

CHER HongKong 2018

The IAFOR Conference for Higher Education Research – Hong Kong 2018

Friday, October 19 - Sunday, October 21, 2018
Lingnan University, Hong Kong

Final Draft Schedule

Please Check & Confirm

Please check that all information pertaining to you is correct and notify us at cher-hongkong@iafor.org if there is any error.

Please notify us of any corrections by **Thursday, September 27 17:00 (GMT+8)**.

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 **Monday, October 8**.

Friday at a Glance

October 19, 2018

- 09:15-10:00 Conference Registration & Coffee
- 10:00-10:10 Opening Announcements**
Kiyoshi Mana, Director of Events, IAFOR
- 10:10-10:20 Welcome Address**
Joseph Haldane, IAFOR, Japan
- 10:20-10:50 Welcome Address**
Joshua Ka Ho Mok, Lingnan University, Hong Kong
- 10:50-11:35 Keynote Presentation I**
Innovation and Entrepreneurship at a Liberal Arts University? The Experience of Lingnan University
Leonard K Cheng, Lingnan University, Hong Kong
- 11:35-12:20 Keynote Presentation II**
Innovation, Entrepreneurship and the Shift to the East
Anthony Welch, University of Sydney, Australia
- 12:20-12:35 IAFOR Documentary Photography Award | 2018 Winners Screening
12:35-12:45 Conference Photograph
- 12:45-14:00 Lunch Break
- 14:00-14:30 Featured Presentation I**
Value, Innovation, Entrepreneurship: An Ethical Perspective for Global Education, Research, & Development
Xu Di, University of Hawai'i at Manoa, USA
- 14:35-15:05 Featured Presentation II**
The Impact of Internationalization of Higher Education in Asia on Cooperation Among Diverse Stakeholders: International Cooperation to Promote Entrepreneurship and Innovation
Yuto Kitamura, The University of Tokyo, Japan
- 15:05-15:30 Coffee Break
- 15:30-16:00 Featured Presentation III**
Contemporary patterns of global educational mobilities: what might be the impact on innovation and entrepreneurship?
Catherine Montgomery, University of Bath, UK

- 16:05-16:35** **Featured Presentation IV**
Recalculating Higher Education in the Asia Pacific Region within the Emerging Fourth Industrial Revolution
Deane Neubauer, East-West Center, USA
- 16:45-18:00 Conference Welcome Reception

Saturday at a Glance

October 20, 2018

09:00-11:00	Parallel Session I
11:15-12:45	Parallel Session II
12:45-13:45	Lunch Break
13:45-14:45	Parallel Session III
15:00-17:00	Parallel Session IV
17:15-18:45	Parallel Session V

Sunday at a Glance

October 21, 2018

09:00-11:00	Parallel Session I
11:15-12:45	Parallel Session II
12:45-13:00	Closing Session
13:00-14:00	Lunch

Saturday Session I: 09:00-11:00

Room: *To be Announced in Final Schedule*

Stream: Questing for Innovation and Entrepreneurship: Curriculum Design and Student Learning

Session Chair: *To be Announced in Final Schedule*

44182

Taiwanese University Students' Retrospective Evaluation of a Textbook in Use

Szu An Chen, Wenzao Ursuline University of Languages, Taiwan

In Taiwanese EFL contexts, textbooks play an important role in the classroom. As teachers, textbooks provide learners with a resource of L2 input either in the classroom or outside the classroom. A recently published textbook, *Reading Time: A Strategic Approach to Reading in English*, needs to be evaluated from the perspective of its users. The purpose of this study is to examine how student users perceive this textbook and its effect on their English learning through conducting a questionnaire survey in the research context. The questionnaire was developed by the researcher according to the aim of the study, and the quantitative data was collected from eight Level 2 English classes at Wenzao Ursuline University of Languages and then analyzed by using SPSS 23.0 in 2018. The research findings reveal that the student participants reflected positively on this textbook and its effect of helping them learn English at Wenzao. Based on their written comments in response to three open-ended questions in the questionnaire, some suggestions regarding textbook modifications to be done in the future have been made for textbook developers. The present study also addresses the needs of carrying out further research on the evaluation of the textbook from different perspectives.

44156

Gamification in Primary School Curriculum Design in Hong Kong

Yick Kan Kwok, Technological and Higher Education Institute of Hong Kong, Hong Kong

Growing up with digital technology, primary school students expect education should be immersed into ICT and STEM. According to recent local research conducted by The University of Hong Kong, students are addicted to gaming, spending more than three days per week on average. To steer students back to study, curriculum design needs to be reformed to be more attractive. The aim of current work is to study and present the benefits of adding game elements into the current curriculum, such as increasing the motivation and engagement of students. The methodology used in this study is a controlled experiment, which lasts for one semester. One class of students use a traditional curriculum, while another class uses gamified curriculum design, which the curriculum elements such as assignments, quizzes and examinations are re-designed to become quest-based. Depending on the performance of students, each quest can reward the student with a game score and certain single-use perks, such as privileges to extend the deadline of homework for one day. Without needing to wait for their classmates, students can finish a quest and start another if the prerequisites, such as completed related lecture, have been met. At the end of the semester, the effectiveness of the gamified curriculum design can be reviewed by comparing the performance changes of two classes of students. The experiment can as well be re-run and extended to a wider base of test subjects to obtain more accurate results. We hope that this study will give insights to future curriculum reform.

44237

Can Video-Conferencing Mediated Learning Improve Students' Oral Ability? A Study on a Learning Chinese as Foreign Language Program

Chiayi Chen, Kainan University, Taiwan

Yan jin Pan, National Chiayi University, Taiwan

The researchers conducted a distance video-conferencing instructional design in which 45 Chinese language learners in the US and 27 Chinese language pre-service teachers in Taiwan completed a series of collaborative assignments. Under this video-conferencing design, Chinese language learners could exercise the target language, and Chinese language pre-service teachers could also practice teaching foreign students. The result of this study showed that this video-conferencing design had a positive impact on the Chinese learners' oral ability. The pre-test scores of students in the control group (mean=71.10) were larger than those of the students in the experimental group (mean=62.62) but the difference was not statistically significant. After the treatment, the students in the experimental group (mean=87.77) outperformed significantly those in the control group (mean=79.27) on the post-oral test at the level .05 and $t[42]=-2.351$, $p=.02$. The researchers analyzed the results of the students' surveys and follow-up interviews to investigate why students under video-conferencing design had better oral learning outcome. The researcher suggested that the application of this video-conferencing mediated learning design would be helpful for those in the remedial foreign language program. And it also would increase the mutual understanding of those across the different countries.

Saturday Session I: 09:00-11:00

Room: *To be Announced in Final Schedule*

Stream: Globalisation, Internalisation of Education and Impact on Student Learning

Session Chair: *To be Announced in Final Schedule*

42985

Information Technology Student Dispositions Towards Social Networking Site as an Educational Tool: A Case Study

Las Johansen Caluza, Leyte Normal University, The Philippines

Educational technologies are means to enhance teaching and learning process both the teachers and the students. Many kinds of literature showed significant impact on the use of these technologies. In the Philippine context, social networking sites play a vital role in everyday activities of these students in the tertiary level. However, understanding the actual experiences of these students remain unexplored which this research aimed to unveil. The single-case research design was utilized in this study in order to unveil the actual experiences of the selected fifteen IT students in the university through in-depth interview and observation. These students were purposively selected based on the selection criteria. The data collected were analyzed using Colaizzi's Descriptive Phenomenological Approach of data analysis, results revealed varied opinions and were grouped according to the theme such as collaborative learning strategy, the highway of information, drive to learn further, and accessibility constraints. Based on findings, it is imperative to say that social networking site as a medium of instructions and learning showed significant interest and positive feedback. However, further studies could be done like getting the experiences of the teachers using social media.

43277

A Teacher Educator's Self-Study in the Course of Teaching Methods for School Physics: Looking for the Hope with the Expectation

Jaehyeok Choi, Chonnam National University, South Korea

Heekyong Kim, Kangwon National University, South Korea

Yong Jae Joung, Gongju National University of Education, South Korea

Kwang Hee Jo, Chosun University, South Korea

The purpose of this study is to investigate the pedagogical practices of "I" and "pre-service teachers" by "self-study" with three critical colleagues to develop pre-service teachers' professional abilities in teaching physics. This study was conducted from March to June 2018 in the 45-hour lecture with the participation of 14 pre-service teachers who were seniors in a department of physics education, a university in South Korea. My reflective journals, pre-service teachers' reflection on their own lesson demonstration, the feedback about the demonstration, and lecture notes were collected with videos. In addition, the questionnaires were administered to pre-service teachers twice. The lecture was largely composed of the understanding of the instructional models and their application through lesson demonstration. "I" expected that the pre-service teachers could share the orientation of each instructional model and apply it to the actual class. And pre-service teachers expected to develop their lesson skill through lesson demonstrations in this lecture. Since "I" found that some pre-service teachers recognized that the instructional model was purely theoretical and could be applied in an ideal situation, "I" was disappointed. Pre-service teachers were disappointed that they could not improve their lesson skills as much as expected even though they did their best. Most of the pre-service teachers tried to understand the orientation of the lecturer, "I", and tried to practice the student-centered lesson as "I" expected. In this process, "I" found the necessity of pre-service teachers' self - understanding and their improvement of change capacity.

43313**Catch and Hunt Me Table (A Multi-Sensory Instructional Materials)**

Ma Ronila Balanquit, Philippine Normal University, The Philippines

Educators know that learners learn in different ways. For the instruction to grasp most of the learners, the teaching method must be related to the child's individual learning preference style. Considering that there is no single method of learning appropriate for all children, it is, therefore, necessary that teachers should have a variety of strategies and approaches from which to select and will be attractive and interesting to all learning preference style. The multi-sensory teaching method is the most effective teaching method to use in a good number of learners. It supports learning by engaging students on various levels. It encourages learners to use more than one sense at a time that leads to a productive learning if properly guided by the teacher. This paper talks about using "Catch and Hunt Me Table" (Multi-sensory Instructional Materials) that was personally developed by the researcher and appropriate for primary learners. This will be helpful for the teachers by providing strategies and approaches that engage the learners in learning. It is also helpful to those teachers who were having a trouble to get the attention and interest of their pupils. Schools' administrators can also adopt the strategies with minimum modifications that will be suggested by the researcher. The instructional materials developed by the researcher can also be done at home with parent's supervision and also an effective bonding time while playing at home.

43263**Interdisciplinary Educational Projects in Automotive Engineering Classes**

Israel Ibarra Solis, Instituto Politécnico Nacional, Mexico

This study shows the techniques used to evaluate and work along with classes in automotive manufacturing engineering based on an interdisciplinary method. The method is related to the evaluation through competency-based learning, although is not a new method worldwide, in the engineering education in Mexico is gaining popularity. The evaluation is centered in the flexibility, the continuous education, and the professional formation of the student by working in a context of manufacturing processes. The method deals with small groups, so the students would be ready for the upcoming challenges that they might face in the manufacturing work field. Among the results, we found that students are learning faster, and that collaborative work is promoted at different levels of understanding. As a conclusion, the results are measured in a qualitative and quantitative manner to identify the competencies that need improvement to adequate the learning in the appropriate industrial context.

Saturday Session II: 11:15-12:45

Room: *To be Announced in Final Schedule*

Stream: Questioning for Innovation and Entrepreneurship: Curriculum Design and Student Learning

Session Chair: *To be Announced in Final Schedule*

44035

Changing the Monolith: Barriers and Opportunities of Entrepreneurialism in Higher-Ed

Brian DeLevie, University of Colorado–Denver, United States

In 2013, The Progressive Policy Think Tank concluded the twentieth-century models of higher education were broken and that to survive "a deep, radical and urgent transformation is required." In 2018, the prescience of that statement is being reflected in universities via ever-tightening budgets, decreasing available student populations, and ever-increasing student costs and debt. To combat these forces universities are trying a myriad of options including alternative credentialing, MOOCs, and professional certificates. Underpinning these efforts has been a drive towards greater entrepreneurialism and a search to develop new ways to transform and infuse classrooms with more business-like cultures (Hyslop-Margison & Leonard, 2012; Polster, 2005; Milley, 2016). Despite the well-documented economic, cultural and societal challenges facing universities, the many logistic, administrative and political barriers to change are both complicated and personal. This paper looks holistically into the fundamental questions and challenges academia faces including: How can entrepreneurial approaches be encouraged and used to break down disciplinary silos (and associated systems of faculty governance, merit, and tenure) to create creative, innovative and entrepreneurial approaches of research theory, practice, and pedagogy; how can universities use their prestige and teaching acumen to strengthen ties to the private sector and create pipelines that lead towards student enrollment and employment; what are the conflicts with the stated and perceived mission of universities and how can the risk-averse nature of university administration be changed to encourage faculty and students to fail with purpose?

43049

Set Up a Bridge Between the Classroom and the Real World

Jui-Feng Ho, Far East University, Taiwan

Jung-Chun Liu, Far East University, Taiwan

Ling-Chin Ko, Kun Shan University, Taiwan

The research project intended to integrate the realities and theories of service learning, training methods and curricula, interdisciplinary research results in Industry-university cooperation, betterness education, and social expectations to create a new pedagogical praxis research platform. For the new generation with a fierce competition, how to enhance the ability to survive is an important issue in the future. There are seven competitiveness factors of communication skills, problem-solving ability, planning ability, information analysis ability, ambition, time management ability and leadership. Participating students can increase the professional skills through actual participation in the service learning process in the future world. Through service learning of activities enhance children knowledge and information technology applications of life in rural primary school. Service learning emphasizes the concept of "learning" combined with "service", and enhance each of these skills with professional coaching and curriculum design, service learning projects, and specialized studies. In the service learning process, different job attributes can train different abilities. Training and review of results will be conducted through various mechanisms and rotation of works. The researchers will observe whether there is a difference in the ability of seven aspects through these processes. Before doing this project, the learner will be asked to fill in a competency analysis questionnaire.

The learners need to fill in the working log in the service process. After the service is completed, the learners will fill in the service experience and questionnaire. The final data will be analyzed by one-way multivariate analysis of variance (MANOVA).

44260**Student Learning Through Self-Directed and Experiential Inquiry**

Jun Hong Ha, Korea University of Technology and Education, South Korea

Moon Jeong, Korea University of Technology and Education, South Korea

Students learn best when they have self-motivation and relevant experience of what they wish to learn. This study examines students' learning achieved through university extracurricular programs (named as "Student-directed 2030 Future Research Activity", the 2030 project hereafter), that promotes participants' full autonomy on the selection of research themes and following research activities. The 2030 project is designed to develop multi-dimensional learning outcomes for engineering students who are faced with new social demands for the future. By observing students' self-efficacy developed during program participation, we first expect to find out that students enhance their research capacities such as critical thinking skill and interdisciplinary inquiry. Secondly, we investigate how much students' research activities (including a visit to overseas cutting-edge sites of innovation) affect students' learning (e.g., soft skills, global mind). Last but not least, it is meaningful for us to introduce that this research finding can contribute to university education that aims to nurture future talents who can lead innovation and entrepreneurship.

Saturday Session II: 11:15-12:45

Room: *To be Announced in Final Schedule*

Stream: Globalisation, Internalisation of Education and Impact on Student Learning

Session Chair: *To be Announced in Final Schedule*

44271

Development of Higher Education Systems and the Impact of Neoliberalism on Higher Education Reforms

Marc Brazzill, Waseda University, Japan

There is a growing consensus in the field of political science that developed, or massified, higher education systems are classifiable into distinct types that reflect the broader welfare regimes of each country. However, there is a large body of higher education research that argues that higher education systems are converging upon a neoliberal type, which is not yet reflected in the political science literature. This paper seeks to reconcile these two positions and explain why such contradictory theories have developed by looking at both the development of higher education systems in the post-war period and subsequent systemic reforms that have been identified as neoliberal. I argue that middle-class demand has driven the expansion of higher education systems and that variation in the style of higher education systems is a result of differential electoral importance of the middle-class and differences in which parties the middle-class support in each country. I also argue that subsequent neoliberal reforms are path dependent on these pre-existing types, which partially explains the contradictions between political science and higher education research, and note the importance of differentiating between two distinct aspects of neoliberal ideology: 1) budgetary and fiscal responsibility, and 2) competitiveness in the face of a globalized economy. In order to illustrate these ideas, this paper provides an in-depth look at the cases of Japan and the United Kingdom, which developed into very different systems in the post-war period but have since shown slight convergence on the back of reforms.

43014

New Contexts and Cultures: Exploring Faculty Members' Sense of Fit in the Internationalized University Classroom

Annette Bradford, Meiji University, Japan

In an era of significant international student mobility and expanding internationalization, higher education classrooms in Japan are becoming increasingly diverse. There is a growing need to find new ways of thinking about teaching and learning. Assumptions about so-called "Western" and "non-Western" teaching and learning approaches and "local" versus "international" students are not adequate for acknowledging and addressing the varied backgrounds, values, and expectations that now come together in our classrooms. This presentation conveys the experiences of faculty members in Japan as they navigate new contexts and cultures and learn to feel a sense of belonging in classrooms that are internationalizing in different ways. In-depth interviews inform the study. After highlighting common experiences among faculty members, the presentation delves deeper into the understandings of one Japanese professor as she reflects on the journeys taken travelling between cultures in her internationalized classrooms. It explores her feelings of "fit" and discomfort as she navigates different contexts, and describes the ways she approaches complex classroom situations. Session participants will learn about the challenges that faculty members encounter in their diverse and non-diverse Japanese- and English-taught classes. They will learn key strategies for adapting to new language environments and heterogenous student populations.

42806**International Partnership Strategies and Practices at 4 Case-Study Global Research Universities in Singapore and Japan**

Justin Sanders, Osaka University, Japan

As internationalization has become firmly embedded in the higher education sector, universities are learning that in order to compete, they must collaborate. International partnerships facilitate the exchange of scholars and students, research collaboration, and the ability of universities to develop new programs and offerings to students. As such, partnerships have become essential to not just internationalization efforts, but any institutional ambitions towards "world-class status". This presentation will outline the process of international partnership development at four national comprehensive research universities in two national contexts, Singapore and Japan. By using a comparative perspective, we can highlight how both national and institutional factors can affect the approach to partnerships. Beginning with an overview of the nature and extent of partnerships at each university, the presentation will discuss the rationales and strategies employed by each institution in developing, managing and leveraging international partnerships. Data for the study comes from an extensive document review of material published by each university including websites, strategic plans, annual reviews, brochures and so on. In addition, semi-structured interviews were conducted with faculty and staff leadership at each university to gain greater insight into the rationale behind particular approaches. By providing such case study analysis, this study hopes to inform other higher education institutions in their own pursuit of mutually beneficial international partnerships.

Saturday Session III: 13:45-14:45

Room: *To be Announced in Final Schedule*

Stream: Innovation, Entrepreneurship and Graduate Employment

Session Chair: *To be Announced in Final Schedule*

43247

Music as a Language of Social Movements - A Bands' Entrepreneurial Process

Hui-Yin Lin, National Yunlin University of Science & Technology, Taiwan

Chih-Ming Lin, National Sun Yat-sen University, Taiwan

As we knew, entrepreneurship is usually seen as a solution to problems in community development through community mobilization and stagnating communities are expected to return to growth. The question of what entrepreneurship is and how it emerges remains unanswered or neglected. The aim of our paper is to answer this question. To consider "entrepreneurship" that is not traditionally considered within the domain of entrepreneurship, our research explores the fields of performing arts groups. Taking the local Bands from a disadvantaged rural county in Taiwan, our research conducted with the musicians provides evidence and insight into how social impact or social value emerged upon their entrepreneurial process. A narrative inquiry conducted with the singer and the team musicians were also analysed and three themes emerged. In the end, the ambition of this article is to conceptualize how musicians use music as a language of social movements and explore its entrepreneurial process.

43421

Employability of Bachelor of Elementary Education Graduates of Bicol University

Norilyn De Chavez, Bicol University, The Philippines

Tertiary education institutions primarily aim to produce graduates who will become active and productive members of the society. This tracer study aimed to describe the profile and employability of the 2011-2015 Bachelor of Elementary Education (BEED) graduates of Bicol University College of Education (BUCE). Descriptive survey method using questionnaires, face to face interviews, consultations, and focus group discussions were used to gather data. Different factors affecting their employability and their employers' evaluation of their work performance were also discussed. Data revealed that 80.76% of the graduates are female, 87.17% were single, 40.82% came from big families with a lower level of occupations and average monthly family income of Php 10,000-20,000. Out of 343 respondents, 310 or 90.38% were employed as teachers in public and private schools and had their first job between one month to less than two years after graduation. Employers were very satisfied with their knowledge and understanding, general qualities, general and specialized skills and are extremely likely to hire other BUCE graduates. The data implied that the BEED graduates of BUCE are highly employable. The study revealed that there were factors affecting employment after graduation that should be considered in the preparation of career and curriculum enhancement programs of the institution.

Saturday Session III: 13:45-14:45

Room: *To be Announced in Final Schedule*

Stream: Questioning for Innovation and Entrepreneurship: Curriculum Design and Student Learning

Session Chair: *To be Announced in Final Schedule*

43091

Next Generation Coaching Approach in the Twenty-Second Century – Japan-Originated Coaching is the Key to Transforming

Hideyuki Sugawara, Hokkai Gakuen University, Japan

An inevitable trend, a low birth rate and growing senior population, is now proceeding toward the Twenty-Second Century in Japan. This meta-trend is generally regarded as a serious threat in the near future of Japan. Considered from the viewpoint of international business, this could be an opportunity for Japan to transform in order to adapt to the new way of thinking of the Twenty-Second Century. In the field of international business studies, as productivity rises, people engage less and less in activities related to production. Even if the population declines by 30%, the Japanese economy could still maintain its current level by improving productivity by 30%. Thus, the declining population will not necessarily influence overall economic activity. Increasing productivity is the first priority among the current policies of Japan. We still have a promising future. The Japanese have always tried to make today's vision into tomorrow's reality. One of Japan's great strengths is its long history. Many things have been tested, but only truly valuable ideas have survived over this long period of time. For example, Bushido strengthens the mental foundation of the Japanese. The teachings of Esoteric Buddhism are secret and not available to just anyone, whereas Exoteric teachings learned from books are accessible to everyone. These high levels of mentality and spirituality make it possible access to the subconscious layers and succeed in transforming people. This is the key to wellbeing in the Twenty-Second Century.

42424

Praxis Pedagogy in Teacher Education

Julie Karen Arnold, Deakin University, Australia

Brian Mundy, Victoria University, Australia

Historically in teacher education, there has been a tradition of examining practice and striving for an ideology as a basis for developing a culture of teacher education. These efforts of reflective researchers has led to an evolution of new pedagogies in teacher education models. This paper discusses the pedagogies associated with a model that focuses on praxis. Portfolio dialogue, case writing and signature pedagogy mapping are identified as central to the model and present pedagogical practices which are intended to create possibilities of orientation rather than a lineal hierarchy of outcomes for pre-service teachers. Part of this paper reports on discussions from final year pre-service teachers regarding their portfolios and considers the presence and the contributions of these signature pedagogies. New knowledge for refining planning and practice through visual modes are considered while arguing for a critical, dialogical and praxis view of pedagogy.

Saturday Session IV: 15:00-17:00

Room: *To be Announced in Final Schedule*

Stream: Driving for Innovation-centric Entrepreneurship: Management and Governance Issues

Session Chair: *To be Announced in Final Schedule*

44248

Development of Mobile Royal Thai Armed Forces Personal Information Software on Android

Neramit Archaapinun, Rangsit University, Thailand

Paniti Netinant, Rangsit University, Thailand

The purpose of this research is to development of Mobile Royal Thai Armed Forces Personal Information Software on Android. As Thai military regulations, it has determined that all military personnel of RTARF HQ must submit their updated personal information annually on their birth-date to assemble accurate information on both paper and a computer information system. Also, they can verify personal information easily as it could be accessed by themselves anywhere and anytime through the internet. The concept of development and implementation of the software has been used Rapid application development (RAD) for developing the system in many Thai military units. We use RAD to develop mobile software because it does not require a lot of time, resources, and developers to design and implement. This research paper describes the theory of Technology Acceptance Model (TAM) to use as a tool to verify the acceptance of our software requirements. The model consists of two main factors: perceived usefulness and perceived ease of use. Perceived usefulness refers to the user believing that the technology will help to improve the performance and efficiency. Perceived ease of use is defined as what extent the user to be comfortable when using the features of the technology. In conclusion, the mobile applications development are mainly to be comprehensively, effectively, easily and flawlessly to use for users of RTARF HQs. Finally, we present the overall system design of the Thai military personal information software on mobile devices. It would be a prototype of mobile applications development.

42545

A Study of Factors Affecting Doctors' Reputations from the Perspective of Hospital Patients

Chung-Yi Yen, Kaohsiung Medical University Hospital, Taiwan

Ya-Rong Liang, Kaohsiung Medical University Hospital, Taiwan

Past researches indicated that patients' perceptions of a doctor's reputation are one factor influencing their healthcare-seeking behavior. Also, it was suggested that a patient's perception of a doctor's reputation is highly related to the latter's medical skills and ethics. However, those researches only took into account patients' points of view and ignored other hospital's judgment on this issue. Therefore, the aim of this study is to discuss what constitutes doctors' reputation from the perspective of hospital patients. Their opinion on the issue is critical because it is an important source of information when potential patients seeking advice. Specifically, this study investigates the relationship between doctors' service attitude, medical skill and their reputation among hospital employees. We use a questionnaire survey method to investigate patients' responses in each variable. AMOS software is applied for empirical data analysis and research hypotheses examination. Evidence suggests that doctors' reputation is related to both their service attitude and medical skills. Results of this study have managerial implications for both hospital management and doctor's who wish to improve their reputation image.

44228**A Study of Entrepreneurial Cognitive Capability, Innovation for Environmental Sustainability and Dynamic Capability: A Case Study of SMEs in Taiwan**

Ting-Ling Lin, National Taipei University, Taiwan

Mei-Chen Hsieh, National Taipei University, Taiwan

Heng-Yih Liu, Yuan Ze University, Taiwan

How do Taiwan's small- and medium-sized enterprises (SMEs) deploy their limited resources and capabilities for environmental sustainability and related capacity building as an attempt to strengthen and build dynamic capabilities adapting to environmental changes? In view of the aforementioned issues, this study integrates Helfat and Peteraf's (2015) research and finds a systematic logic among entrepreneurial cognitive capabilities, dynamic management capabilities, and strategic changes. This study also integrates Watson, Wilson, Smart and Macdonald's (2018) research and discovers environmental innovation requires three levels of capabilities; namely, operational capabilities, management capabilities, and learning capabilities to active participation within the process of adapting dynamic capabilities to reduce the uncertainty of its dependence on external resources. Four SMEs in Taiwan were examined by case study method to analyze the development process of their entrepreneurial cognitive capability, innovation for environmental sustainability and dynamic capability building. Through data analysis, we found that SMEs' entrepreneurs in Taiwan seize opportunities by sensing external opportunities, reconfiguring resources, and integrating new resources. It creates new products and technologies that are more environmentally sustainable and friendly, and collaborates with new partners possessing common values of environmental sustainability. The implementation of this activity is a combination of new products, new processes, new business model innovations and environmental interactions. This learning process combines both internal and external competence embedded in the environment, and it takes time to accumulate with time compression diseconomy. Thus, it is hard to imitate by other companies.

42858**A Strategic Framework for 3-D Print Application and Business Model in Taiwan**

Che-Fei Chen, Kun Shan University, Taiwan

Ling-Chin Ko, Kun Shan University, Taiwan

Jui-Feng Ho, Far East University, Taiwan

In this article, the authors develop a conceptual framework for 3-D Print Supply Chain Application and Business Model that helps broaden the understanding of the 3-D Print industry and its role in enhancing and integrating manufacturing and service industries in Taiwan. After review the current literature on additive manufacturing technology Industry, that is, 3-D printing industry; the authors interviewed fifteen 3-D printing services provided firms in selected Taiwan's markets and, develop a new conceptual framework based on the need for the consumer, the supplier and the combining the requirements of applicants and consumers. The result of this study provides an appropriate business model which can help organizations to evaluate and invest in this technology to stand firm at all times.

Saturday Session IV: 15:00-17:00

Room: *To be Announced in Final Schedule*

Stream: Globalisation, Internalisation of Education and Impact on Student Learning

Session Chair: *To be Announced in Final Schedule*

44285

Students' Perceptions of Research Integration in Graduate Education

Janet Valdez, La Consolacion University Philippines, The Philippines

The shape of education changed with time as the world opened to borderless, distance, and virtual learning. The confinement of students in the four-cornered classrooms transformed to globalized educational milieu. Side by side with the structural and instructional transformations of education emerged new pedagogical principles and paradigms at all levels in the hierarchy of academic institutions. One shift included the culture of research among students, especially in higher educational institutions. The contradictory perceptions of students on research integration provided a relevant springboard on the determination of the students' perception in a certain locale, particularly at the Graduate School of La Consolacion University Philippines. It was interesting to identify the perceptions of a particular community of students on research integration: optimism on the relevance of research in the current educational trends of globalization and internationalization or pessimism posed by the fear on the hurdles and difficulty of the conduct of research.

44318

Adolescents Risky Behaviours: Classroom as Context for Interventions to Enhance Self-Regulation

Sangeeta Bhatia, University of Delhi, India

Pallavi Sharma, University of Delhi, India

Adolescence is a period of rapid change at all the three levels: physical, social and cognitive. However these changes take place at different speeds of maturity, with puberty as a hallmark of development and cognitive changes brought forth in pre-frontal cortex as slower. The emotional system shows heightened activation leading to sensation seeking, impulsive and novel behaviours, that are primarily facilitated in the context of peer presence. Decision making continues to improve but takes up to the early adulthood period in consolidation and complex thought thereby giving better emotional regulation only in early adulthood when the frontal lobes are fully mature. Surveys show that risk behaviours are predominantly a feature of this age and social media has only added on to addictive behaviours. The present research focussed on the adolescent in the classroom and through focus group discussions attempted to study the frequency of risky behaviours and the beliefs underlying those (using narratives, interviews). The objective was to impart techniques such as mindfulness that has been shown to be a powerful technique for improving emotional regulation. This study was undertaken on 100 undergraduate students, with the aim to create peer educators and facilitators in adolescents through creating awareness of bio social underpinnings of behaviours and the negative implications for their lives and using mindfulness as a tool for enhancing regulation. Findings have implications for increasing relevance for learning in higher education that extends beyond text book content. The classroom is the readily available context for a teacher and educators to make a positive change in young lives and create mature adults who would meaningfully contribute to their societies.

42908**Cognitive and Non-Cognitive Factors of the Academic Performance of the UM Digos College Students**

Viola Buenaventura, University of Mindanao, The Philippines

Emma Ceballo, University of Mindanao, The Philippines

Ryan Dale Elnar, University of Mindanao, The Philippines

This study verified the predictive value of cognitive and non-cognitive factors to students' academic performance. Two standardized measures were utilized and administered among 351 college students enrolled in the different majors at UM Digos College. Results reveal that the involved participants obtained an average level of academic performance. The students also manifested average cognitive abilities while their non-cognitive results were high in terms of academic interest but average in study methods and low when it comes to academic drive and study anxiety. Multiple regression analyses revealed that cognitive and non-cognitive factors significantly predicted the academic performance of the students. Study results supported the development of an academic mentoring program.

43960**An Analysis of the Free Speech - Hate Speech Conundrum at American Universities**

Denis Binder, Chapman University, United States

The past couple of years has witnessed growing conflicts between free speech and "hate" speech on American campuses. Free speech is protected by the United States Constitution at public, but not private, universities. Academic speech is protected by the concept of Academic Freedom at both private and public universities. However, faculty, students, and non-university related persons often object to speech they vehemently disagree with. They may demand trigger warnings in the classroom or comfort zones within the university. They may object to speakers because of their political views, labelling it "hate speech," which they personally find offensive. Threats of violence create a "heckler's veto." Controversial topics include Gay Rights, abortion, gun control and the NRA, affirmative action, race, gender, capitalism, conservatism, and White Privilege. The blowback against speakers can occur on the campus or through social media and the internet. The American Association of University Professors (AAUP) struggles to protect the academic freedom of professors from off-campus social media and political attacks. The question is whether universities will continue to open students' minds, or close them, by encouraging or discouraging the free exchange of ideas. The risk is that universities will no longer be a cathedral of learning with the free exchange of ideas.

Sunday Session I: 09:00-11:00

Room: *To be Announced in Final Schedule*

Stream: Innovation, Entrepreneurship and Graduate Employment

Session Chair: *To be Announced in Final Schedule*

43261

In-Building the "Triple-Helix Entrepreneurs" in China: Experiences and Reflections of Students in University Incubators

Dian Liu, University of Stavanger, Norway

The creative construction of university incubators as the innovation engine is a mirror image of the broad set of Government-University-Industry interaction in a triple-helix research context. Chinese university incubators have developed significantly during the past decade, attracting a rising population of students; involving expanding networks from government, industry and academia; aligning growing numbers of heterogeneous R&D entities; transforming technology into an array of firms; meanwhile releasing the harsh graduate unemployment in the regional labour market. Despite the increasing scholarly work on the general growth of business incubators and start-ups, little is known about the subset of enterprises with university students as the major actors. Moreover, most studies investigated the resources and operating models of incubators with survey data. However, such student entrepreneurs' own experiences, attitudes and views remain a myth, as well as the factors and processes that shape their perspectives. Therefore, this study provides empirical illustrations of how "incubation" carried out in intensified Government-University-Industry interaction from the students' perspective. Drawn upon the interview data with 25 university entrepreneurs as users of the incubators, this study focuses on, first, the experiences and attitudes of the students in their idea formulation process, and second, the role of the different stakeholders in facilitating the idea formulation. The aim of this article is to contribute to the understanding of university incubators in China from the perspective of students.

42749

Graduates Surveys: Accelerating Graduate Employment and Understanding Employability

Fatma Said Al Hajri, Ministry of Higher Education, Oman

Graduate Survey 2017 is the second national graduate survey conducted in Oman in which 25,551 higher education graduates completed the career-tracking questionnaire. The findings indicated that there is a significant difference in graduates' employment according to their gender, qualification and training. In general, female graduates were less employed across all fields of study than male graduates were ($\chi^2=4936.6$, $df=4$, $Sig=0.00$). Less female employment aggravates the gender gap in the demographics of job seekers; females currently constitute 57.8% of the total number of jobseekers and 78% of the total number of job seekers with academic qualification. The results have also indicated a significant difference in employment between trained and untrained graduates. There was a significant difference in graduate employment according to their qualifications ($\chi^2=372.9$, $df=16$, $Sig=0.00$). It was found that graduates with a diploma are more employed in the private sector than graduates with a Bachelor's Degree. Similar to previous studies, Graduates' employment significantly differed by their field of study ($\chi^2=1924.1$, $df=44$, $Sig=0.00$); the employment rate of graduates with qualifications in education, health followed by engineering is higher than the employment rate of other graduates. Document analysis of national workforce policies (e.g., Omanis and non-Omanis wage policies, outsourcing, crowdsourcing and female work policies), employment practices, and structure of workforce has indicated that these policies and practices have adversely affected the graduates' employability.

44450**Profiles for Future Entrepreneurs: Implicit Entrepreneurship Theory**

Jie Hao, Tsinghua University, China

Lei Wang, Tsinghua University, China

Wen Wen, Tsinghua University, China

Hamish Coats, Tsinghua University, China

Implicit entrepreneurship theory (IET) is defined as an individual's personal assumption about the characteristics and behaviors that differentiate entrepreneurs from others. Goals of this research include identifying the content and structure of IET and establishing a preliminary nomological network of individuals' implicit entrepreneurship theory by examining its consequences. This study included 849 participants across three studies. Results provide evidence for reliability and validity of the IET scale. IET is represented by a first-order structure (risk and uncertainty tolerance, continuous passion, proactive networking, and challenging goal). One's IET predicted his or her entrepreneurial self-efficacy. Future research and implications are discussed.

44284**Success in the Industrialization Era to Innovation in the De-Industrializing Era in Japanese Higher Education**

Shinichi Aizawa, Chukyo University, Japan

This paper presents both quantitative and qualitative aspects of Japanese educational expansion and higher education reform since the 1990s. Higher education was not universalized because the Japanese government regulated the construction of new colleges between the late 1970s and the 1980s. This era of government-regulated tertiary education coincided with Japan's economic height, globally. Social scientists worldwide focused on Japanese school education because education was considered the most important factor in economic success. Following deregulation and slackening competition, the Japanese enrollment rate for tertiary education expanded dramatically from 30% to over 50% between 1990 and 2010. Essentially, Japan entered the universal stage in higher education. Through this universalization process, Japan has had to face globalization and de-industrialization. This paper explores the possibility of innovation and creation of new value in contemporary Japanese higher education through an empirical analysis.

Sunday Session I: 09:00-11:00

Room: *To be Announced in Final Schedule*

Stream: Driving for Innovation-centric Entrepreneurship: Management and Governance Issues

Session Chair: *To be Announced in Final Schedule*

44210

The Cultivation of Innovative Talents in the Universities and Colleges Based on the Enlightenment of Darpa

Huafeng Zeng, National University of Defense Technology, China

Zhenzhen Jia, National University of Defense Technology, China

As the world leader of the national defense Sci & Tech innovations, the mission of DARPA (Defense Advanced Research Projects Agency) is to maintain the technological leading position of the United States, and to prevent potential opponents beating them. Since its establishment in 1958 with this belief, DARPA has made remarkable achievements in technology innovation that laid the global military advantage directly. In the field of talent training, DARPA's unique cultivation of innovative talents is also worth learning. Firstly, this paper introduces the cultivation of innovative talents in DARPA on the basis of relevant theories. Secondly, it clarifies the connotation and features of innovative talents including "professional-model", "Interdisciplinary-model" and "switching-model" innovative talents. Thirdly, it makes a discussion from the cultivation of innovative talents framework, with the innovation of DARPA. On this foundation, the research conclusion on the cultivation of innovative talents in the universities and colleges is done, and the suggestions on innovation and entrepreneurship education in China will be put forward.

43260

The EU and China: a Renewable Energy Community in the Making? Interconnectedness, Collaboration, Interregional Spillover Effects

Thomas Sattich, University of Stavanger, Norway

Duncan Freeman, College of Europe, Belgium

Daniel Scholten, Delft University of Technology, Netherlands

The European Union's (EU) and China's energy policies have both internal and external effects, and are dependent on policies adopted by other global energy actors. However, little is known about the policy interdependence of both blocks in this field. In order to evaluate the EU's and China's strategic options, this paper provides a systematic analysis of the interactions between European and Chinese energy policy, mediated across different political and economic channels. A literature review briefly sums up and evaluates the state of the art in this field of research. Subsequently, the internal energy policies of both blocks are being studied. In this regard, the respective regional context is central, as both EU and Chinese energy policy reflect the specific political and economic conditions of their geographical area. The energy policies of both blocks are, therefore, discussed against their regional background. Since much of the recent policy discussions in this field concern the environmental impact of the use of fossil fuels, the focus of this paper lies on policies to achieve sustainable economic development such as the promotion of renewable energy. Furthermore, the policy interaction between the two blocks is addressed; based on available data on EU-Chinese dealings in the field of energy, this section discusses the policy interaction between the two blocks via different areas of international climate and sustainability discussions as well as the renewables sector. Finally, the strength of the interregional policy spillover is discussed.

43922

Design Thinking by Contrasting Contexts: How Municipalities Can Look in Unexpected Places for Exploring Innovative Solutions to Emerging Challenges

Kristiane Lindland, University of Stavanger, Norway

Kristin Scharffscher, University of Stavanger, Norway

Municipalities continuously need to adapt to rapidly changing circumstances. In order to handle changes in citizens' needs and demands as well as demographic changes linked to factors such as migration, the public sector increasingly seeks new, innovative solutions. In the Scandinavian countries, co-creation between researchers and the public, private and volunteer sectors has been hailed as a universal organizational recipe for meeting these emerging challenges. However, recent research on this topic indicates that finding practical ways of doing so in a municipal context is challenging. Municipalities often copy solutions from similar municipalities without thoroughly exploring their own needs. Through design thinking, we suggest that municipalities study the solutions of others experiencing the same challenges, but in radically different contexts. Not for them to blueprint the solutions as such, but to explore their own situation from a completely different angle. Concretely, we look at innovative approaches applied in a poorly resourced municipality in Haiti when building and securing societal infrastructure, and explore how these strategies would work in a Norwegian municipality having to re-design their municipal services. We propose that precisely because of the very different contexts, this approach can challenge our own presumptions and help us learn more about the context we think we know from A to Z. With this paper, we aim to contribute to the development of practical methods for public and social innovation, and to a more nuanced understanding of the challenges of co-creation in the public sector.

43919

Informal Capacities for Resilient Communities: The Significance of Innovation and Unconventionality in Haiti and Norway

Kristin Soerung Scharffscher, University of Stavanger, Norway

Kristiane Marie Fjaer Lindland, University of Stavanger, Norway

Although still an emerging concept, resilience can be defined as the ability to return to normality upon unexpected, extreme events that overwhelm regular coping capacities. As such, resilience can either mean the stability or reliability of a community, or a community's ability to change and adapt to rapidly changing and/or unprecedented circumstances. The latter approach requires attention to the community's ability to make use of its entrepreneurial and innovative capacities. Focus on such resilience capacities, rather than vulnerability, may generate new knowledge about informal coping mechanisms in communities marked by poor access to resources. It may also guide us to under- or unacknowledged mechanisms in communities marked by apparently well-functioning contingency services. In this paper, we present two sets of data that represent each of these examples. Our aim is to explore unlikely connections between resilience theory, informal capacities in the shape of innovation and entrepreneurship, and disaster risk reduction. In a small Haitian town, a newly elected mayor set about reconstructing critical infrastructure with unconventional means. For instance, he organized crowd-funding on social media to finance the paving of city center streets as a hurricane protection feature. Upon redesigning its urban centre, a Norwegian municipality came to re-interpret the usefulness and value of an old hydro-power station for providing both flood resilience and realizing new, multi-source energy solutions. Our initial findings indicate that unconventional innovation and entrepreneurship capacities may provide valuable information on how to build resilient communities in a world where the climate is becoming increasingly unpredictable.

Sunday Session I: 09:00-11:00

Room: *To be Announced in Final Schedule*

Stream: Globalisation, Internalisation of Education and Impact on Student Learning

Session Chair: *To be Announced in Final Schedule*

42910

Developing Peer Reviews Skills in EFL Writing

Steven Charles, Nagoya University of Foreign Studies, Japan

The use of peer review in EFL writing helps develop analytical skills and a greater sense of agency in foreign language students. Many EFL students lack peer review skills and so teachers need to encourage these skills in their students through the use of rubrics, or component-based analysis, and checklists of common student errors. Peer review skills allow students to become better writers through increased exposure to the writing of others as well as pushing students to take on a more teacher-like role in assessing writing. In addition, increasing peer review in the writing classroom demonstrates a more social nature of writing, rather than simply performing for a teacher. The peer review process develops a more student-centered classroom as students create greater student-to-student interaction through, in this case, a three-draft cycle. This research project tracked a second-year writing course at a university in Japan as the teacher and students went through two rounds of peer review over the course of three writing assignments. This project seeks to demonstrate the development of peer review skills through the use of a variety of materials and document the students' perceptions of both teacher and peer feedback.

42843

Listening Comprehension Difficulties of College Students: Basis for Remediation Strategies in the Classroom

Cecilia Calub, Tarlac State University, The Philippines

Francelle Calub, Tarlac State University, The Philippines

Rosalina Garcia, Tarlac State University, The Philippines

Leodivina Tagama, Tarlac State University, The Philippines

This is a descriptive research that gathered quantitative as well as qualitative data on the listening comprehension difficulties frequently experienced by selected college students enrolled in the College of Education. Results of the investigation reveal that the students often experienced difficulties in listening to aurally-presented texts due to the physical setting that is noisy and listening aids/materials/equipment that have problems with the volume or the quality of sound. They sometimes had problems with: 1) the listening comprehension process; 2) the texts' linguistic features; 3) concentration; 4) psychological characteristics pertaining to their interest, attitude towards the text, and their confidence; 5) the listener; 6) the speaker/reader; 7) content of the text. Thus, a list of appropriate strategies was proposed to remediate the difficulties experienced by the students when listening to aurally-presented texts. Based on the findings several recommendations were given. Among these are: 1) Further studies should be extended to cover the students majoring other courses (e.g., Physical Education, Mathematics, Social Studies, Filipino); 2) Conduct research on the possible reasons for the listening difficulty that signal the presence of another problem such as ear infection or an attention deficit; and 3) Apply remediation strategies proposed in this study.

43226**What Does an Attendance and Engagement Policy Tell Us About Contemporary Transnational Higher Education?**

James Lee, Bath University, United Kingdom

This paper considers an Attendance and Engagement policy introduced by a Joint Venture university in China. Universities around the world have developed new models of education in order to meet the needs of a growing internationally-mobile student body, and there is a need to demonstrate that these institutions can provide education of a suitable quality. In this environment, the concept of student engagement has become increasingly prevalent. Universities with highly-engaged students can market themselves more effectively to prospective students and thus consolidate their position within global higher education. A “What’s the problem represented to be?” framework (Bacchi, 2009) is used to consider the ideas which underlie the introduction of this policy, to examine closely the value of the policy, and speculate on its potential implications. The analysis notes that while the policy purports to address engagement, it is much more clearly focussed on student attendance, thus acting as a way for the university to solidify its power structures and protect itself against student (i.e. consumer) dissatisfaction. The increased use of technology as a tool for implementing the policy is also highlighted and evaluated.

44292**University English Writing Training for Creative Industries and Entrepreneurship**

Anna Wing-bo Tso, The Open University of Hong Kong, Hong Kong

With the growth and development of entrepreneurship in cultural and creative industries in the market, more and more tertiary institutions in Hong Kong are now offering bachelor’s degree programmes in media design, creative advertising, photographic art, animation, and so on. The aim of this paper is to discuss how a traditional one-size-fits-all generic University English writing course for freshmen can be redesigned to help creative arts students acquire the writing skills they need for becoming entrepreneurs in the cultural and creative industries. According to scholars of new literacies (Gee, 1996; Russell, Lea & Street, 2009), writing is a socially situated activity in which the writer needs to get actively involved in the process of meaning-making and identity forming. In order to train students up as entrepreneurs in the creative industries, English language teachers must first have a good understanding of the literacy practices of their students. For example, instead of merely improving students’ grammar and vocabulary, English teachers should get themselves familiarized with the various professional text types that are commonly used in the creative industries, such as the artist statement, exhibition description, press releases, journalistic material, and so forth. They should also work closely with the subject teachers to create a literacy environment for the creative arts students to cultivate their socio-cultural sensitivity and entrepreneurship. In this presentation, I will explore how the English writing course at The Open University of Hong Kong may be set to enhance entrepreneurship among students studying creative arts and design subjects.

Sunday Session II: 11:15-12:45

Room: *To be Announced in Final Schedule*

Stream: Promoting STEM and the Role of Value in Education

Session Chair: *To be Announced in Final Schedule*

43501

Teachers' Perceptions of Immersive Virtual Reality System for Field Trip Learning

Kun-Hung Cheng, National Chiao Tung University, Taiwan

This study aimed to understand what teachers consider that the role of immersive virtual reality (VR) system with a head-mounted display (HMD) play in their teaching. Their expectation of the applications and their utilization of instructional strategies were also explored. Specifically, this study explored 19 teachers' perceptions of immersive VR system for field trip learning from four dimensions, including: 1) usability evaluation; 2) system and content design; 3) learning influences; 4) instructional strategies. These teachers were interviewed after using a VR system, namely "Google Expedition." The qualitative data were analyzed through phenomenographic method. The results showed that, in the dimension of usability evaluation, there were four categories generated which are language restriction, hardware and network problem, learning content, and less interaction. In the dimension of system and content design, there were four categories generated which are scaffolding, micro-content design, local content design, and system authoring. In the dimension of learning influences, there were four categories generated which are increasing presence, fostering learning motivation, understanding abstract concepts, and active inquiry learning. In the dimension of instructional strategies, there were five categories generated which are the advance organizer, course extension, learning evaluation, teamwork, and role-playing. The findings of the categories could be the basis to develop immersive VR systems for field trip learning in the future. Furthermore, this study proposed that the categories could be elaborated to form indicators for the system evaluation.

43029

The Common Edible Shellfish Recognition System Applying Laser Measurement

Mei-Jin Wang, Kun Shan University, Taiwan

Ling-Chin Ko, Kun Shan University, Taiwan

Yuan-Tsun Chen, Kun Shan University, Taiwan

Jer-Min Tsai, Kun Shan University, Taiwan

Yi-Ling Chen, Kun Shan university, Taiwan

Image recognition has been widely applied to sorts of fields. Nevertheless, the most common characteristics of image recognition, such as color, corner and texture, are liable to be affected by illumination and the light of background leading to bias the recognized consequences. In recent years the technology of three-dimensional scanning has developed increasingly mature which could precisely measure the contour of fixed-shape objects. We take the three-dimensional contour as characteristics in the project. The comparative sample which will be used as for recognition was scanned every 1 millimeter from the leftmost to the rightmost in order to establish the three-dimensional object database, besides we sampled 540 dots for each scanning line. In order to shorten the testing time, we merely scanned two scanning lines while doing testing. The edible shellfish was taken as example in the research so we examined the characteristic for recognition feasibility. There were nine edible shellfishes used for the experiment. Each category has individual thirty samples. We take leave-one-out for recognition mechanism that the rate of recognition could reach 89.69 and the average recognition time was 5 seconds. The three-dimensional scanning is a new option for characteristic capturing. Furthermore, we will do our best to continue increasing the rate and speed of recognition to improve the practicality in the future.

44295**Computer Programming for Non-CS Majors: A Review**

Tsung-Che Chiang, National Taiwan Normal University, Taiwan

As artificial intelligence leads the fourth industrial revolution, human-machine collaboration has been recognized as an emergent ability to develop. Computer programming is believed to be one part of the human-machine collaboration abilities, and it starts to be included in K-12 and university-level curriculum in many countries recently. In the universities, computer programming is taught in introductory courses and general education courses for non-Computer-Science major (NCS) students. This creates the opportunities but also challenges for CS faculty to design courses, teach, and evaluate NCS students. It is important for CS faculty to know how NCS students feel about programming, what they want/need, and how to teach them. In this paper, we review recent studies on computer programming education for NCS students. We summarize the research findings in the following aspects: 1) the role of computer programming – opinions on why and why not computer programming should be taught to NCS students; 2) perception and learning factors – how NCS students look at programming and what factors may affect the learning results; 3) course design and experience report – what topics are included and whether the courses are successful; 4) pedagogy and teaching tools – how programming is taught; 5) evaluation and metrics – how the courses, pedagogy, and tools are assessed; 6) adopted languages – which programming languages are used in the courses. This review would help researchers to know the state of the arts and provide useful information for instructors who are going to teach programming to NCS students.

Sunday Session II: 11:15-12:45

Room: *To be Announced in Final Schedule*

Stream: Questioning for Innovation and Entrepreneurship: Curriculum Design and Student Learning

Session Chair: *To be Announced in Final Schedule*

43473

The Effect of Project-Based Learning Using Cloud Computing to Enhance Collaborative Skills

Siripon Saenboonsong, Phranakhon Si Ayutthaya Rajabhat University, Thailand

Learning by doing is an ideal key factor for acquiring knowledge of people through practice from their own experiences. It would introduce a beneficial outcome to students as the learning ability. Thus, this study investigated the effect of combining a Project-Based Learning (PjBL) with Cloud Computing on students' collaborative skills in an undergraduate course. Based on the PjBL, the model of learning and teaching was designed with seven steps using the cloud computing including six components as a tool for learning management and organizing the PjBL activities to increase motivation and collaborative learning. Thirty-three undergraduate students who registered a Computer Graphic course on Computer Education were incorporated to work as groups and required to complete the PjBL project. The students were assigned to create projects using tools on the cloud computing. The teacher acted as a facilitator and provided the students with a good learning environment. Results indicated that the learning and teaching method provided a positive impact on the development of collaborative skills.

44211

The Construction of Innovation and Entrepreneurship Education Mode in Colleges and Universities From the Perspective of AI

Ai-hua Yang, National University of Defense Technology, China

With the development of AI (artificial intelligence), the traditional innovation and entrepreneurship education exposes some "short boards" that can't adapt to the development of technology and market demand. On the basis of defining relevant concepts, the paper analyzes the problems existing in the traditional innovation and entrepreneurship education in detail. Then, it proposes to construct an innovation and entrepreneurship education mode of colleges and universities from the perspective of AI. Last but not least, it makes a discussion from four aspects of educational ideas, curriculum design, teaching methods and student learning in the era of AI, which will certainly have a profound theoretical and practical guiding significance. On this foundation, the research conclusion on building a scientific innovation and entrepreneurship education mode in colleges and universities, so as to do better in innovation and entrepreneurship education and accommodate student development to the demand of the development of technology trend.

44298

Teaching Tomorrow's Digital Innovators and Entrepreneurs

Konrad Tollmar, KTH – Royal Institute of Technology, Sweden

EIT Digital Master School is a two-year postgraduate programme in computer science and information technology, with a focus on innovation and entrepreneurship (I&E). The programme is built upon a new set of learning experiences that we argue is important to excel I&E in ICT. These include mobility and networking across digital industries, and a mixed curriculum offering an advanced ICT major and capstone courses in an I&E minor. To offer mobility and networking the programme is part of a pan European collaboration among 20 Universities that all provide a similar curriculum. The students study hence one year

at an "entry" university and one year at an "exit" university in two of EIT Digital's hot spots around Europe (ie Stockholm, Berlin, Paris, London, etc). The I&E Minor includes standardized capstones courses for all universities, these are: 1) The business development lab course gives hands-on experience on business development based on a design thinking model; 2) The Summer Programme serves as a community event and enabling interaction with business partners; 3) The I&E minor thesis and a shorter internship in an advanced ICT company relates to and completes the traditional technical thesis. This talk presents a brief description of the programme and the assessment results. The assessment results indicate that students appreciate the mobility and networking and mix of a ICT Major and I&E Minor. However, teaching I&E courses in an engineering curriculum provides also challenges that need to be addressed.

Sunday Session II: 11:15-12:45

Room: *To be Announced in Final Schedule*

Stream: Globalisation, Internalisation of Education and Impact on Student Learning

Session Chair: *To be Announced in Final Schedule*

44268

The Effects of Long-Term Study Abroad on Second Language Identity: The Case of Korean International Students in Australia

Dhanisa K. Miftahul Huda, Macquarie University, Australia

In this globalisation era, the number of people studying abroad is growing rapidly. The context of study abroad in the construction of one's second language identity itself is particularly important. As for the majority of learners who are studying abroad, their efforts to engage and interact in their second language are creating natural effects in the construction of their second language identities. Sato (2014) assumed that study abroad with longer duration could lead to a more intensive experience which affects the construction of learners' second language identities differently from the shorter period. Based on that assumption, this study is discussing second language identity in a long-term study abroad context; specifically, second language identity amongst Korean international students in Australia. The method used in this qualitative study is a narrative inquiry and for triangulation purpose, a combination of three sources of data collection is used: 1) self-reports about English language learning experience in Australia written by participants; 2) one-on-one semi-structured interviews; 3) in-class observations. Focusing on the outcomes on participants' second language competence with personal and social identity, it was found that even though all participants claimed to have developed something in their long-term SA experiences, not all participants were positively affected by it. This indicates that study abroad, despite all the positive outcomes that many people believe, is not always a good thing for learners.

42871

Studying in Between Two Systems: An Exploration of Chinese Students' Learning Experiences in China-Australia Joint Programs

Kun Dai, University of Queensland, Australia

Set against globalization and as an expression of it, transnational higher education (TNHE) has become an important part of the Chinese educational higher education (HE) system. Research has widely investigated macro topics, for example, policy and developmental history of Chinese HE. However, limited studies have explored Chinese students' learning experiences in TNHE, especially in joint 2+2 programs. This study aimed to investigate this under-researched topic and interviewed twelve Chinese students who studied in China-Australia joint programs. Based on analysis of students' learning narratives from the theoretical perspectives of diaspora and space and place, this research found that the joint 2+2 setting created an in-between or third learning space for students, many of whom became in-between learners. The contours of such space were shaped by several cross-system academic inconsistencies in teaching, assessment, usage of internet-based technology and university culture. This positions joint 2+2 program students in a unique, in-between learning pathway that demands constant negotiations between different HE systems and cultures. These academic inconsistencies indicated that articulations between Chinese and Australian universities in such programs may still be only on a surface level.

42570

Globalization and Innovation of Higher Education: Preparing Globally Work Ready Allied Health Care Graduates

Indu Singh, Griffith University, Australia

Global education requires collaborative, standardized and flexible teaching pedagogies fit for purpose to each local community. International development and globalization of sustainable teaching and learning strategies in higher education result in a work-ready universal workforce with good soft and human skills. Educational initiatives and use of technology are essential to train self-directed lifelong learners with transferable skills preparing graduates for technical, professional, entrepreneurial and multinational leadership roles in future. The emerging economies are based on knowledge as a key factor, and industries demand highly trained employees in the fast-changing up-to-date health industry. The focus of this presentation is our mixed-mode innovative strategies being used to train globally work ready allied healthcare graduates with a trial to incorporate entrepreneurship and providing modern day employability attributes. Our teaching strategies, resulting in a very high employment rate before graduation with global employers and low attrition rate, include work-integrated learning, problem-based learning, inter-professional learning, teamwork with group discussions leading to peer review, reflective practice and self-directed learning. This is incorporated within horizontal and vertical scaffolding of teaching material across courses and subjects to prepare interdisciplinary graduates for the very liquid workplace of the world today. This presentation is our case study providing evidence of successful outcomes using these tools. To conclude audience will be invited to share their opinions, strategies and effective pedagogy to our challenges in evaluation of effectiveness and incorporation of sustainable entrepreneurship for increasing healthcare students aspiring to be self-employed innovators in the international healthcare industry.

Virtual Presentations

44287

Using Bean Counting Activity to Teach Binomial Distribution

Owen Tang, The Hong Kong Polytechnic University, Hong Kong

Brian Sun, The Hong Kong Polytechnic University, Hong Kong

Since the 1980s, many academics have engaged in the research of statistics education. The underlying reason is that there was an increasing number of students taking introductory statistics courses, which stimulated the need to improve the teaching of statistics courses. Some researchers have suggested that teachers should focus more on concepts by designing more active learning activities. On the other hand, a substantial number of teachers have using the traditional lecture method. Some studies have found that an active learning technique has correlated with more positive attitudes or higher test scores but some studies showed a detrimental effect when using active learning methods in teaching business statistics. This paper reports the result of an educational experiment by dividing a class of 70 students ($n=70$) into two tutorial sessions (1-hour duration). One tutorial class was taught entirely with a lecture about the concept of binomial distribution. The other tutorial class was taught by using a minimal teacher-centered activity. At the beginning of the next tutorial class, an identical closed book exam of 20 minutes was conducted, and students' results on exams were analyzed. The result suggested that the activity session produced a better score both on conceptual questions and on application questions. However, one defect about this educational experiment is that the author did not control other factors that may affect the exam performance, such as the impact of previous GPA performance of the students in the two groups.

44209

Debunking Assumptions in Education: The Relationship of Teacher Education and Student Performance

Eric Smiley, King Faisal University, Saudi Arabia

Preston Dixon, King Faisal University, Saudi Arabia

Scott Donald, King Faisal University, Saudi Arabia

Questioning the assumption that more degrees produce a better teacher, this paper reviews teacher ($n=54$) and student ($n = 1022$) performance from two years of data at King Faisal University's Preparatory Year Deanship English Program (PYD). The PYD prepares students for their university degree by establishing a standard of English proficiency within the first year of their time at the university. Employing a 2 (teacher education: BA/MA) x 2 (course: beginner/ advanced English) x 2 (class average: past grade and final grade) full factorial pre-test post-test experimental design and repeated measures analysis of variance, this study shows that there is no relationship between teacher education and student performance. Literature surrounding teacher knowledge and practice, teacher education and practice, and practicum-based teacher education and practice are discussed along with the relationship of the PYD programs' teacher training that may have influenced the results of this analysis.