore the affective domain in their learning, including English learning resilience and motivation. Resilience in second language education refers to the learners' ability to effectively manage academic failures, pressures, and stress from studying (Martin, 2002). The speaking program was designed for the twelve participants who pursue e-sports players and professional gamers rather than academic performance. Also, the public high school was specially designed for the third-grade students' professional careers such as games, cooking, and art. For their presentation skills, the speaking program was designed based on gamification, and the participants took the classes for 50 minutes twice per week for five weeks. The result presented positive responses in their learning resilience and motivation. Overall, the interview and survey data analysis indicated that gamification can be effective to facilitate the secondary underachievers' English presentation skills and ABC activities can provide enjoyable foreign language learning environment for academic low achievers. These findings provide positive empirical evidence for the effectiveness of gamified English speaking program applied to ABC activities in the aspect of affective domain.

54660

Development of the Tense Dependency by Heritage and Non-heritage Speakers of Korean

Sun-Young Lee, Cyber Hankuk University of Foreign Studies, South Korea

This study investigated the L2 development of the tense dependency in the acquisition of Korean as a second language by heritage and non-heritage speakers. In Korean, the past tense marker –a/ess- is deleted in the subordinate clause of a past-tense sentence, depending on the conjunction (e.g., pika wa-se/*wa-ss-se, wusan-ul kace wa-ss-ta. 'I brought an umbrella because it was raining.') which is different from English. This study investigated the influence of the tense system of native language on the acquisition of L2. This study analyzed the data which were collected from 52 heritage and non-heritage speakers of Korean on the production abilities at 1+ to 4 on the ILR (Interagency Language Roundtable) scale. The overall preliminary analyses indicated the high internal reliability of the task and high correlation between individual accuracy scores and ILR proficiency scale on the task (see Lee et al. 2016). Further detailed analyses were conducted in this study focused on (i) the comparison among various experimental conditions, and (ii) the comparison of the performance between heritage speakers and L2 learners to better understand the acquisition of Korean tense system by English speaking learners of Korean. Preliminary analyses showed influence of English on the acquisition of Korean as well as differences between heritage and non-heritage speakers. The implications of the findings will be discussed regarding heritage language acquisition in general.

55583

Development of English Teacher-Researchers in South Korea

Kyungja Ahn, Seoul National University of Education, South Korea

This study aims to examine the development of elementary EFL (English as a foreign language) teacher-researchers in a graduate program in South Korea. Survey responses and autobiographic essays from 22 graduate students were collected. Also, survey responses, autobiographic essays, reflective journals, and final papers were gathered. All the data were analyzed qualitatively through content analysis. It was found that the graduate students went through three different stages as teacher-researchers based on their amounts of experience in research and how long they had been in the graduate program: The initial, implementation, and expansion stages. While conducting their own research during the semester, the participants displayed four types of teacher-researchers: research learners, research explorers, research negotiators, research reflectors. Individual differences were primarily related to how specific their research topics and methodology were and how prepared they were when they started their research at the beginning of the semester. In particular, in case the teacher-researchers carried out action research, their development was more directly influenced by their students' reactions to instruction. Important implications for teachers, teacher researchers, teacher educators, and policy makers surrounding elementary English education and teacher education are discussed.

Sunday Session I: 09:40-11:20

Room: *To be Announced in Final Schedule*
Session Topic: Teaching, Learning & the Mind
Session Chair: *To be Announced in Final Schedule*

55563
The Art of Reflection – Teaching Experiences of Reflection as a Tool for Learning
Annika Johansson, University of Umea, Sweden
Maria Liljeholm Bang, University of Umea, Sweden
Carina Lindgren, University of Umea, Sweden
Thomas Back, University of Umea, Sweden

At Umeå University, students undertaking the Basic Training Programme for Police Officers develop knowledge and skills concerning the effects of mental preparation and mental abilities on police work. Tactical, physical and mental preparations relative a multitude of situations are essential for police officers to be able to prevent bad decisions. It is therefore crucial that students develop self-knowledge and coping strategies, and this is reflected in the significance of reflection as an element of teaching within our subject. To be able to handle the art of reflection, students need support in developing this special competence. The aim of this presentation is to provide examples, based on our teaching experience, of how reflection takes place in our practice. In doing so, we problematize the teacher's role in reflective activities (i.e., how to create an educational format that contributes to learning), including the teacher's competence in designing the activity, creating a safe learning climate, and supporting student activities that lead to higher levels of reflection. We draw specifically on our experiences from repeated but varied learning activities during which students reflect on their own and others' action in relation to theories of reflection in order to gain a deeper understanding of how thoughts, emotions and physical reactions impact behavior. By highlighting strengths and challenges in our ongoing work, our goal is to contribute to a discussion on how reflection may be a tool for learning and professional development, and how this tool may be implemented in different learning situations.

53754
The Power of Believing: Analyzing Self-Empowerment Communication in the College Classroom
Jessica Vierra, California State University, San Bernardino, United States

This study assesses students self-image and its relation to positive learning outcomes. Predominantly, this study will examine previous research and connect students ability to believe in themselves to their retention of content and self-image. The literature review describes how important it is for students to have a positive self-image and how important it is for instructors to hold a positive influence in students lives. The duration of this research was one year, analyzing a total of six oral communication courses, with each class including 28 students. The literature review displayed many benefits came from students having a positive self-image and being encouraged to maintain this self-image from instructors. The data suggests positive self-image was created from the instructors' ability to be immediate, show their positive self-image, and the ability to believe in their students. This research describes independently successful students come from a healthy immediate learning environment.

54131
Neuroplasticity: Rewiring the Brains for Success
Rieko Matsuoka, Teikyo University, Japan
Tadashi Nakamura, Nakamura ENT Clinic, Japan

This presentation shares the recent studies on the brain (e.g., Arden, J.B., 2010; Norman, D., 2007) and proposes the possibility of applying these studies for out daily professional life as an educator. The brain used to be thought as hardwired and it was believed that genetics determined everything that we experienced (Arden, J. B., 2010). However, as an eye-catching article online (Mauz, S., 2019) describes, we can train our brain for success. According to Chopra D. (2013), we could rewire our brains as a result of neuroplasticity including neurogenesis (the growth of new neurons) and synaptogenesis (new connections between neurons). Specifically, Chopra advises us to practice 5 to 10 minute positive visualization about ourselves a day for six weeks for rewiring our brains, based on the study of memory (Schacter, D. L. et al., 2012) which states that the human brain cannot always discern between a memory and a vision of the future. The students, complaining that they are different from so-called good students owning good brains who attend prestigious universities, may develop their self-efficacy (Bandura, A., 1997) by practicing 5 to 10 minute visualization a day for six weeks. Further review on the brain research and the students' feedback comments on this practice will be examined and presented for the purpose of disseminating the possibly effective intervention for enhancing the quality of students' academic lives.

54957
Integrated Focus: Unlocking Insight and Creativity in the Face of Intractable and Complex Problems
Jennifer Walinga, Royal Roads University, Canada

The concept of insight - the 'out of the box' or 'aha!' solution to a problem - offers a framework for exploring and understanding how best to enhance problem solving skills and, consequently, performance in a variety of realms. The sudden shift in thinking that characterizes the insightful solution seems to be an important link in unlocking creative solutions to all manner of problems. Researchers of insight problem solving argue that the cognitive shift we seek happens not at the solution end of the problem, but at the problem end. It is believed that insight results from a restructuring or redefinition of the problem (Knoblich et al., 1999; Ohlsson, 1986) which leads to the abrupt and unanticipated change in the solution path that leads the solver to immediate success with a problem (Weisberg, 1995). As the old adage says: a problem well defined is half solved. As such, Wertheimer describes insight as a 'new, more penetrating view of the problem', but what does 'a more penetrating view' really mean? And how does one go about achieving 'a more penetrating view'? This paper documents the process for unlocking insight in a variety of contexts including sport, education, social profit and corporate organizations, and public institutions.

Sunday Session I: 09:40-11:20

Room: *To be Announced in Final Schedule*
Session Topic: Education & Business
Session Chair: *To be Announced in Final Schedule*

55359
Unseen Skills and Knowledge: Call Center Agents and Invisible Literacies
Johanna Tovar, WU Vienna University of Economics and Business, Austria

A common conceptualization of call center work is that it is low-skilled, with minimal or no new learning occurring because it's underpinned by Taylorist management practices and standardization. However, some studies have reported that agent's report to having improved their language skills as part of working in a call center. Moreover, as Hampson & Juror (2005) observe, call center work is more complex than generally assumed. In fact, they argue that the skills needed to perform range from emotional labor, articulation work and possession of procedural and substantive knowledge. Building on their work, this paper argues that call center work requires a unique hidden set of literacies for employees to succeed. It is argued that these literacies help in turn agents with language learning. Unfortunately, these literacies, although potentially transferable to other job sectors if known to employees and employers, remain often hidden and illegible to in-and outsiders. This research explores how these invisible literacies are acquired and trained in the context of L2 speakers of English in call centers and will provide reasons for their misconceptions, which can be changed. To do so, it draws on ethnographic fieldwork in a Filipino and British context as well as interviews with agents and managers. This research argues that transpositional analysis (Woydack, 2019) and focusing on textualization practices can make the various set of literacies such as script literacies more visible and provides some insight on how it helps with language learning in the workplace.

55056
Developing a Faculty Training Program for Entrepreneurship Education
Mingrui Yang, Japan Advanced Institute of Science and Technology, Japan
Eunyoung Kim, Japan Advanced Institute of Science and Technology, Japan

Over the last decade, entrepreneurship education has made significant development in university in China. Although universities play an important role in the improvement of entrepreneurship(Carvalho, Costa and Dominguinhos, 2005), entrepreneurship education only recently got some attention from the scientific community and became a discipline, and is far from maturity(Charney and Libecap, 2011). For strengthening future entrepreneurship education, strong intellectual and conceptual foundations, and also practical experiences are all necessaries for fields of entrepreneurship and education(Fayolle, 2013). This study aims to develop a faculty training system for entrepreneurship education at two universities in Dalian, China. Both universities have opened the entrepreneurship curriculum from 2014, totally 12 faculty members working in this area. Through the interview of all the members, I propose to develop the faculty training system by considering three dimensions: the rewarding system, the entrepreneurship training courses, and the support infrastructure. The entrepreneurship cooperation platform refers to provide opportunities to faculty members to exchange their experiences, ideas and sources. The entrepreneurship training courses refer to the curriculum related to the theory and practices of entrepreneurship(Fiet, 2000). The support infrastructure refers to the service that promotes feasible entrepreneurship practice opportunities in conjunction with the real market. The study represents a starting point to a better comprehension of entrepreneurship education in university, and the well-developed faculty training program should include professionals from government service agencies, well-known entrepreneurs, investment institutions, and academic scholars. Furthermore, the results of these analyses better explain the dilemma of entrepreneurship education in China.

54686

Innovations in Hospitality and Tourism Education in Vietnam: A Hypothetical Framework

Thao Thanh Luong, Japan Advanced Institute of Science and Technology, Japan
Eunyoung Kim, Japan Advanced Institute of Science and Technology, Japan

In Vietnam, the number of international tourists is increasing and their needs become more diverse. However, workers in the hospitality and tourism industry do not meet the demands due to lack of professional skills. Therefore, it is necessary to innovate the skills of workers through education, especially through innovative pedagogical approaches. Supporting teachers to innovate in teaching and curriculum development thus becomes vital for institutions. Nevertheless, few researches focused on factors responsible for curriculum renewal and pedagogical innovations, particularly in hospitality and tourism education. This paper aims to propose a hypothetical framework for innovation in hospitality and tourism education using Hargreaves and Fullan's concept of "professional capital" and curriculum renewal process. We adopted a mixed-method approach to address psychological factors, organizational conditions and curriculum renewal factors that influence how teachers foster pedagogical innovations. Qualitative methods include interviewing school administrators and teachers, and documentation which is the researcher's diaries. An online survey is also conducted with 100 teachers in Vietnam to identify factors responsible for innovation in hospitality and tourism education. The hypothetical framework for innovations in hospitality and tourism education shows the relationships of three groups of factors, namely teachers' motivational forces, organizational supporting conditions, and curriculum renewal facilitation. Although it needs to be tested in our further study, the suggested framework will help administrators of Vietnamese hospitality and tourism institutions in not only building a motivational strategy to drive teachers' innovative behavior, but also developing a training program that provides methods for teachers to innovate their teaching practices.

54915

A Problem-based, Design Thinking Approach to Teaching Entrepreneurship to Scientists and Engineers in Developing Countries: A Philippine Experience

Rosula Reyes, Ateneo de Manila University, Philippines

The technology-driven society has tremendous impact on the economic perspective of a society; that the most innovative and entrepreneurial society produces greater economic prosperity. In the global market only the right products will be able to compete. It is in this context that scientific and technological innovations are essential to entrepreneurship. However, the education system for science and engineering in developing countries prepares graduates as future employees, wage-earners rather than employers nor entrepreneurs. The Philippine Commission on Higher Education in response, established a program with the objective of raising the entrepreneurial competence of Filipino engineering students. This program paved the way to the inclusion of the entrepreneurship course in the curricula of the engineering disciplines. The challenge in teaching entrepreneurship to scientists and engineers, is how to deliver the course effectively as it transcends the standard method of teaching. This paper presents how the course evolved from teacher-centered learning to becoming a problem-based, team-based, experiential learning. The ideation process incorporates creativity and design thinking approach to identifying social challenges and finding innovative solutions. The term technopreneurship is well-defined in the community of scientists and engineers as the used of technology as a significant factor in the transformation of good and services. Synergy, sharing of ideas, engaging the user-customer, putting together the financial and technical aspects to implementing the best solutions are among the key terms mentioned by students who have taken the course.

Sunday Session II: 11:35-12:50

Room: *To be Announced in Final Schedule*
Session Topic: Technology in Education
Session Chair: *To be Announced in Final Schedule*

54633
Seniors and Preschoolers Connect With a Robot Toy Dog: Learning Through Social and Emotional Engagement in Transgenerational Play
Katriina Heljakka, University of Turku, Finland
Pirita Ihamäki, Prizztech Ltd, Finland

Playful technologies are increasingly used as tools for learning. Toy robots, a multidimensional and multiplatform media, call out for improved understandings of their potential: These toys invite to interaction of many kinds, generating both multi-sensory and cognitive experiences. For example, many toy robots use sound, lights, movement, and language-based communication to encourage players to engage physically and creatively. This presentation highlights a study focusing on playful human-robotics interaction with an interest in a robot dog, and the social and emotional connections established in a learning situation with a transgenerational playing audience including preschoolers and seniors in the context of Finnish early education. In order to find out how players of different ages reacted to, approached and employed a robot dog (called Golden Pup) as a part of playful learning, we designed an experimental study with 6-7 year old preschool children and 80+ year old seniors. We conducted the study with preschoolers and seniors who during a shared session interacted with a robot dog resembling a Golden Retriever puppy. Through a group interview and an analysis of video-recorded data, our aim was to find out how the robot dog invites playful interaction with it, facilitates social engagement between generations of players, and opens up conversations around social robotics and adaptive learning on toy-based technologies between players of different ages. Our findings suggest the role of importance of play in transgenerational encounters showing how toy robots can be used to enhance social and emotional connections, when shared by players of different ages.

54307
Combining Pedagogy and Modern Technology into the Public Relations Classroom: Arousal Theory as a Roadmap for Student Success
Jessica Nerren, California State University, San Bernardino, United States
Jessica Vierra, California State University, San Bernardino, United States

This study further assesses instructional pedagogies utilizing public relations technology in classrooms leading to the heightening of student success, empowering students, increasing comfort, bridging disparities, and embracing a diverse learning community. Public Relations professional technology hinges on educating and informing key publics, and similarly, can serve as tools that every instructor has at their disposal. Predominantly, this study dives into the literature review of research associated with the use of consumer grade and professional grade technology in the classroom and the types of different resources (i.e. live polling, animated video presentations, socials, etc.) a person may wish to apply in the classroom that is significant not only to public relations as a practice but also as a pedagogical tool, accomplishing two goals at once for students. Particularly, this study connects learning in the classroom with Arousal Theory. This study will be among the first to analyze the benefit of PR technology in the public relations classroom, through primary and secondary research by two PR practitioners and instructors. Technology used in the field of PR used as learning tools can persuade students to be more interested and participate more in content, which creates a healthy collectivistic classroom climate.

54692

Knowledge Creation of Adaptive Learning on the Blockchain System – Collaborative Cloud Educational System

Mayumi Hori, Chuo University, Japan
Masakazu Ohashi, Chuo University, Japan

The major difference of the networked society from the conventional analog society is its potential of increasing the continuity of time and space. That is, it transcends the boundaries between individuals and organizations, private and public sectors, family and work, business and pleasure, producers and consumers, the national and local governments, different disciplines and so on. With this continuity based upon an advanced ICT infrastructure, tacit knowledge, which is the most difficult yet valuable type of knowledge to be transmitted that is gained through personal experiences and stored within individuals, has better chances to be transferred and shared. Therefore, building a platform to make tacit knowledge more accessible and sharable in the society is essential. In this paper, we would like to discuss Adaptive Collaboration, which integrates different systems and applications into one comprehensive system. The Adaptive System holds the potential to connect different entities such as corporations, university lecture, and Project Based Learning to enable the Adaptive Learning (AL) which is critical to meet the increasingly diverse needs of the Ubiquitous Society. The structure of this paper is as follows: First, we introduce the AL and discuss the potentialities of application of the Cloud System based on the Block Chain Technology. Second, we refer the experimental pilot study on the AL and provide further observation for applying the AL. Third, we discuss how this Society utilizing the Cloud Services based on the AL would affect the lectures and AL.

Sunday Session II: 11:35-12:50

Room: *To be Announced in Final Schedule*
Session Topic: Primary & Secondary Education
Session Chair: *To be Announced in Final Schedule*

53824
Play, Health and Wellbeing in Primary Schools: Findings from a Survey
Catherine Latimer, Queen's University Belfast, United Kingdom

Outdoor play has been linked to a multitude of health benefits, from physical strength and fitness to mental wellbeing and resilience. This generation has seen a worrying drop in outdoor play activity largely due to societal changes such as 'stranger danger', urbanization, and technological advancements, which leave children with less freedom – or indeed desire – to roam outdoor spaces than ever before. For many children the school playground is the only accessible outdoor space available to them on a regular basis, highlighting the need for these spaces to be designed and utilised with children's health outcomes in mind. Outdoor play, when delivered correctly, has the capacity to alleviate the negative health outcomes currently – and disproportionately – experienced by primary school children in Northern Ireland (obesity, asthma, anxiety, transgenerational trauma resulting from the Troubles, to name a few), and instil in them the resilience to not only cope but flourish in a post-conflict society. The objective of this research project is to explore the effectiveness of current outdoor play provision using the voices of teachers and primary school students (aged 9-11) in Northern Ireland. This paper explores the findings from a quantitative survey which gathered information from a sample of 150 primary school teachers as part of a wider mixed-methods study.

55025
Today's Choices for Selecting a School: Private, Public, Charter, or Homeschool
Margaret Ferrara, University of Nevada Reno, United States

Today, "equity" and "a quality education" are is at the forefront of education conversations. Local and national efforts are increasing to meet individual students where they are and provide relevant support to overcome obstacles preventing them from a fair chance at an education in a public school. Three years ago, gender was one of the variables that held a spotlight as districts set up a blueprint to develop new schools – namely public charter schools. A strong opposition arose against this initiative based on interpretations of Title IX. Today, mixed and single public schools are still present in the United States but what is now in the forefront are an increase in private charter schools and homeschools.. This paper attempts to capture a broad understanding of school choice –private charter schools, public charter schools, public schools, and homeschools. Overall, the paper will touch on the most fundamental differences among schools and use the template of questions that originally was linked to single and mixed gender public schools – as a research frame for looking at charter schools overall.

55595
The Pedagogical Effects of Global Experiences and Research-based Learning on Japanese High School Students' Academic and Global Abilities
Rika Iwami, Kobe University Secondary School, Japan

The Super Global High School Program provided by Japan's Ministry of Education, Culture, Sports, Science and Technology aims to foster globalized leaders who will be able to play active roles on the international stage through education at high schools that contribute to this mission. High schools designated as Super Global High Schools design a profile for the type of globalized leader they envision. This program requires high school students to conduct fieldwork both domestically and internationally on a research topic as part of

their learning, in order to broaden their views and pursue their goals. They will achieve goals such as awareness and deep knowledge of social issues, communication ability and problem-solving skills. However, the pedagogical effects of SGH-related educational programs have not been clearly examined. This paper explores how students' global experiences and research experiences are related to their academic grades and global abilities. The author analyzes the data obtained from the students from a Super Global High School in Hyogo Prefecture. The data include: (1) numerical values that describes the students' attitude towards essential abilities and qualities to become a global citizen,(2) their free descriptive answers about the definition of a global citizen,(3) the scores of their academic grade,(4) the participation points in international exchange programs (5) and the evaluation points of their research paper. The result indicates the possibility that the SGH program will have a definite effect in fostering learners' academic grades as well as their global abilities.

Sunday Session II: 11:35-12:50

Room: *To be Announced in Final Schedule*
Session Topic: Teaching Experiences: Teacher Preparations
Session Chair: *To be Announced in Final Schedule*

54050
Professional Integration of (Im)migrant Teachers in Singapore: Practices and Values
Peidong Yang, National Institute of Education, Singapore, Singapore

The professional integration of (im)migrant teachers is a relatively neglected topic within research on teacher education and teacher experience, possibly due to the modest numbers of such teachers in most pre-tertiary education systems around the world. This paper argues that (im)migrant teachers' experiences are educationally and sociologically significant: better understanding of migrant-background teachers' experiences not only adds knowledge to teacher education scholarship, (im)migrant teachers' professional integration also have direct impacts on host society students' learning experiences and their formation of values and perspectives. More broadly, the integration of (im)migrant teachers in an education system arguably reflects the system's overall orientation to social diversity, difference, and change, which are pressing global trends. This paper looks into migrant-background teachers working in mainstream primary and secondary schools in Southeast Asian city-state Singapore, drawing on a mixed-methods study combining surveys (144 responses) and qualitative interviews and focus group discussions with more than 50 participants in total. The paper presents basic pictures about the diverse backgrounds of these (im)migrant teachers and their integration patterns, before qualitatively examining their professional integration experiences under two broad categories of practices and values. 'Practices' refer mainly to aspects to do with the enactment of teaching and learning, whereas 'values' refer to issues to do with cultural beliefs, perspectives, and value orientations. The majority of (im)migrant teachers in Singapore consider themselves well integrated professionally, but their experiences with regard to 'practices' and 'values' also display certain distinct patterns that reflect the teachers' ethnic, cultural, and educational backgrounds.

54589
Getting Out of the Box: A Dare to Disrupt the Conventional Practices in Teacher Preparation Pratica
Rayna Fujii, University of Hawaii Manoa, United States
Stacy George, University of Hawaii Manoa, United States
Alyssa Kapaona, University of Hawaii, United States

Field practica is integral to teacher preparation programs (TPP). Through school-university field practica partnerships, TPPs "integrate coursework, theory, and pedagogy with practitioner knowledge" (NCATE, p.3). However, there are other learning experiences that could benefit teacher candidates (TC). Baldwin, Buchanan, & Rudisill, (2007) conducted a study around the impact of service-learning experiences on TCs in a TPP. They discovered that service-learning and practica shared a common purpose, but were not the same experiences. Practica are mostly self-serving to the TC, preparing them solely for assimilation to a classroom. Similar to service-learning, the researchers saw potential in other supplemental experiences, that could provide valuable opportunities for TCs to apply pedagogical knowledge in situations outside clinical practica. The researchers began a partnership with a local elementary school, to provide a space where TCs could engage with elementary students in an activity that promoted Career and College readiness, a sense of place, and STEM critical thinking and problem solving skills. The following questions are addressed in this case study: How are TC's able to apply theoretical practices learned from content method courses to supplemental teaching experiences? What are the implications and impact of having TC's engage in supplemental teaching experiences within the TPP? Methods include examining artifacts (videos of teacher

candidate engagement, written reflection, interviews), looking at surveys, and analyzing student reflections. This study aims to uncover data and implications that could inform TPPs on the impact that adding supplemental teaching experiences may have on teacher candidate preparation for a career in education.

54296

School-University Partnerships: Generative Possibilities for Theory-and-Practice Integration
Kevin O'Connor, Mount Royal University, Canada

This paper investigates, through self-study, the effects of our pedagogy designed to help our teacher candidates' integration of theory and practice within a "realistic" approach to teacher education involving partnership schools and an integrated, school-based, and professionally-oriented semester. Teacher education programs tend to be ineffective, as teacher candidates struggle to use the research-based guidelines offered to them in their courses when they subsequently engage in their practicum placements Clift & Brady, 2005; Perry & Power, 2004; Wideen, Mayer-Smith, & Moon, 1998). Such conclusions have prompted us to investigate alternate approaches to teacher education that foster "realistic" experiences (Korthagen, 2001) among teacher candidates in order to help them move beyond these typical limitations in their development as teachers. During the 2014-2019 academic years, we initiated the formation of partnership schools and piloted an integrated, school-based, and professionally oriented semester consisting of a capstone research project, two curriculum and instruction courses, and a fifteen-week practicum placement for all candidates in their final year of our four-year undergraduate education program. As teacher educators, this study helped us become more attuned to the importance of relationships between schools and universities as we confronted the complexities of theory-and-practice integration. The results will enhance the learning experiences of our teacher candidates through a better understanding of our own practice as we design and implement more integrative practicum experiences in the context of school-university partnerships. This research links our developing professional knowledge to ways teacher educators can support the formation of robust partnerships within teacher education.

Sunday Session II: 11:35-12:50

Room: *To be Announced in Final Schedule*
Session Topic: Online & Virtual Education
Session Chair: *To be Announced in Final Schedule*

55087
Social and Emotional Learning in Real Versus Virtual Environments: Impact on Empathy and Prosocial Behavior in Typical and Atypical Development
Gabriela Walker, National University, United States

Starting from the Vygotskian premise that "learning awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and in cooperation with peers" (Vygotsky, 1978, p. 90), and keeping in mind that virtual reality did not exist at the turn of the 20th century when Lev Semionovich Vygotsky lived (1896-1934), this paper investigates what types of interactions are more conducive to true social and emotional learning (SEL) ("with people in his environment"/in person, versus online) and to what degree each should be used advantageously. Technology is pervasive today in youth's lives during their most important years of maturing of their prefrontal cortex, a brain region responsible for moral judgement, moral decision-making, information integration, causal reasoning, empathy, and complex executive functions (e.g., Dvash & Shamay-Tsoory, 2014; Lamm, Decety, & Singer, 2011; Patil, Calo, Fornasier, et. al, 2017). This presentation uses interpretive methodology to discuss the emergence of SEL and empathy during play and virtual play, and the impact of gaming on these psychological processes in typical and atypical development (specifically, autism). Empathy is the ability to connect with others on an emotional level, and is recognized as an essential component of being 'human'. In conclusion, this presentation advocates for human mediation, when using technology, for an optimal expansion of SEL.

52932
Technology Fatigue in Online Instructors
Colleen Halupa, East Texas Baptist University, United States
Doris Bolliger, Old Dominion University, United States

Online instructors can easily experience technology fatigue when they feel like they are expected to be available constantly. Flexible course and/or program delivery requires flexibility of those who teach online. Many online instructors work year around and end up teaching almost every day unless they set strict boundaries for themselves and their students and colleagues. This predicament can result in feelings of technology or information overload and the desire to disconnect for periods of time due to stress. In order for universities to offer proper support to the faculty, administrators need to understand the factors of technology fatigue. It was the goal of this study to develop a valid and reliable instrument and measure this construct in online instructors at higher education institutions. The researchers conducted a thorough literature review and developed a questionnaire with 26 items on a 5-point Likert-type scale. The instrument was reviewed by a panel of four experts who had considerable experience in the area of online teaching and technology use. The review resulted in the deletion of one item and revision of two statements. The final instrument was administered to online instructors in Spring 2019 at three private universities located in the United States. A total of 171 individuals completed the questionnaire. Results indicate that the instrument is a valid and reliable measure of online instructors' technology fatigue. Participants reported they were only moderately fatigued. Presenters will discuss the results with the audience within the context of the literature.

54175

Professional Development for Teaching Online and Hybrid Courses in Higher Education

Kristin Palmer, University of Virginia, United States

All institutions want their faculty to have confidence going into a classroom to teach their subject, whether face to face classes, hybrid classes that are partially online, or fully online classes. How can institutions support their faculty to be effective and independent in the classroom teaching hybrid and online courses? This talk will walk through the suite of professional development opportunities available to faculty for teaching online at the University of Virginia (UVA). There is a range of options from self-service, just-in-time summary sheets to immersive cohort based residential workshops. I will illustrate the resources that have been developed which include: Screencasting 101, Accessibility 101, and Converting Your Course to be Online. I will also walk through the self-paced six-week online course that is available for teaching faculty best practices for teaching online. I will walk through the syllabus and materials for our face-to-face residential workshop called the Course Design Institute. Finally, I will discuss the idea of having a selective teaching fellows program which is based on available, free content but is delivered to a cohort over an academic year with high perceived value for faculty.

Sunday Session II: 11:35-12:50

Room: *To be Announced in Final Schedule*
Session Topic: Education, Sustainability & Society
Session Chair: *To be Announced in Final Schedule*

55484
Multicultural Education: Bias Issues in Hawai'i Contexts
Minako McCarthy, University of Hawai'i at Mānoa, United States

Hawai'i has consisted of divergent cultural populations since the sugar plantation era in the middle of the 1800s. With a mixture of ethnic components, its society does not dominate in any majority. However, social stratification distinguishes as advantages and disadvantages ethnics (Halagano, 2006). In a multicultural classroom, students from different backgrounds must cooperate and learn tolerantly because each student has different perceptions, norms, or practices. Despite, students may have biases toward different groups of others and their cultural practices. Having biases could be common but could also be learned throughout their lives. If they maintain their biases and prejudice, this will leads to major conflicts, such as hate crimes, bullying, and struggles (Oudekerk, 2019). It will also affect students' motivation and educational performance (Jacoby- Senghor et al., 2016). Therefore, bias reduction is a forefront topic in multicultural education, which highlights promoting equality for diverse students in school (Banks, 2007). Critical multicultural education has a transformative approach that analyzes power, oppression, and privilege, which is the advanced stage of multicultural teaching and learning (Views, 2010). This paper examines bias classification and its issues related to social hierarchy in Hawai'i throughout the existing literature. This study found that racism, which originates from bias, still occurs in a multicultural context like Hawai'i. Surprisingly, positive biases lead to negative consequences; positive generalization creates an intergroup competition and rejection. This literature review helps readers to understand that overcoming bias is a significant component in multicultural education.

54707
This is No Place for Hate: Social Justice and Political Movements at a Research 1 University in Texas
Donna Druery, Texas A&M University, United States

According to the Southern Poverty Law Center (2016), there were almost 900 reports of harassment and intimidation across the nation in the ten days following Donald Trump's presidential election. When the White Lives Matter group decided to host their rally at a predominately White, Tier 1 University in Texas, legally, the student body and the President of the University could not say no. What they could do was offer an alternative to hate in the form of a counter-rally to replace hate with unity and togetherness. In December, 2016, Richard Spencer, self-proclaimed member of the White Nationalist group, Alt-Right, visited Texas A&M University for a White Lives Matter Rally. Alt-Right is a political group that rejects immigration and multiculturalism (Ellis & Blakinger, 2017). The group wanted to recruit and bring in supporters from the White community. How did Texas A&M respond? They threw a party and invited the student body and the community! The counter-protest was dubbed, "Beat The Hell Outta Hate" (BTHOHate) to show the nation and the world that hate has no place at Texas A&M University. BTHOHate organizers created a maroon wall (the campus colors are maroon and white) to show solidarity with the student body and to denounce bigotry. University President Michael Young also hosted an "Aggies United" event at the football stadium. Guests included Holocaust survivor, Max Glauben, singer-songwriter Ben Rector, actress and model V. Bozeman, and award-winning actor Hill Harper. For this night, community members,students,and counter-protesters united to show that hate is unwelcome here.

54638

He Pā Anamata: Indigenous Approaches to Teaching Sustainability

Meegan Hall, Victoria University of Wellington, New Zealand

As with many universities around the world, Victoria University of Wellington (VUW) in New Zealand has been increasing its teaching activity about sustainability issues. Every Faculty now offers courses with sustainability content, and a number of degree qualifications have a strong sustainability focus. The experience of some of the University's academics who teach about sustainability suggests that interdisciplinary approaches to curriculum and pedagogy remain difficult (Wood, Cornforth, Beals, Taylor & Tallon, 2016). Even more challenging is the complexity of incorporating Indigenous sustainability perspectives and practices into the learning and teaching experience in ways that are authentic and inclusive (Kealiikanakaoleohaililani & Giardina, 2016; Yap & Watene, 2019). This presentation will centre around two different examples of teaching about sustainability in ways that incorporate Māori (the Indigenous people of New Zealand) perspectives. One example is a first-year design course that used a series of video dialogues between university and community-based sustainability experts, including Māori, to teach students about the United Nation's Sustainable Development Goals. The second example comes from an ongoing project to create a living building on the VUW campus that will provide a uniquely Māori multipurpose teaching, learning, engagement, and research complex that targets the highest level of sustainability. The presentation will conclude with thoughts and reflections on enhancing the transformative potential of sustainable development education through the use of Indigenous knowledge and pedagogical approaches to produce He Pā Anamata – a bright future.

Sunday Session II: 11:35-12:50

Room: *To be Announced in Final Schedule*
Session Topic: Creativity in Education
Session Chair: *To be Announced in Final Schedule*

55291
The Effects of Informal Learning on the Creative Expression of Craft Design
Sun Qianang, Japan Advanced Institute of Science and Technology, Japan
Kim Eunyoung, Japan Advanced Institute of Science and Technology, Japan

Craft design education can be defined with professional practice and creative expressions in a comprehensive domain. While the apprenticeship used to be a core of traditional ways of knowing in craft education, and the modern craft designers are learning through working in creative studios and heuristic teaching to promote their original performances. For the assessment of creative expression, both apprenticeship and heuristic teaching mainly focuses on the outcomes, and there has been less attention to the process of practice, which may involve a surprise in the result. This paper focuses on the process of creating crafts to explore the effects of informal learning with social interactions such as visiting workshops, museums, peer discussions, and community learning on creative expressions. The purpose of this research is to explore how do informal learning affects the practicing process of ceramics, particularly in the shaping process, so that gives rise to adjust the details of expression and creative solution. We have conducted qualitative research through a survey of 80 undergraduate students and interview six ceramic designers in their early career to conducting a thematic analysis. The results showed that the knowledge from informal learning is less systematic, but the tacit knowledge has mentioned as a kind of ability to generate creative solutions by accident in the process of making ceramics. This study attempts to spark new views for the assessment of creative expressions in craft design and provide further insights into design education.

53718
Developing Empathy through the Writing of Children's Books
Claudine Fernandez, Artistic Strategies Academy, Singapore

Description: In this workshop, participants will get to witness how children's empathetic imagination can be developed and nurtured through the process of writing and publishing of illustrated children's books. They would also be able to draw connections between empathy and the stories and illustrations created by elementary school students from diverse ethnic and educational backgrounds. These students have also donated the profits from the sales of their books to their adopted charities and raised thousands of dollars.
Throughout the session, participants will take part in several interactive and hands-on activities that they could immediately use in their own classrooms. These activities are multi-sensorial artistic activities that are designed to engage and challenge the learners. Rationale: As we move towards the uncertain and unpredictable future, it becomes increasingly necessary to instil empathy in our students so that they will always approach the world with humanity, compassion for the environment and mindfulness of others. Learning Outcomes: Participants will learn how to; 1. Guide and support diverse learners in increasing their levels of empathetic imagination through the planning, drafting and creation of a story about other disenfranchised characters. 2. Facilitate a dialogic peer-review session between diverse learners and their target audience to increase the level of understanding and empathy among all parties, leading to a more multi-layered and richer creation of the children's books. 3. Engage and support diverse learners in connecting and empathising with the broader community through the writing of children's books.

55177

Examining the Use of Comics and Sequential Art in Professional Degree Programs and Implications for Academic Libraries

Jordan Nielsen, San Francisco State University, United States
Kathryn Houk, University of Nevada, United States

There is a growing, documented trend in undergraduate humanities, arts and social science curricula to include comics as a tool for teaching and learning, and many academic libraries have responded by developing comic collections that support this. More recently, comics have been adopted by faculty who teach professional students at the graduate level in several fields including medicine, engineering, and business. How are students enrolled in professional graduate degrees engaging with comics or sequential art to better understand concepts in their field of study? What does this mean for library collections and services, particularly for those librarians who provide information literacy instruction and research support for professional programs? This presentation will attempt to answer these questions by describing the results and reasoned implications from a review of the educational literature available for professional degree programs. The presenters will highlight instructional approaches that integrate the use of comics and sequential art in the university classroom and how adoption of comics impacts collection development, information literacy, and research services in academic libraries.

Sunday Session II: 11:35-12:50

Room: *To be Announced in Final Schedule*
Session Topic: Education & AI
Session Chair: *To be Announced in Final Schedule*

54281
"Chatbot Says Her Favorite Artist is BTS!": An Investigation Into Second Language Learners' Perspectives of an Effective AI-based Chatbot
Jang Ho Lee, Chung-Ang University, South Korea

One of the fastest growing areas of applying AI technology is related to the development of chatbot (or chatterbot), which can serve a variety of functions, ranging from extracting information from the Internet, to making natural conversations with its user. In the field of second language teaching and learning, the role of AI-based chatbot has just started to gain attention from researchers, raising the question of how it can enhance learners' second language acquisition. In this paper, we report a study on Ellie, an AI-based chatbot whose design and development are aligned with this purpose, and learners' perception of Ellie after conducting a series of language learning tasks. Over 100 young Korean EFL learners were asked to chat with Ellie in a group of three or four, and given specific language tasks such as eliciting personal information from Ellie and buying shoes by taking the role of customers. The participants were given a survey, including an open-ended questionnaire on their perception of chatting with Ellie. The results of the survey showed that Ellie's comprehension level of users' speech and contents of its generated responses are what concern its users the most, while some other factors also seem to influence their perception of the effectiveness of the chatbot. We suggest how the quality of chatbot may be enhanced in order to facilitate second language learning, based on the learners' perspectives.

55582
Results of the New Type of Reading Skill Test for JSL High School Students in the Age of AI
Sayo Uyama, Hokkaido University, Japan

The Reading Skill Test (RST) has been developed to measure examinees' reading abilities to quickly and accurately understand the meaning and intention of text in textbooks and newspapers. This test has revealed that many high school students have low reading levels that are often no better than those of AI reading programs. Previous studies, however, have failed to consider the performance Japanese as a Second Language (JSL) students. In 2019, this study employed the RST to investigate 26 Sapporo high school students' reading abilities including some JSL students to compare them with Japanese schoolchildren and the AI results of previous studies as benchmarks. A questionnaire survey about their self-assessment of Japanese language abilities and study habits was also implemented. The research questions are as follows: 1. What are the RST results of this study focusing on the JSL students when compared to that of other examinees and AI in the previous study? 2. Is there any correlation between the RST results and the questionnaire survey? 3. In the age of AI, what are the necessary educational and language support for the JSL students? Results indicate that most of the JSL students have significantly lower level of reading skills when compared to that of other examinees on the RST, and recognize that their reading levels fall short of the advanced level. These results suggest that the JSL students need special reading programs not only to study for exams, but also to improve their precise reading comprehension to survive in the age of AI.

54818
Designing an AI Chatbot-based Tasks for EFL Learners

Heyoung Kim, Chung-Ang University, South Korea

Artificial Intelligence (AI) chatbot is getting smarter and more human-like, but it seems to be rarely adopted for language learning. One of the biggest reasons is that most of the highly recognized chatbot programs were developed for L1 users, so their language and topic are inappropriate to second language (L2) learners, and also the chatbot often fails to recognize the users' inter-language. Language learning chatbot should play a role as a conversation partner in the L2 classroom, not in the L1 context. Accordingly, the purpose of this study is to introduce a new idea of developing an AI chatbot for English as a Foreign Language (EFL) learners and integrating it into English class in Korean public school curriculum. This research is a part of the two-year AI Chatbot project funded by the National Research Foundation (NRF). The testing chatbot Ellie was developed to perform speaking tasks by interacting with users in English. The tasks were created in two types: "exchanging personal information" and "problem-solving." The presenter will show examples of the AI chatbot-based pedagogic tasks and explain how they can work as a group activity in the elementary classrooms by demonstrating the program. Finally, findings of the three-week experiments with 177 Korean elementary school students will be briefly reported especially focusing on the benefits from the new technology, and barriers to using chatbot in L2 class.

Sunday Session II: 11:35-12:50

Room: *To be Announced in Final Schedule*
Session Topic: Technology & E-Learning
Session Chair: *To be Announced in Final Schedule*

54080
Effects of Social Media on Adolescence
Eden Rincon, California State University San Bernardino, United States

The growth of technology and social media use today is easily attainable to not only adults, but also in the hands of adolescence. The adolescence population is at high risk for experiencing psychological and mental health effects due to social media use. When mental health is affected in adolescence, other external domains may also be harmed such as social aspects, academic performances, and environmental factors. This has brought rising concerns to mental health professionals, academic staff, parents, and so forth. This literature review will explain the development of adolescence and it's correlation to social media use. It will also examine the effects of social media on adolescence encompassing the topics of self-esteem, depression, anxiety and sleep loss, addiction, child pornography and sexting, and cyberbullying. Treatment and inventions of counseling surrounding approaches of cognitive behavior therapy, client-centred therapy, and rational emotional behavior therapy will be discussed when providing help to adolescents. Finally, a professional role examination through school counseling will exhibit what steps are more effective and appropriate to take when providing services to students on the effects of social media whether administered individually, in groups, or school-wide.

54142
Use of Smartphone for Engineering Class Instruction and Its Effect on Student Engagement and Learning
Getu Hailu, University of Alaska Anchorage, United States
Maria Gemzicka, University of Alaska Anchorage, United States

According to the 2012 UNESCO report, there are a staggering 5.9 billion mobile phone subscriptions on a planet with 7 billion people. Smartphones, by far the ubiquitous interactive information and communications technology on Earth, have tremendous potential to assist the learning of people everywhere. They can be used to help deliver and spread knowledge and significantly improve the education process throughout the world. In this project, an engineering laboratory exercise was designed and developed where smartphones were used to conduct the exercises. Student engagement and learning outcomes were evaluated. Quantitative (pre- and post-laboratory exercise surveys with relevant statistical analyses) and qualitative (observations) methods were used to assess student engagement and the learning outcomes. Results indicate that, smartly used, smartphones can enhance student engagement and learning outcomes.

55243
Does an e-Learning Tutorial Increase Students Knowledge About Academic Integrity?
Lyle Benson, MacEwan University, Canada
Rickard Enstroem, MacEwan University, Canada
Evandro Bocatto, MacEwan University, Canada
Kristin Rodier, MacEwan University, Canada

Because academic integrity is a concern at many universities' they have implemented a variety of Park's (2003) three approaches to address academic misconduct. These include the punitive approach which focuses on punishment for the offender (student) and acts as a deterrent to would-be offenders (other

students). The educational approach which acts as a rehabilitative process for the offender (student) and acts as a deterrent to would-be offenders (other students). The restorative justice approach which acts as a rehabilitative process for the offender(student) and acts as a restorative process to the injured party (faculty). Universities have also employed an array of specific activities to deliver academic awareness education. These include individual courses, classroom visitations, online modules (e-learning), and out-of-class workshops. This study first reviews the literature on academic integrity e-learning; second; it provides an overview of the development of an Academic Integrity E-Learning tutorial at a Canadian university which focuses on the educational approach; third; it evaluates the effectiveness of the Canadian university Academic Integrity E-Learning tutorial on the increase of academic integrity knowledge in students through a study involving multiple course sections with a control group and experimental treatment group; and forth makes recommendations for academic integrity e-learning at universities.

Sunday Session III: 14:00-15:15

Room: *To be Announced in Final Schedule*
Session Topic: Natural Resources
Session Chair: *To be Announced in Final Schedule*

55176
Bat and Primate Richness in Response to Conservation Strategy and Forest Structure Across Costa Rica

Patrick Kelleher, St. Edwards University, United States
Eric Johnson, St. Edwards University, United States
Amy Concilio, St. Edwards University, United States
Michael Wasserman, Indiana University, United States

Human disturbance has fragmented tropical landscapes all over the world deceasing biodiversity and sustainable growth. Costa Rica has been a leader in the response of restoration practices and policies aimed to counter this disturbance. The main conservation strategies in place are National Parks, eco-lodges, research stations and incentive programs or payments for ecosystem services (PES) but it is uncertain how these strategies affect restoration, forest structure and species distribution and density. Comparing the influence that different policies and conservation strategies have on forest structure and species composition, especially indicator species, will inform planners and researchers on best practices and restoration strategies. This study measured primate and bat species presence and density, and forest structure composition (e.g. canopy cover, tree height, average seedlings/m2, saplings/m2, total DBH, or average DBH). The life stages of trees were documented in nested plots in 20 forest fragments in 4 regions of Costa Rica. The conservation strategy was identified for each site as national park (NP), ecotourism (ET), research station (RS), participating in the Payments for Ecosystem Services (PES), and other (O) was used if no conservation strategy was being used. Primate richness used to understand how these strategies are influencing primate's success. Bats are also important seed dispersers and pollinators, using two passive acoustic recorders it was possible to determine species richness and assemblage.

55354
An Assessment of Water Access Opportunities for a Rural Farming Community in Ecuador

Cristian Casanova, University of Michigan, United States
Tanner Jones, University of Michigan, United States
Natalie Ritter, University of Michigan, United States
Jessica Kahn, University of Michigan, United States

In partnership with a community organization, Nido De Vida, we assessed the water access needs and built a physical map as a prototype to recommend ways to improve water access for the Bolivarense community in Ecuador. The team, using deep dive method, conducted initial interviews with community members from 17 households within a 3 mile radius. Out of 17 households, only six felt secured about the amount of water they have access to during the dry season, but those that do have significant water storage, while all households get their water from creeks which run low in the dry season. Lastly, all of the 17 household saw cost as a barrier to improving their water systems; some explained that they would like to buy storage tanks or electric pumps, but could not afford them. The team, in cooperation with Nido de Vida, employed a range of needs filtering methods in order to set aside some challenges and prioritize the others. After prioritizing and filtering the challenges, most of the high priority challenges centered around ensuring water access for all community members, environmental conservation, education, and community building. Focusing on the challenge of environmental conservation, we created and presented a 3-mile radius physical map to the community, displaying geographic locations of water sources used by various families and locations of

homes of the community. This assessment and geographical map has demonstrated that it is possible to use these deliverables and apply it for potential development projects to improve water access for this community.

Sunday Session III: 14:00-15:15

Room: *To be Announced in Final Schedule*
Session Topic: Preserving & Challenging Cultures
Session Chair: *To be Announced in Final Schedule*

54548
Vernacular Architecture as Embodiment of the Melting Pot Culture in Labuan Bajo
Athina Ardhyanto, The University of Kitakyushu, Japan
Bart Dewancker, The University of Kitakyushu, Japan

The booming touristic town of Labuan Bajo in Indonesia was formerly a small trading port for Bajau, Bima and Bugis people of neighboring islands and Manggarai people of the mountainous areas of mainland Flores. Some of them then reside in Labuan Bajo, creating a melting pot of many cultural and religious backgrounds in the fishing village. The existing pluralism nature has now allowed the village to transition easily into a developing touristic town. The national government has even shed light on how they intend to further the developments to create an international premium tourist destination. With all these investments and excitement, the buildings and landowners on the main street near the main port have adjusted their assets to new functions. Some have adjusted by doing small changes and renovations, some have created entirely new buildings. Some tried to remember their cultural roots, some accustomed to the tourism business, and some are just functional. The research will analyze the buildings based on their exterior appearances and correlate them to the design logic. The interweaving of various shapes and styles of the vernacular architecture is still a reflection and embodiment of Labuan Bajo's original cultural value, warm and welcoming to everybody regardless of their differing cultural backgrounds, to fuse various logics to continue trading goods harmoniously. The study aims to be a reference for further study on the changing cultural value in architecture in the future.

53460
Feeling the Burn: Native Cultural Revitalization, Fire Management and the Re-Greening of California
Kenneth Hansen, California State University, United States

Dealing with catastrophic fires has become a way of life in California. But as time goes on and climate change continues to get worse, the fires have become much more lethal for people and ecosystems alike. This paper delves into the systemic causes of fire suppression policy in California and finds that almost two centuries of institutional discrimination against California Indian peoples--and policy disconnects between state and federal governments--are greatly responsible for contemporary catastrophic fires. The question is how to fix the current policy problems. I argue, based on participant-observation and discussions with tribal elders who maintain traditional culture, the solution is to return to Native California fire management practices, which for millennia had been much more sustainable and green than modern fire suppression policies imposed since statehood in 1850. For this to happen, there needs to be a re-acknowledgment of California Indian tribes and increased support for cultural revitalization efforts, especially controlled burning. Also, the inter-governmental dilemmas between state and federal bureaucracies, which oversee wild lands, needs to be addressed. Native tribal communities are in a unique position between states and the federal government in terms of sovereignty. Both state and federal governments need to recognize the important role played by Native peoples in managing ecosystems with traditional, culturally-relevant good stewardship.

Sunday Session III: 14:00-15:15

Room: *To be Announced in Final Schedule*
Session Topic: Security & Safety
Session Chair: *To be Announced in Final Schedule*

54095
Quantifying Risk of Natural Disaster Using Typhoon Damage Cases in Commercial Buildings
Ji-Myong Kim, Mokpo National University, South Korea

Damages caused by natural disasters are increasing worldwide, and damages are increasing accordingly. Therefore, a number of international public organizations and global insurance companies are actively studying risk modeling models to predict and counter the risks of natural disasters. These organizations are working to increase the sophistication of the model, as it creates a strategy for risk transfer or preparation based on the risk quantification model as the risk of natural disasters increases. Nevertheless, many studies on natural disasters and economic losses have defined the main factors, but there is a lack of comprehensive study on the relationship between risk factors such as natural disaster indicators and building inventory using actual cases. This study examine the risk factors and amount of risk through statistical analysis of damage cases caused by natural disasters. Hence, the purpose of this study is to define the risk indicators and to define the relationship between the risk indicators using actual damage cases of Typhoon Maemi, a representative natural disaster cases in South Korea. Building inventory and natural disaster indicators were used for statistical analysis. The results and framework of this study reflect the vulnerability of the actual damage, vulnerability of the building to natural disasters as well as the vulnerability of the region, so that public agencies and insurance companies will have a practical way to develop natural hazard risk quantification models.

55219
Environmental Protection and Military Exemptions – a Sustainable Framework
Kurt Smith, Sam Houston State University, United States

While much of the public and the environmental community remain aware of the Paris Peace Accords, a large segment of international polluting stays largely out of public scrutiny and view. The United States military is a powerful and important actor on the world stage in terms of global and international politics and policy. The United States Department of Defense spends more than six-hundred billion dollars on defense, making its expenditure greater than the combined defense spending of China, Russia, Saudi Arabia, India, France, United Kingdom, Japan and Germany combined. Only twenty-four countries in the world would have a higher GDP then the US military spends (Stockholm International Peace Research Institute, April 2017). With the expenditure of that money on gasoline, vehicles, weapons containing hazardous waste, housing hundreds of thousands of personnel, building of infrastructure to support operations etc., comes a major source of anthropogenic pollution to the environment. Coupled with this impact have come a number of exemptions from environmental laws and regulations. The Pentagon has continued to pursue an agenda of expanding these exemptions, with little or no empirical data to suggest environmental regulations have had any impact on military readiness. Understanding the legitimate needs of the military, and the risks to the environment past, present and future is a consideration of this paper/presentation, as well as recommendations for further study on how to assist the United Sates in the role of being a good global citizen.

Sunday Session III: 14:00-15:15

Room: *To be Announced in Final Schedule*
Workshop Presentation

52640
Enlisting Student Agency for High-yield Learning
Ryan Champeau, Center for Secondary School Redesign, United States

The Question Formulation Technique (QFT) is a powerful tool that teachers at all levels can use to ignite student agency for learning. The QFT promotes deep ownership for what and how students learn. The notion that teachers are the primary purveyor of questions in the classroom is debunked by transferring this metacognitive student experience with learning. Divergent and convergent learning modalities are embedded in the process in a way that builds student student learning capacity for deeply knowing and applying the knowledge to action using the constructs of student experience. It is a counter-intuitive pedagogy for most educators with elevating learning outcomes as a result of promoting the learning agency of the student. While the QFT is well suited for any age and any classroom environment, it is equality applicable to other settings, such as professional development and building capacity of individuals in pursuit of social services, health services, building community engagement and promoting democratic participation in such things as voting. The QFT research base is robust in all these environs and showcases the exponently enhancing power of an individual's agency for learning; specifically showcased in this workshop.

Sunday Session III: 14:00-15:15

Room: *To be Announced in Final Schedule*
Workshop Presentation

53208
Jamie Oliver YouTube Videos to Promote Cross-Cultural Understanding in the Language Classroom
David Melhuish, Macao Polytechnic Institute, Macao

Cross-cultural communication and exploiting the increasingly wide-spread access to youtube and other short videos provides teachers with opportunities to improve language output and study skills of their precious students. In my institute, (Macao Polytechnic Institute) I am devising teaching resources to exploit the short cooking videos of British chef and restauranteur, Jamie Oliver. These teaching aids provide fantastic resources for visual and auditory learning. Students are studying for Hotel Management and general English. These carefully prepared and tested authentic resources help students become more aware and more curious about ingredients and dishes from other cultures and presentation steps. The videos feature similar ingredients and cooking equipment (from common to less-familiar), allowing review and recycling of lexis and grammar. Exotic ingredients provide a scaffolding for cultural knowledge from the UK and beyond. My fully-immersive workshop will explain rationale behind these teaching materials and the integral learning skills that they support. I will demonstrate a short video with accompanying lessons so that teachers may be easily able to transfer these materials and ideas to their own classes and adapt as necessary.

Sunday Session III: 14:00-15:15

Room: *To be Announced in Final Schedule*
Session Topic: Clean & Affordable Energy
Session Chair: *To be Announced in Final Schedule*

54276
On the Tariff Modification for Remote Area Renewables Integration to the Power System

Roghieh Abdollahi, Clemson University, United States
Zoleikha Biron, University of Florida, United States
Ramtin Hadidi, Clemson University, United States

Growing interest in renewable energy sources and declining cost of solar photovoltaics and small-scale batteries in recent years are changing the traditional power grid especially in the residential sectors. Renewables are a promising solution for power system reliability especially in remote areas. A well-managed increasing level of renewables leads to a more reliable power grid in emergencies such as hurricanes and power transmission issues. It is shown in literature that current electricity tariffs in higher penetration levels of renewables causes multiple problems such as overvoltage and thermal issues in distribution systems. A significant portion of power energy is devoted to the residential and small commercial customers, therefore developing smart electricity tariffs especially in residential and commercial sectors to improve the power grid stability and load profile are inevitable. In this paper, we consider a small microgrid to model a remote area as our case study model. In the first step we discuss the potential effect of the current electricity tariffs on power system frequency and load profile in the presence of renewables such as batteries and solar panels. Then a tariff modification approach based on current tariff and load profile is proposed to improve voltage and frequency profile of the system. It is shown that the new tariff also improves the peak to average ratio (PAR) of the system. Lower PAR means a lower investment requirement for peak time demand in power systems especially in the generation and transmission sector.

54647
Resilient Control in Microgrids Using Renewable Energy Sources

Zoleikha Biron, University of Florida, United States
Roghieh Abdollahi, Clemson University, United States

Disasters are unfortunate events involving many countries like US, Japan, and Indonesia. Providing the minimum standards for living during and after disasters, is a major factor in risk managements of these occasions. The minimum requirements such as power electricity can prevent so many losses. In this paper, we focus on power grids as one of the fundamental infrastructures to be saved during the disasters such as hurricanes. We provide a novel approach to enhance the resiliency of microgrids in islanding mode toward uncertainties and load deviations in emergency situations. The resilient control strategy of the microgrids focuses on the quality of the delivered power electricity to the customer during the disaster and also increases the availability of the stored renewable energy for the customers. In this study, we consider a microgrid case study with integrated solar photovoltaic panels as the renewable energy source to the system. Unlike the majority of the existing papers on renewables, we do not focus on the profit for power grid system or the customer. The objective of our proposed control strategy is to control the charging/discharging profiles of the existing batteries to increase the quality and the duration of power electricity for all customers served by the microgrid no matter if they have battery or not. In the emergency islanding mode, we intend to use historical data of customers to predict their required power energy and then control batteries and solar energy in the power system to provide the required energy with high possible quality.

54225

An Analysis of the Possibility to Achieve the Specified Indonesian Renewable Energy Development Target

Hanan Nugroho, National Development Planning Agency, Indonesia
Dedi Rustandi, National Development Planning Agency, Indonesia

Is it possible to achieve the specified Indonesian renewable energy development target? An analysis of constraints and recommendations for accelerating the development of renewable energy in Indonesia. Indonesia has ratified a number of international agreements, for instance on Global Climate Change and Sustainable Development Goals, and has also announced its long-term National Energy Policy (through Presidential Decree No. 79/2014), and well as published its 3rd Mid-Term National Development Plan (2015-2019). All the policies/plans point to the necessity of developing renewable energy (RE) for the country having significant and diverse reserves of RE. However, at present the share of RE in the national energy mix is merely about 8 percent, or it seems to be very difficult for the country to achieve the target of 23 percent RE share in 2025 national energy mix, as set by the National Energy Policy. This paper analyzes factors that hinder the achievement of the target of RE development in Indonesia, taking also into account the country's policies on fossil fuels development, and clustered by regions. Based on the analyses and by making comparisons with other countries, this paper recommends things/strategies that must be developed, especially with regard to institution, regulation, and pricing/financing issues for Indonesia's energy transition to be able to deploy more RE projects and approaching the target set in the future.

Sunday Session III: 14:00-15:15

Room: *To be Announced in Final Schedule*
Session Topic: Climate Change
Session Chair: *To be Announced in Final Schedule*

55450
The Effect of Green Buildings on Environment
Nasir Ahmad Ahmadi, Konya Technical University, Turkey

Today, the construction sector has surpassed other sectors in the increase of carbon footprint. This sector, which uses one third of natural resources, uses 12% of fresh water and is responsible for 40% of total solid waste. Green buildings are designed, operated and terminated to minimize the negative effects of the built environment on human health and the natural environment. This means efficient use of energy, water and other resources; protecting the health of users and improving employee productivity; means reduction of waste, pollution and environmental degradation. Research on green buildings shows, if the buildings are designed and operated in this way, energy consumption compared to the average buildings designed and operated by traditional methods between 24% and 50%, CO2 emissions between 33% and 39%, water consumption between 30% and 50%, solid waste amount by 70% and maintenance costs by 13%. In this research, the effect of green building on environment and climate change was investigated. This study also present design, construction and operation processes of high performance sustainable green buildings.

55749
Empowering Communities by Optimizing the Deployment of Neighborhood-scale Resilience Hubs: A Case Study of Maui Island
Alexander de Roode, KTH Royal Institute of Technology, Sweden
Ivo Martinac, KTH Royal Institute of Technology, Sweden

As a part of an integrated planning approach to develop programs intended to support communities increasingly facing impacts of natural disasters, including those associated with climate change, neighborhoods must strengthen their local community cohesion and resilience. One way to support neighborhood-scale resilience is to create recognized and accepted local resilience hubs. These hubs are physical spaces intended to serve as a community resource during normal non-emergency periods, while also having the ability to serve as backup emergency shelters and emergency recovery hubs during and immediately following emergency events, such as natural disasters. Critical services are integrated into such resilience hubs, including back-up power supply, potable water, telecommunications, medical resources, and food provisions as complements to other support systems. This paper provides a case study of how resilience hub sites are selected and enhanced for resiliency using bottom-up community engagement methods coupled with technical resilient power feasibility studies. This methodology results in the creation of resilience hubs that are accepted, trusted and stewarded by neighborhood residents, while meeting specified community needs. The community engagement process in this study informed a resilient power feasibility analysis of three targeted sites on the Island of Maui. Communities who implement this approach will increase their resilience, including their community cohesion. This study is intended to inform related research exploring how a distributed network of resilience hubs can serve as a critical component of resilient communities who face increasing vulnerability to disaster impacts resulting from climate change.

53305

Site Selections and Topographic Design for Preventing Risks From Mountain Floods in Light of Feng-shui

Ping Xu, University of Colorado, United States

Mountain floods involve debris flows, landslides, and overflows occurring throughout complex and steep terrains during intense rainfalls. The historical 2013 floods, which took place in the Colorado front range, caused extensive damages to many mountain properties. Repairing these flood damages have cost the government hundreds of millions on disaster recovery and reimbursements. These recovery efforts have involved reconstructing damaged homes on their original property, which risks subjecting residents to the same dangers if future debris flows occur. Meanwhile, other residents who experienced overflows have repaired their homes with government reimbursements, but have not addressed the drainage issues of their site conditions, as they do not recognize the threat of additional mountain floods during their lifetime. However, some locations received minimal to no impacts from the floods. This research explores safety methods pertinent to successfully residing in mountain areas in the following aspects: first, using principles of feng-shui – an ancient Chinese geomancy, as a clue to discuss landforms prone to mountain floods, and optimal areas to occupy; secondly, studying topographic design and providing precedents which withstand mountain areas and avoid flood risks; and finally, using case studies from the Colorado Front Range and Boulder mountainous areas to exemplify the significances of site selections and improvements of topographic design in preventing and protecting residents from possible floods. This research will provide recommendations on surviving mountain floods, from large-scale site selections to details of the topographic design. Criteria will be identified/evaluated for improving site selection processes in order to sustain mountain communities.

Sunday Session III: 14:00-15:15

Room: *To be Announced in Final Schedule*
Session Topic: Gaming & Online Education
Session Chair: *To be Announced in Final Schedule*

54771
Competency Education Goes Online: Overview of an Undergraduate Early Childhood Education Program Moving to Competency Based, Online Education
John Lowdermilk, University of Texas Rio Grande Valley, United States

This presentation examines both the need and process used to create an online, competency-based program at the University of Texas Rio Grande Valley. This project is funded by the Texas Higher Education Coordinating Board. The rationale for selecting this program for development to an accelerated competency-based format is the growing need for childcare professionals with advanced academic training and credentials at the local, state, and national levels and the insufficient number of programs in colleges and universities that offer credential and degree programs in this area. In recognition of this growing need, PreSchoolTeacher.Org reported that state spending on preschool programs between 2014 and 2015 grew by $6.5 billion, an increase of $553 million from the year before. The following year, 32 states increased spending for preschool programs by a total of $767 million. Further, a report conducted in 2015 by the Institute of Medicine and the National Research Council, corroborates the urgency of this problem and the need to create affordable certificate and bachelor's programs in the childcare sciences: The Institute of Medicine (IOM) and National Research Council (NRC) were commissioned to explore the implications of the science of child development for the professionals who work with children birth through age 8. In the resulting report, Transforming the Workforce for Children Birth Through Age 8: A Unifying Foundation, the committee found that much is known about what professionals who provide care and education for children need to know and be able to do and what professional learning supports they need.

55587
Thinking About Thinking: Examining the Metacognitive Behaviors of Learners in an Educational MMO
Anastasia Betts, University at Buffalo, SUNY, United States
Meagan Rothschild, Age of Learning, Inc., United States

Metacognition, often referred to as "thinking about one's thinking," includes learners' abilities to effectively plan, monitor, control, and evaluate performance before, during, and after the learning process. While strong metacognitive skills have been shown to be a critical component of learning and are associated with higher academic achievement, students with lower academic performance tend to engage in little or no metacognition. However, research has shown that metacognitive skills and abilities can be taught and learned when students are provided with the right kinds of learning environments and tools. Video games, which depend upon player agency, self-directed learning, goal setting, accountability, strategy use, and open exploration, may provide spaces for the development of metacognitive behaviors in players. This presentation discusses recent research on the virtual environment and tools employed in an educational massively multiplayer online video game (MMO), and the ways in which structures and tools in the game enhanced and revealed the metacognitive behaviors of players. Through the analysis of player commentary (n = 505 unique players), the authors found strong evidence to support the notion that students were actively engaged in all four phases of metacognitive regulation (planning, monitoring, controlling, evaluating) throughout gameplay. This presentation calls for further research into the ways in which video games can be used to support the development of metacognitive skills in learners, as well as the transfer of these skills to more traditional learning environments.

55463

Using Digital Games to Help Young Chinese English as a Foreign Language Learners Develop English Language Skills

Hee Jin Bang, Age of Learning, United States
Jacey Chen, Age of Learning, United States

Despite the recent increase in the number of digital games designed to facilitate learning, little is known about their effectiveness in helping young children learn foreign languages (Hung, Yang, Hwang, Chu, & Wang, 2018). As children in Asia start learning English as a foreign language at increasingly early ages, research is needed to help teachers, parents, and curriculum developers make informed decisions about digital resources that help young learners' English language development. This presentation reviews results from a study of 64 kindergarten-aged beginning learners of EFL in Hangzhou, China who played a digital game designed to help them learn English for 15-20 minutes a day for 6 months. The design of digital EFL game activities was informed by best practices in second language instruction and research, and weekly surveys completed by parents provided feedback on the extent to which these activities were engaging and helping children's English language development. Pre- and posttests of English language skills, along with survey, interview, and focus group data from children and parents offered insight into which activities were most helpful and how the learning activities shaped children's English language learning experiences. Results showed that kindergarteners who played the digital language learning game developed on various measures of English. Qualitative data shed light on the relative helpfulness of specific game elements in promoting children's engagement. Suggestions for creating effective digital activities to help EFL learners are discussed, aimed at parents and teachers of young Chinese EFL learners.

Sunday Session IV: 15:30-16:45

Room: *To be Announced in Final Schedule*
Session Topic: Foreign Language Education
Session Chair: *To be Announced in Final Schedule*

54252
'Misinformed' Perceptions of English Language Amongst Japanese Learners
Naoko Araki, Akita International University, Japan

The Japanese government and enterprises have been emphasizing the urgent need of fostering 'global jinzai' (global human resources) in Japan. The pressure of increasing numbers of global human resources, globally competitive Japanese people, is commonly viewed as requiring fluency in English communication. The current social and educational norms lead to further development of English language education to satisfy the government policies. Under these policies and competitive pressure, Japanese students entering university come with 'misinformed' impressions of English language and culture associating their mastery of English language with their sense of self-worth. This creates disparity and a new imagined category of 'Junjapa' amongst themselves that it is particularly seen amongst students who highly value advanced English language levels as essential for being accepted into 'elite discourses of globalisation' (Yamagami and Tollefsen, 2011). The presentation will be critically questioning the government policy on global human resources and will bring discussions of this new category in globalising Japan.

54703
Annexation of Co-curricular Activities: Experiencing and Assessing Grammar Competence in EFL Context
Meherun Nesa, Southeast University, Bangladesh

Over the past few years the annexation of co-curricular activities (CCAs) in experiencing learning and assessing grammar competence have increasingly been filtered into educational discourse in EFL context. The empirical evidence based on questionnaires shows that traditional methods in grammar learning do not foster learners' potential development and confidence in assessment tests. Learners are taught and assessed in different components of grammar following only academic resources via close tests. This paper proposed to include co-curricular activities with academic contents in weekly lesson plan in experiencing grammar learning and assessment tests to 25 cohort of 1st semester of the department of English at a private university in Bangladesh. This paper collected data through triangulation methods in the means of observation, interviews, and focus group discussion via the lens of socio-cultural theory (SCT). In this study, CCAs comprised drama, song, and debate to reinforce their ways of grammar learning, foster critical thinking and assess grammar competence amidst writing scripts, lyrics and speeches. It intended to launch a transformative approach with the inclusion of CCAs to remove inhibition and fear of the learners in grammar learning and assessment tests by creating collaborative intervention with peers, teacher and learning contents. This paper investigated CCAs facilitated academic grammar learning and worked as an effective means to engage learners comprehensively, reduce their affective filters implicitly, and thus, had a great impact on achievement of continuous classroom assessment. This paper may give a new vision of learning and assessing grammar to learners and teachers in EFL context.

53762
Easing into TED Talks comprehension: Establishment of a TED Word List
Wenhua Hsu, I-Shou University, Taiwan

TED (Technology, Entertainment and Design) is a nonprofit organization devoted to spreading inspiring ideas and its website provides recorded talks delivered by experts from different disciplines and cultures at TED conferences. Covering a great variety of topics from science to business to global issues, TED Talks have been recommended as pedagogical resources in the EFL/ESL classrooms and can be used in a range of ways, including the training of listening, speaking, reading and writing skills. Amid various language tasks, vocabulary size has been generally accepted as an indicator of language abilities, since a rich vocabulary makes language skills easier to perform. As such, this research began by compiling a TED Talks Corpus of 3100+ transcripts across six topic areas downloaded from its website and then measured the vocabulary levels of each sub-corpus and the corpus as a whole along the word-frequency scale of the British National Corpus (BNC) and the Corpus of Contemporary American English (COCA). Adopting the putative 98% lexical coverage for adequate comprehension, the subsequent purpose of this research was to create a TED word list (TWL) to bridge the lexical gap to the vocabulary level of the talks. Results demonstrate that knowledge of the first BNC/COCA 8,000-9,000 word families plus proper nouns, transparent compounds and marginal words would command 98% lexical coverage of a TED talk. Assuming knowledge of the first 3,000 word families is considered as prerequisite abilities for initial access to TED Talks, the first 3,000 word families were not included in the TWL. Applying a set of criteria, the next 700 most frequent word families were selected to form the TWL and they accounted for 6.42% of the total words of the corpus. The present TWL may be helpful for EFL learners when using TED Talks as learning materials for vocabulary development.

Sunday Session IV: 15:30-16:45

Room: *To be Announced in Final Schedule*
Session Topic: Education Policy
Session Chair: *To be Announced in Final Schedule*

54272
Relational Organizing: Coordinating Student Services for Student Success
Jeffrey Grim, University of Michigan, United States

Higher education institutions of all types, sizes, and locations struggle to retain and graduate undergraduate students, especially those from historically underrepresented backgrounds (low-income, first-generation status, and students of color). While the literature mostly problematizes student background, motivation, and ability as the cause for individual retention and graduation rates, there is not enough focus on the institution's role in producing such outcomes. This pilot case study research project examines one British institution's attempt at organizing student services to improve student success outcomes, especially for underrepresented students. Using relational coordination theory from the management literature as an analytical tool, this paper will address how interpersonal and structural mechanisms impact coordination of student services for students success along with providing implications for both student affairs practice and future conceptual research.

54632
A Review of Foreign Language Education Policy Researches in China Through Bibliometric Analysis of CSSCI: History, Content and Trend
Tiemei Guo, Japan Advanced Institute of Science and Technology, Japan
Eunyoung Kim, Japan Advanced Institute of Science and Technology, Japan

Foreign language policies in China are regarded as an integral part of the national development planning. To explore the history, content and trend of this field will be of great significance to understand the evolution of foreign language education in China. This article conducts a comprehensive review on theories, research focuses, core researchers and organizations concerning foreign language policies by blibiometric analysis. The data was collected from the articles related to foreign language policies in China Social Science Citation Index (CSSCI) published during January,1999 to August, 2019 with the subject as foreign language policy, or foreign language planning, or foreign language education policy, or foreign language education planning and 185 articles which meet the requirements are extracted. The tools for bibliometric analysis used are SATI and UCINET. Results are shown specifically according to development phrases, node articles, highly cited papers, core authors and core journals, high-frequency keywords co-ocurrence, author co-citation and keyword network to reveal the nature of foreign language policy researches within the recent two decades and to propose an appropriate direction for future studies. By using the tools of informetrics, the work brings logical quantification from existing literature in foreign language policy researches in China and helps the researchers and the policymakers to have a clear picture of history, content and trend of this field for further research and policymaking.

55118
Faculty Initiated Communities of Practice: A Case Study
Rebecca Wilson-Mah, Royal Roads University, Canada

Faculty development is defined as an individual process and a social activity in communities. In studies on faculty development, learning in communities and the process of developing collaborative relationships and groups of support are rarely the primary focus. Furthermore, studies suggest that autonomy, self-direction

and specialized interests are impediments for forms of faculty professional development that are embedded in learning in communities. Communities established for the purposes of collegiality and learning, without an institutionally framed agenda are less common in faculty professional development in higher education. There is also more evidence of higher education institutions supporting faculty communities that are formally associated with specific operational or strategic priorities. This qualitative case study explored faculty members' experiences in three faculty-initiated and organized communities of practice (CoP) in a University. Data collection included three focus group interviews and nine in-depth, semi-structured interviews. A thematic analysis indicated that faculty appreciated the opportunity to convene in a CoP and that learning was associated with five characteristics. The characteristics were described by faculty members as: the freedom to choose whether to join and how to contribute; an engaging purpose for attending; mutual support; a collaborative and open approach to learning and sharing; and, an opportunity to slow down and take time for reflection. There were several barriers and impediments to group functioning in these informal groups and associated risks and benefits. The findings give shape to forms of social learning that are often not noticed or invisible in our workplaces.

Sunday Session IV: 15:30-16:45

Room: *To be Announced in Final Schedule*
Session Topic: Intercultural/Social Justice in Education
Session Chair: *To be Announced in Final Schedule*

55525
Investigating Intercultural Communications Among International Students
Yu-Chieh Wu, University of Hawaii at Manoa, United States

Due to the interconnectedness of the world, many higher education institutions aim for internationalization by developing an intercultural environment through recruiting international students. In 2015, it is estimated that 1.13 million international students participate in higher education in the US (U.S. 21 Immigration and Customs Enforcement, 2015). Despite the increasingly diverse environment in the campus, recent research shows lack of intercultural competence which may not always result in successful intercultural communication. Studying in a foreign country where one becomes a cultural outsider, international students often face linguistic, socio-cultural, emotional and educational challenges studying abroad. While language barriers and cultural distance are often cited in the literature that may hinder communication, less is known on how these challenges actually impact values, beliefs, attitudes, and the communication process. To fill that gap, this empirical study aims to examine the experiences of international students, exploring how the interactions between high-context and low-context cultures resulted in different expectations, constraints, and conflicted styles in a conversation. Qualitative data from the transcripts of international students' interviews and field notes in diverse environments such as dorms, classrooms, and TV lounge were analyzed analyzed using the constant comparative approach (Corbin and Strauss, 2008) to identify students' learning experiences. The research questions that guided this study is: How does the diversity among students influence international students' overall experiences? The result will provide implications for intercultural competence and multicultural policies.

55564
Teaching Social Justice to University Students in the Contemporary Australian Social, Political and Media Landscape
Erika Smith, Western Sydney University, Australia

The current social, economic and political climate in Australia means that teaching with social justice in mind is more than challenging, it's heavily opinionated territory that requires caution. In 2012 editors Barry Down and John Smyth asked, 'How do we educate for social justice in a world that is neither just, nor social?' This is a question that still has validity, more so now, than when it published. Much of the current literature on this topic examines teaching with social justice in mind within primary and high school environments, not in universities. In this presentation I draw upon autoethnography and research from my experiences as a unit coordinator for a Master of Secondary Teaching unit, that 'engages students in critical analysis […] for diversity and social justice in Australia and beyond' (WSU). This presentation focuses on the challenges of teaching Master of Teaching students to teach for social justice when they reflect the current conservative socio-political views on education. Finally, I offer teaching strategies, that have allowed me (for now) to navigate this uncertain territory with success. The topic is worthy of critical discussion if we are to have primary (elementary) and secondary (junior/high) school educators truly embrace difference, to then teach with student wellbeing and academic achievement in mind.

55600

How to Foster the (Inter)cultural Competence of Language Learners at Institutions of Higher Education via Short Animated Films?

Ingrid Kutz, Queen Mary University of London, United Kingdom

(Inter)cultural competence is listed among the skills with an increasing significance in both professional and private domains due to ongoing processes of globalisation and migration. There are various definitions of (inter)cultural competence not only in different areas of expertise, but also within the same subject. Most definitions, however, name empathy and the ability to change perspectives as core constituents of the concept (inter)cultural competence. Many definitions suggest that people are endowed with these abilities, but growing numbers of students within the autism spectrum disorder seem to contradict this assumption. Furthermore, highly different cultures are likely to challenge these abilities. The presentation will introduce a teaching unit which aims at the development of (inter)cultural competence respectively empathy and the ability to change perspectives. Knowledge about film aesthetic means like field sizes and their effects on perception are the foundation of the teaching unit. Once the students learned about field sizes they are asked to apply them on short animated films from the target culture. Later on students will realise that perception (and judgements) are not only influenced by field size, but also by perspective, setting, sound, etc. With this in mind students are asked to successfully represent different opinions in a role-play which's content is currently subject of controversial debate (whether teachers in Germany should be allowed to wear headscarfs). Before the discussion begins students are supposed to put themselves in the position of their characters by reflecting on the teacher's questions about their assigned roles.

Sunday Session IV: 15:30-16:45

Room: *To be Announced in Final Schedule*
Session Topic: Curriculum Design
Session Chair: *To be Announced in Final Schedule*

54547
Artificial Intelligence Models to Support Curriculum Development
James Otto, Towson University, United States
Chaodong Han, Towson University, United States

This research provides tools to support curriculum development for skills education. Specifically, we apply artificial intelligence neural networks and multiple linear regression models to predict a person's annual wages based on the levels and combinations of skills that they possess. The models are developed based on governmental data for 35 job skills combined with annual wage information for over 960 occupations. Given this input data, the resulting neural network trains to above 70 percent accuracy in predicting annual wage levels. The multiple linear regression models provide somewhat lower performance. Curriculum developers and education administrators can use these models to determine what level and mix of occupational skills are most appropriate for meeting student goals and optimizing wage potentials. Job and career seekers can use these models to generate estimates of how well their skills should be compensated by the job market.

55462
Digital English as a Foreign Language Curriculum for Young Children Informed by Design-, User-, and Efficacy Research
Jacey Chen, Age of Learning, United States
Hee Jin Bang, Age of Learning, United States
Paula Hidalgo, Age of Learning, United States

Worldwide, English is the most common second language being learned, and digital games can be effective in helping learners acquire English (Kao, 2014). Limited research exists, however, on the effectiveness of digital games with younger children, although children in many countries are learning English as a foreign language (EFL) at younger ages. This presentation focuses on the design, development, and testing of a digital game for young EFL learners. For development, curriculum experts and game designers created a digital game for pre-k and kindergarten children that would provide a dynamic, engaging, and interactive English learning experience. A review of learning science theories (e.g., spaced repetition) and best practices in second language instruction guided the team's implementation of an immersive learning environment with guided interaction, offering children opportunities to acquire receptive and productive skills. Multiple language learning standards (e.g., Common European Framework of Reference for Languages, American Council on the Teaching of Foreign Languages) informed the linguistic development sequences underpinning the game's scope and sequence. Feedback from user research conducted with young children informed revisions to content, lesson structure, and game features. The game's effectiveness was tested in a 6-month study of 64 kindergarten-aged Chinese children playing for 15-20 minutes daily. Pre- and post-tests, weekly parent surveys, and end-of-study interviews revealed that children were highly engaged and experienced improvements in several language skills. Game analytics (e.g., activities completed, time spent in game), along with the usage and retention data from 20k+ daily users in China inform the team's continual game improvements.

55336

Data in the Classroom: Online Resources for Education, Outreach and Training
James McNally, University of Michigan, United States

Secondary data, regardless of your discipline research approach offers your students at least four primary benefits. 1) Efficiency- The collection of primary data, both qualitative and quantitative is time consuming and expensive. Good secondary data facilitates the teaching of research methods across disciplines. 2) Variety- The quantity of secondary data has growth tremendously allowing many research questions to be explored with existing data. 3) Theory Testing- Secondary data allows for the controlled testing of theories in a manner that facilitates validation of results, and 4) Generalizability- Because secondary datasets take advantage of sampling distributions results can be generalized to a broader population. While data use was one scene as a graduate level activity, increasingly undergraduates are required to have some data experience before moving on to upper-level studies. This presentation will offer an overview of the value of secondary data in the classroom and potential resources that teachers can use.

Sunday Session IV: 15:30-16:45

Room: *To be Announced in Final Schedule*
Session Topic: Curriculum Design
Session Chair: *To be Announced in Final Schedule*

55086
Coaching in the Classroom: Incorporating Academic Coaching in a Student Success Seminar
Leilani Harjati, University of Hawaii at Manoa, United States
Shauna Sibonga, University of Hawaii at Manoa, United States

Freshman and sophomore student success seminars provide an excellent opportunity to incorporate academic coaching practice into the classroom. This session shares the experience of an academic advisor and an academic coach coming together to team-teach a freshman/sophomore success seminar. They share the unique opportunity of incorporating academic coaching activities into an established one-credit, major and career exploration course. Together they shared with students the power of developing a positive growth mindset (Dweck, 2006), grit (Duckworth et al, 2007), self-efficacy (Bandura, 1977) and resiliency (Waxman et al, 2003). With weekly touch points, students created personalized plans for major and career exploration, campus engagement, and academic achievement. Through class activities and assignments, students identified personal strengths and barriers all while being part of a supportive seminar team. Students end the semester with concrete tools to support their major and career goals. Sample class curriculum will be shared along with strategies to facilitate group coaching conversations. Presenters will also discuss how academic coaching can be applied in various settings and support different student populations.

55594
Early Childhood Education and School Readiness in Lao PDR: From Curriculum Perspective
Xiaodong Meng, Kobe University, Japan

The study aims to examine the National Kindergarten Curriculum prepared for 5 to 6-year-old children relative to transition from kindergarten to primary school in Lao PDR. The National Kindergarten Curriculum is the only framework applying to all types of early childhood education programs in Laos. The standards within the curriculum define expectations for children's learning and development prior to primary school entry, which is also a reflection of how the country is conceptualizing children's readiness for school.
Totally, 13 developmental standards, 58 content categories, and 104 indicators under 5 developmental domains in the readiness competency part and 6 teaching-learning activities in a teacher's guide part were analyzed by adopting content analysis, with the purpose of identifying the specific areas of early development addressed within this standards document. Preliminary findings suggest that early childhood education standards of Lao PDR have emphasized the language, intelligence, and general education domains, however, the specific areas within domains of social interactions and emotions have been addressed relatively less often. Few standards have emphasized the social-emotional and approach toward learning domains. The author suggests that the content of Laos early learning and development standards reflect the current national objective for ECE: prepare children to learn Lao language and have readiness to study in primary education focusing on reducing drop-out and repetition of primary education, but in some cases might not be coherent with the research literatures on children's development in early years.

54379

Phenomenon-based Learning Curriculum Design to Mitigate the Skills Gap

Kelly La Venture, Bemidji State University, United States
Julie Adams, Bemidji State University, United States

Urgently needed, are solutions to help mitigate the global skills shortage that threaten the long-term economic prosperity of many nations and to address highly complex transnational challenges. These solutions require extensive coordination through the local and global levels, from different professionals, and include increased worker training, education, and close collaboration with educational institutions to improve graduate employability. Organizations need suitable candidates who have the right skills and appropriate education to fill an ever-increasing number of jobs. To alleviate the talent shortage impacting innovation and global economies, young people need a globalized perspective that may in part, be developed through phenomenon-based learning (PhenoBL). Phenomenon-based learning is a strategy born out of constructionism and developed in Finland. Students start with a real-world challenge then use collaboration and inquiry-based learning to grapple with real-world concepts to solve problems (Sislander, 2015). A phenomenological perspective on students learning (1) prepares students for a narrow and receptive appreciation of a whole system and provides a globalized perspective, (2) integrates with ethics and values, thus complementing the students' cognitive competencies by explicitly emphasizing the training of relevant skills and competencies, and (3) bridges the gap between theoretical knowledge and knowledge-based actions in real life situations by promoting the action aspect of learning and teaching (Østergarrd, Lieblein, Breland, & Francis, 2010). This work-in-progress paper includes a review of PhenoBL, overview of student and instructor roles, an in-depth dive into the curriculum re-design to PhenoBL in a marketing course, and the impacts of PhenoBL on mitigating the skills gap.

Sunday Session IV: 15:30-16:45

Room: *To be Announced in Final Schedule*
Session Topic: Education, Sustainability & Society
Session Chair: *To be Announced in Final Schedule*

55085
Lessons From a Global Analysis of the UN Conventions on Children and Disability Rights
Gabriela Walker, National University, United States

Among the 6.7 billion people in the world, there are 2.2 billion children, of which 1 billion live in poverty. This study looks at the rights of children with disabilities and how vulnerable populations can be protected. The UN (2009) identifies several obstacles to democracy, human rights, and the rule of law, including: "deepening poverty; threats to human security; the infringements of individual rights and impediments to the enjoyment of fundamental freedoms". The author used a cumulative logit model for ordinal responses, in particular proportional odds model, to look at whether states with a higher degree of democratization and a higher level of human development are less likely to ratify the United Nations Conventions on the Rights of the Child and on the Rights of Persons with Disabilities. The analysis finds statistically significant relationships for multiple variables. Here are selected general conclusions: (1) as the widest ratified human rights treaties, the CRC and CRPD have profound implications on understanding how the states' development and democratization impact how they sign and ratify treaties; (2) different indices have different effects on each of the conventions, without contradicting each other, meaning that governments perceive and treat Conventions distinctly; (3) the date of ratification, rather than the date of signature, is much more reflective of the state's democratization and development levels; and (4) the world is in need for a reconceptualization and recontextualization of children and disability policies, redefining concepts like equity, empowerment, social enterprise, and inclusive development to include these disempowered populations.

54643
Planning Resilient Cities Around the Globe For and With Young People: Insights From UC Berkeley's Y-PLAN Tohoku, Japan Case Study
Amanda Eppley, University of California, Berkeley, United States
Myrna Ortiz, University of California, Berkeley, United States
Deborah McKoy, University of California, Berkeley, United States

The Y-PLAN (Youth - Plan, Learn, Act, Now!) Tohoku, Japan Studio offers an inspiring case study demonstrating the power of engaging young people in planning inclusive and resilient cities across the globe. Through the Y-PLAN Japan studio, students from the region devastated by the 2011 Great Japan Earthquake and Tsunami learn about sustainable development and prepare social action plans for their home communities. This paper and presentation will share findings from this eight year partnership between Tohoku, Japan and Berkeley, California, engaging 1,000 Tohoku high school students. Based at UC Berkeley's Center for Cities + Schools, Y-PLAN is an award-winning educational strategy, bringing the perspectives of young people to planning processes in our most vulnerable cities. Y-PLAN's rigorous research methodology empowers young people to give voice to the challenges and assets of their communities. It allows civic and community leaders to hear directly about young people's life experiences, develops trust and enduring relationships across generational divides, and prepares tomorrow's leaders. The Y-PLAN Japan case study reveals six core findings that enable planners and educators to transform cities for and with young people. Action plans for Tohoku range from a trash collection sporting event called Zero GoMission ("gomi" means trash), bringing together the community to clean up their town in the earthquake's immediate aftermath, to turning park benches into multi-functioning disaster-relief infrastructure

by equipping them with supplies and tools. Today's young people will be living in the future that's being planned right now; they need to be part of shaping it.

55398

Changing the Narrative for Youth in Foster Care

Leslie Ponciano, California State University: Office of the Chancellor, United States
Akin Abioye, Liberty Hill Foundation, United States
Zaid Gayle, Peace4Kids, United States

Changing the Narrative is a youth-initiated effort to identify implicit bias toward youth and alumni of foster care (YAFC) and to redress it within the education and social services sectors. Results from a survey distributed to a representative sample of the general public in Los Angeles County (N=2488) confirmed both that the public has negative expectations for the outcomes of YAFC and that these negative stereotypes are inaccurately exemplified in the media portrayals of YAFC. Analyses determined that variation in public perception can be connected to age, gender, ethnicity, personal experience in foster care, and professional experience with YAFC. As the majority of the sample had few direct experiences with YAFC, perceptions were primarily formed based on the portrayals of YAFC in the media. The portrayals selected most often were criminals, victims, and survivors. This research highlights a distressing cycle that begins with social service professionals, foster parents, and teachers who are influenced by the media to perceive children and youth in foster care as deficient, thereby creating a negative set of expectations that are met as the children cope with early trauma and, thus reinforce the negative stereotypes. Therefore, the next steps are for educators to develop a curriculum that increases awareness and changes the narrative to a strengths-based perspective of youth in foster care.

Virtual Presentations

54039
Internship Abroad Program: The Lived Experiences of Education Students in a State University
Luzviminda Relon, University of Northern Philippines, Philippines

Quality learning is indispensable for meeting people's basic needs, and vital in nurturing the conditions for global peace and sustainable development across the globe. Regardless of the race and creed, everyone needs to learn in active, collaborative and self-directed ways in order to flourish and contribute to their communities. Colleges and universities are faced with evolving and more demanding environment that has forced them to become adaptive and flexible. They are also faced with the pressure from the realization that their graduates should be able to compete in an increasingly global market place. This study aimed to disclose the personal experiences of the 5 education students during their practice teaching in ASEAN countries such as Thailand, Vietnam and Indonesia. This is a qualitative study which made use of case studies and Key Informant interview. It was disclosed that the student-teachers exposed in Universities of non-English speaking countries like Vietnam and Indonesia, may tend to have several struggles academically, emotionally and socially as compared to a school in a country which have included in their curriculum the teaching of English, both as a subject and a medium of instruction. Internship abroad tend to contribute to the holistic development of a globally competent future educator. However, prior to their exposure to the country of destination, the students should be provided with opportunities to learn the culture and language of the cooperating school abroad.

54072
The Quality of Legal Education in Nigeria: A Case for Professional Ethics and ICT Courses in Law Degree Curriculum
Osahon Omoregie, Ambrose Alli University, Nigeria

There has been raging debate on the quality of legal education in Nigeria. Scholars have opined that the challenges are more imminent at the undergraduate level in the University in comparison with the Nigerian Law School. One central issue canvassed relates to curriculum development. In this regard, the academic content of Law Degree Programmes has generated much criticism. While a lot has been written, not much solution has been proffered. The situation calls for more attention against the backdrop of technological advancement and other developments in contemporary times. This paper is a modest contribution to the debate. The author argues that the inclusion of Professional Ethics and Information Communication Technology courses and modules in the curricula of the Law Faculties in Nigerian Universities will not only effectively produce a better-equipped lawyer in view of the dynamics of a 21st century world, but will also engender the realisation of governmental tertiary education goals and objectives for attaining sustainable development.

54264
Fostering Sustainability Through Renewable Energy Resource Development: The Law and Policy in Nigeria
Osahon Omoregie, Ambrose Alli University, Nigeria

Renewable energy sources (RES) exploitation and utilization is the hallmark of sustainable development in any country around the globe. The need to decarbonize Nigeria's energy base through the utilization of RES to ensure sustainability cannot be overemphasized. In the last two decades, the Nigerian Government has shown keen interest in renewable energy resource development by evolving a plethora of policies which articulates certain visions, goals, objectives, targets, and strategies. This paper critically examines these policies with a view to ascertaining their efficacy. It was found that the policies are ineffective and

inadequate. The paper further revealed that legislation is a pivotal tool to accompaniment and advance policies, but at present, the absence of a legislative framework poses a major challenge to RES exploitation and utilization in Nigeria. The author recommends the urgent need to enact a coherent and comprehensive legislative and regulatory framework to drive RES development and deployment in the country. A content analysis of a proposed legislative framework is succinctly outlined.

54485
Maloya: Performing Reunionese Identity
M-Muriel Hillion Toulcanon, Edith Cowan University, Australia

Maloya is a vernacular style of dance and music, born in the former French colony of La Réunion at the time of slavery. Slaves from Madagascar, Africa, indentured labourers and workers from India, China and France brought by the French colonisers to the sugarcane plantations led to a diverse mix of ethnicities, languages, customs and beliefs – the roots of Reunionese Creolisation. Maloya is a multicultural artform gathering of ancestry, slavery, resistance, resilience, reconnection. This unique communication system, which consequently alienated the French colonial authorities and landowners was unofficially banned until 1981. Accordingly, the importance of acknowledging the past and preserving the cultural heritage by passing this artform from one generation to the next is significant. In 2009 maloya has been recognized by UNESCO as pertaining to have intangible cultural heritage value. At a glance, the dance invites the body parts to converse with each other similarly to the different ethnicities in contact on the plantations. The music, rich of various intertwined influences, uses complex rhythms with call and response patterns and melodic intervals. I argue that Maloya embodies the spirit of the Reunionese identity. Through a practice-led research methodology including research methods from autoethnography and artography I investigate how this powerful symbol of freedom from colonial oppression is a celebration of multicultural contemporary 'postcolonial' La Réunion. I investigate how performing maloya dance and music means to perform Reunionese identity/identities.

55438
A Systematization and Comparison Framework to Facilitate Structured Selection of Sustainability Assessment Approaches
Jan Bitter, RWTH Aachen University, Germany
Daniela Janssen, Institute for Management Cybernetics, Germany
Frank Hees, RWTH Aachen University, Germany

Sustainability assessments (SA) of products, processes, organizations, strategies, etc. aim at providing a basis for decision-making towards (more) sustainable practices and principles. An extensive variety of SA approaches as well as a wide diversity of assessment situations exist, making situation-specific approach selection a complex issue. However, well-founded selection is crucial, as selecting unsuitable approaches for respective assessment situations can lead to incorrect, inconclusive, insignificant, implausible or vulnerable results. Structured, situation-specific selection processes for SA approaches can reduce these effects. However, there is a lack of respective concepts, criteria, guidelines or frameworks for decision-, i.e. selection-support. Based on this, the goal of this work is to develop a systematization and comparison framework, which facilitates structured selection of situation-specific SA approaches. In previous works, Bitter et al. (2018a, 2018b, 2019) proposed a requirements-set for SA approaches, a criteria-set for a systematization and comparison framework as well as respective spectra and specifications for the criteria. In this work, these elements are combined and implemented in form of a meta framework. By means of the criteria-set, SA approaches are characterized and subsequently quantified using the criteria-spectra. Thus, via an extensive rule base, the "fit" of SA approaches to situation-specific requirements, i.e. desired characteristics can be calculated. Based on these calculations within the meta framework, structured decision-support towards the situation-specific selection of suitable SA approaches is provided. For future works, the developed systematization and comparison framework can be used to systematically investigate the influence – nature and extend – of approach selection on assessment results.

55500

Arabic Literature as a Site for Engagement with Alterity: An Ethnographic Study of Arabic Literature Collegiate Classroom

Ebtissam Oraby, George Washington University, United States

This paper reports a study that investigates the reading of Arabic literature in U.S. foreign language collegiate education as a site for engagement with alterity. The study explores how students in FL literature courses encounter alterity, how they construct the other and reconstruct themselves as they read modern Arabic literary texts, and how the political, historical, geographical, and cultural contexts in which students read shape their reading. The study adopts alterity as a framework to illuminate the understanding of literacy in foreign language contexts and aims at engendering an Other-oriented literacy that is rooted in Levinas's ethics of alterity. By examining the different nuances of otherness at play when engaging with Arabic literary texts and the construction of the self and the other through the act of reading within its specific historical, cultural and political context, and examining the manifestations of power in the process of meaning making this study envisions an ethical textual engagement with Arabic literature.

55603

Teaching English to Refugees in Greece: The Case of Lexena School – Challenges and Possibilities

Sofia Tsagdi, National and Technical University of Athens, Greece
Eythmios Tsitsikas, Lexena School, Greece
Maria Tsiakalou, Lexena School, Greece
Konstantinos Theologou, National and Technical University of Athens, Greece

In the last year Greece has experience an influx of refugees, this has been associated with forces having a highly destructive character, resulting in a continuing transformation of existing notions concerning the proper forms of teaching and boundaries of such fundamental phenomena as culture and education. Integration processes have also involved dramatic changes in national education systems, which are currently facing a number of considerable challenges. The aim of this presentation is to examine the current practices of language teaching in refugee schools, report on the challenges teacher and students face as well as suggest possible ways of facing them. It reports on a research project in a secondary refuge school in Greece. The strategy of research applied in this study is grounded theory and the qualitative methods of research are: structured interviews (10 interviews done and transcribed during one month), scaled questionnaires were distributed (80 done during one month and transcribed) and photography (800 photos done during one month and described) and repeated visits in the school. There were at least 80 students involved at the project during one month. Moreover this presentation draws on content analysis as a systematic, rigorous approach to analyzing documents obtained or generated in the course of research. The presentation will conclude on how barriers and challenges can be met and will suggest practical, uncomplicated advice for teachers on how best to support children who have experienced trauma, how to adapt standard teaching methods, and what they can do to help vulnerable children learn and develop their full potential. For those wishing to pursue less conventional research methodologies in educational settings, this presentation will also highlight potential benefits and struggles.