

The Singapore Education Technology Conference 2017

Programme & Abstract
Book

The
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Programme Book

23rd Aug 2017

Venue: The St. Regis Singapore (Embassy & Consulate Room)

29 Tanglin Road, 247911

REGISTRATION: 09:00 – 09:55

SETC 2017 OPENING: 09:55 – 10:00

Professor Dr. Chanita Rukspollmuang
Siam University

KEYNOTE SESSION I: 10:00 – 10:45

‘Nurturing Digital Citizen in Thai Higher Education Institutions’

Professor Dr. Chanita Rukspollmuang
Siam University

COFFEE BREAK: 10:45 – 11:15

KEYNOTE SESSION II: 11:15 – 12:00

‘The Digital Feminine’

Roslina Chai
Co-founder, Chief Learning Curator and Head of Sales Asia, Gnowbe

LUNCH: 12:00 – 14:00

Buffet Lunch at BRASSERIE LES SAVEURS

SESSION I: 14:00 – 15:00

Session Chair: Chantal Rootman, Nelson Mandela Metropolitan University, South Africa

Breaking the Bad: Addressing Inherent Resistance to Learning in a Multi-Disciplinary Global Studies Course

Jonathan Leong, Singapore University of Social Sciences, Singapore; Yvonne Kong-Ho, Nanyang Technological University, Singapore

Driven to Distraction: The Data Availability-Application Paradox Affecting Adult Learning

Jim Wagstaff, Jam Factory Pte. Ltd., Singapore

COFFEE BREAK: 15:00 – 15:30

SESSION II: 15:30 – 17:00

Session Chair: Jim Wagstaff, Jam Factory Pte. Ltd., Singapore

Improving reading ability at a South African university: Student perceptions

Shelley Saunders, Nelson Mandela Metropolitan University, South Africa; Chantal Rootman, Nelson Mandela Metropolitan University, South Africa

Using Moodle at a higher education institution: Does it lead to student satisfaction and learning effectiveness?

Chantal Rootman, Nelson Mandela Metropolitan University, South Africa; Janine Kruger, Nelson Mandela Metropolitan University, South Africa

Implementing technology at rural primary schools in South Africa: A case study

Tasneem Motala, University of Stellenbosch Business School, South Africa

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KEYNOTE SESSION III: 10:00 – 10:45

‘Learning 3.0: closing millennial employability gaps with technology, teams and terabytes’

Brian O’Dwyer

Commercial Founder and Executive Chairman, CognaLearn, Duke-NUS Medical School

Adjunct Professor, Embry-Riddle Aeronautical University Asia

COFFEE BREAK: 10:45 – 11:15

SESSION III (POSTER): 11:15 – 12:00

Digital inclusion via self-directed gaze-interface, to empower children with multiple disabilities to learn Chinese language

Louisa M.S. Wong, Hong Kong Red Cross Princess Alexandra School, Hong Kong; Carly S.Y. Lam, The Hong Kong Polytechnic University, Hong Kong

A Study on Policy Implications for Strategic Field Setting of S&T-specialized Universities in Korea

Sujin Yun, Korea Institute of S&T Evaluation and Planning, South Korea; Aelee Shin, Korea Institute of S&T Evaluation and Planning, South Korea

A Study on the Establishment of Government Investment Strategy for Basic Research of University in South Korea

Aelee Shin, Korea Institute of S&T Evaluation and Planning, South Korea; Sujin Yun, Korea Institute of S&T Evaluation and Planning, South Korea;

Awareness and adoption of educational technology tools in undergraduate teaching in Singapore

Veena Jadhav, S P Jain School of Global Management, Singapore; Shanty Coomaraswamy, S P Jain School of Global Management, Singapore; Chee Huei Lee, SUTD, Singapore

LUNCH: 12:00 – 14:00

Buffet Lunch at BRASSERIE LES SAVEURS

SESSION IV: 14:00 – 15:00

Session Chair: Janine Kruger, Nelson Mandela Metropolitan University, South Africa

Barriers to Tech Adoption Among Educators and Why Training Is Not Always The Solution
Soofrina Mubarak, Dyslexia Association of Singapore, Singapore

Factors to influence medical students' thoughts to the positive attitude for working with the community by Education Technology Survey: transformative learning in medical rural studies at Suranaree University of Technology, Thailand.

Seekaow Churproong, Suranaree, University of Technology, Thailand; Pakwimon Subhaluksuksakorn, Suranaree, University of Technology, Thailand

COFFEE BREAK: 15:00 – 15:30

SESSION V: 15:30 – 16:30

Session Chair: Veena Jadhav, S P Jain School of Global Management, Singapore

Adopting On-line Ethnography as an English Learning Activity for Telecollaboration

Sa-Hui Fan, National Taichung University of Education, Taiwan; Martine Derivry, The University of Bourdeaux, France

SETC 2017

Student Final Grade Prediction via Artificial Neural Network Versus Linear Regression Models

Senyang Jiang, Hangzhou Foreign Languages School, China

END OF CONFERENCE

Abstract Book

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Professor Dr. Chanita Rukspollmuang

Siam University

KEYNOTE SESSION I: 10:00 – 10:45

Nurturing Digital Citizen in Thai Higher Education Institutions

Professor Dr. Chanita Rukspollmuang

Siam University

Abstract

The rapid change in technology and digital world has made a strong impact in planning national development. The Thai government has recently approved “Digital Thailand” as a new national development model aimed at developing a value-based economy. In sum, “Digital Thailand” refers to the country’s brilliance in taking full and creative advantage of digital technology to develop infrastructure, innovation, data capability, human capital, and other resources, thus propelling the country’s economic and social development towards stability, prosperity, and sustainability. Developing human capital for the digital era has been prioritized as one of the main goals with the hope that within 10 years, all Thais will be digitally literate. Education system, as the main driver, has to be reformed in order to produce “digital citizens” for the country. Six indicators were developed as guidelines for “Good Digital Citizens”. It could be summarized that new graduates must be one who at least is has knowledge, understanding, skills, and good attitudes towards the use of technology in a safe and responsible way. The researcher investigated the perceptions and necessary characteristics required for becoming “digital citizens” of Thai students. Examples consisted of 420 students in Thai public and private higher education institutions. Research results showed that they seemed to have appropriate skills in using internet and ICT properly and responsibly, but there were some

concerns about their opportunities and awareness for access to new technologies, and their knowledge about related laws and regulations, as well as digital security

COFFEE BREAK: 10:45 – 11:15

KEYNOTE SESSION II: 11:15 – 12:00

The Digital Feminine

Roslina Chai

Co-founder, Chief Learning Curator and Head of Sales Asia, Gnowbe

Abstract

Where are the women in the world of technology?

This is an urgent question to which universities, as bastions of learning and societal advancement, need to have a conscious response. It is urgent because in 2017, it is our moral imperative to ask “what is the gender of gatekeepers who create and police the algorithms that govern every aspect of our lives?”

- Who codes the algorithm of Google, Facebook, Wikipedia?
- Who codes the facial recognition technology that law enforcement and the military use to make life and death decisions?
- Who codes the algorithms that produces statistics that governments are using to make policy decisions?
- Who codes the architecture of learning apps that claims to democratise learning for all humanity?

By any measure, it's mostly men - gatekeeping and policing the algorithms that impact every aspect of all our lives.

Technological and digital fluency is fast becoming the agent that can bring about the greatest democratization of knowledge, but in its unbridled hastiness, it is also deepening pervasive inequality.

LUNCH: 12:00 – 14:00

Buffet Lunch at BRASSERIE LES SAVEURS

SESSION I: 14:00 – 15:00

Session Chair: Chantal Rootman, Nelson Mandela Metropolitan University, South Africa

Breaking the Bad: Addressing Inherent Resistance to Learning in a Multi-Disciplinary Global Studies Course

Jonathan Leong

Singapore University of Social Sciences, Singapore

Yvonne Kong-Ho

Nanyang Technological University, Singapore

Abstract

The importance of multi-disciplinary studies and courses have been extolled, and yet face multiple obstacles to fulfilling its full potential in education. This paper investigates one such obstacle – the students’ unintended resistance to multi-disciplinary learning. Observations on this resistance to learning and the contributing factors were made across three cohorts of students in one such multi-disciplinary course, supplemented by two sets of interviews; the first at the mid-point of the course to understand the difficulties they face and resistances from the students’ perspective, and the second after completion of the course to verify the accuracy of said observations and the effectiveness of changes made to alleviate learning difficulties. The author, an instructor in the course, finds that techniques involving “directed confusion/conflict” work exceptionally well for a multidisciplinary course such as this, though it requires a significantly larger amount of calculated preparation and awareness on an instructor’s part. The limitations of the methods, including requisite factors, are also discussed in brief, and will lead to further research in pedagogical methods and delivery.

Driven to Distraction: The Data Availability-Application Paradox Affecting Adult Learning

Jim Wagstaff

Jam Factory Pte. Ltd., Singapore

Abstract

Dramatic increases in the availability and use of digital information by adult learners, coupled with a general surge in the exposure to various modes of digital content delivery, may decrease student motivation, focus, and outcomes in adult education programmes and professional skills development efforts.

This paper aims to explore how dramatic increases in the use of digital information in personal and business contexts may be impacting learner focus, motivation, participation, and results in both structured workplace education courses and self-directed online learning. A paradox seems to have accelerated over the last decade in which the learning motivation of participants in adult education programmes has decreased even as learner access, availability, and use of digital information have dramatically increased. As a result, adult learners may experience a data availability-application paradox that is perceived as cognitive overload by many adult learners and observed by educators as a lack of motivation and attention toward learning.

In an age where an exceptionally high percentage of the world's data and "knowledge" is available to learners through a simple Google search, have we reached an educational tipping point whereby the ability to access and activate just-in-time information has superseded the need to actively and meaningfully participate in the process of learning? Is the capacity to get quick answers to information queries via the Internet now seen by adult learners as a viable replacement for more rigorous learning and development in the classroom or online? If so, how might educators, consultants, and trainers respond to this dilemma?

COFFEE BREAK: 15:00 – 15:30

SESSION II: 15:30 – 17:00

Session Chair: Jim Wagstaff, Jam Factory Pte. Ltd., Singapore

Improving reading ability at a South African university: Student perceptions

Shelley Saunders

Nelson Mandela Metropolitan University, South Africa

Chantal Rootman

Nelson Mandela Metropolitan University, South Africa

Abstract

It is evident that one of the biggest problems at South African universities, but one that is not often recognised by either lecturers or students is the problem of reading. The purpose of this study was to establish the perceptions of students with regards to reading and to investigate how students believe their reading can be improved. Convenience sampling was used, and a projective technique called sentence completion was utilised to collect data from participants. Based on the findings, the researchers identified five key reading improvement themes, the majority of students were found to perceive that if they improved their Comprehension of text their reading ability would improve. The four other themes that were found included: Continuous (regular) reading exposure, Relevancy, Summative techniques, and Other. From this study it is recommended that South African universities should focus on incorporating reading programs or courses into their strategic focus, and in so doing encourage the incorporation of such courses in their students' curricula. The study's recommendations could lead to the development and implementation of student reading and writing centers as well as reading campaigns, which could encourage students to read and ensure an increase in academic success.

Using Moodle at a higher education institution: Does it lead to student satisfaction and learning effectiveness?

Chantal Rootman

Nelson Mandela Metropolitan University, South Africa

Janine Kruger

Nelson Mandela Metropolitan University, South Africa

Abstract

It is important to measure students' satisfaction and learning effectiveness by going beyond the consideration of formal assessments and marks. Therefore, this study considered a self-assessment by students to determine their perceptions of whether they are satisfied and whether effective learning took place while using the Moodle blended learning (BL) platform. This study used selected variables of the Technology Acceptance Model (TAM) to investigate whether the use of Moodle influences students' satisfaction and learning effectiveness. A positivistic paradigm and quantitative research design were adopted in order to test the set hypotheses, by using a self-administered structured questionnaire to gather the responses of a large sample of students. The data was analysed using descriptive and inferential statistics. The main result revealed that the usefulness of the Moodle platform has the strongest influence on students' learning effectiveness. In addition, both the ease of use and usefulness of the Moodle platform positively influence students' satisfaction levels. Moodle activities should be useful to, and easy to use, for students in their quest to complete and be successful in higher education courses. However, Moodle is currently used on a very limited basis in one of South Africa's leading higher education institutions. Lecturers should have access to the necessary information technology expertise during the development and management of Moodle platforms. Higher education institutions could consider offering teaching support options to lecturers who wish to spend time on Moodle platform development and implementation in their courses. This study's recommendations could contribute to the more effective use of Moodle to increase student satisfaction and learning effectiveness.

Implementing technology at rural primary schools in South Africa: A case study

Tasneem Motala

University of Stellenbosch Business School, South Africa

Abstract

To bridge the gap between South Africa and more developed countries, an increased effort is being made to integrate the use of technology into the public education system. Technologies introduced in schools are, however, not always adopted equally by all educators. Differences exist in the rate at which the technology is adopted, as well as in the extent to which each teacher integrates the technology into the classroom.

This study identifies the proactive measures a technology implementer can take to increase the likelihood of success of the project. A local company with extensive experience in the successful roll out of technology at schools was identified. The company's implementation approach was studied to enable the generation of a set of guidelines that can be used by those who intend to implement similar projects. A secondary objective of the study was to understand the reasons for resistance towards technology.

Primary data was obtained via interviews with company employees involved in the implementation project. In order to include the views of the primary stakeholders, this study offers input from teachers at a school where the company successfully implemented a technology program.

Results revealed that the attributes of a school have a significant (and often underestimated) impact on the success or failure of a technology project. Prior to undertaking a project, implementers must have a deep understanding of the management of the school and the unique challenges that rural schools face. Resistance from teachers arises for a variety of intrinsic and extrinsic reasons. The main reason being teachers' lack of self-confidence in terms of their competency in using the technology. This is significant in a developing country context where many teachers do not have access to smart mobile devices. Appropriate training is the primary measure used to counter potential resistance. This training should not only focus on device usage, but rather on pedagogical practices so that teachers understand how to integrate the technology into existing lessons. The role of a facilitator is also important. Although facilitators lead the training effort, they must also assume a supportive role and guide the teachers through their adjustment to technology.

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KEYNOTE SESSION III: 10:00 – 10:45

Learning 3.0: closing millennial employability gaps with technology, teams and terabytes

Brian O’Dwyer

Commercial Founder and Executive Chairman, CognaLearn, Duke-NUS Medical School
Adjunct Professor, Embry-Riddle Aeronautical University Asia

Abstract

Several common themes emerge at many education technology conferences:

- Some learning environments haven’t changed in centuries with a reference to a painting of a classroom at the School of Bologna in the 14th century
- There is an employability gap with traditional teaching methods versus 21st century workplace requirements with a reference to the World Economic Forum’s Future of Jobs Report
- Many traditional methods don’t work for millennial learners

While many educators broadly agree with these themes. However, what to practically do about them becomes a little fuzzier with questions such as:

- Many cognitive science learning principles are understood, but which ones to implement?
- Which one of the 100,000 education technology apps should I use in my teaching?
- How to measure the results and use data effectively?

This session will draw on experience with leading academic institutions such as Duke-NUS and Yale-NUS to provide a very practical example of how to use technology enabled teams and real-time data analysis to equip millennial learners with 21st century skills. In addition, participants will not only hear about this approach but experience it as well so don’t forget to bring your mobile technology ready to use.

COFFEE BREAK: 10:45 – 11:15

SESSION III (POSTER): 11:15 – 12:00

Digital inclusion via self-directed gaze-interface, to empower children with multiple disabilities to learn Chinese language

Louisa M.S. Wong

Hong Kong Red Cross Princess Alexandra School, Hong Kong

Carly S.Y. Lam

The Hong Kong Polytechnic University, Hong Kong

Abstract

Neuromuscular disorder is an umbrella term for movement disorders originating in central nervous systems resulting in motor and postural dysfunctions, including reading-related visual challenges, e.g. strabismus and oculomotor anomalies, etc. Those congenital reading-related oculomotor anomalies diminished children's learning capacity, even difficulties in learning their mother-tongue language. This study used the cutting-edge eye-tracking technology in both oculomotor assessment and intervention for reading in Chinese - to achieve digital inclusion and Education for All. Objective: to evaluate the outcome measure of reading-related oculomotor (OM) metrics – to convert the motor output into digital data – e.g. visual angle and smooth saccade (range of motion), accurate fixation to the area of interest (AOI) (muscle grading), total visit duration (reading time) and orthographic recognition. Design: It is a prospective Cohort study. 21 students with NMD, aged 6 to 8 years, studying from grade 1 to grade 3, with oculomotor anomalies completed 8-weeks of interventions then followed by 4 months of repeated measures and follow-up. Result: Repeated measures showed improved and sustainable effect in treatment group than control group, such as accurate saccade and better revision result. Data processing this study is still in progress. Conclusion: Therefore early intervention in primary level to enhance children's reading-related oculomotor skills from performance components of visual search (saccade) and attention (fixation) to functional reading is significant. Findings from this study will shed light on the possible enhancement of research about reading-related OM skills, and enabling people with OM challenges to achieve better academic qualifications and thus enhance their quality of life and career prospects!

A Study on Policy Implications for Strategic Field Setting of S&T-specialized Universities in Korea

Sujin Yun

Korea Institute of S&T Evaluation and Planning, South Korea

Aelee Shin

Korea Institute of S&T Evaluation and Planning, South Korea

Abstract

1. Background

Korean government has established four science and technology specialized universities such as KAIST, GIST, DGIST and UNIST in order to cultivate advanced science and technology manpower and to carry out world-class leading research. Each university has its own history and characteristics different from its foundation year and its provinces, and the research areas that it focuses on are also differentiated.

In 2011, the Korean government established the 'Specialization and Development Plan for Four Science and Technology-specialized Universities' and developed strategic areas for each university. However, as time goes by, there has been a criticism that there is a difference between the major research fields of each university and those announced in the policy

In this study, we are going to try to solve the problems of the existing policy by deriving the main research field through the analysis of the research performance conducted at each university so far and setting up a new strategic field based on the result. This will contribute to securing the differentiation and strategic research among the universities.

2. Method

To analyze the research performance, SCI papers of each university are analyzed quantitatively and qualitatively. The quantitative analysis will be conducted based on the number of papers according to the standard field classification of each university, and the qualitative analysis will be analyzed based on JIF. Journal Impact Factor (JIF) is an index for evaluating the quality of academic journals. It uses JCR (Journal Citation Report) as a DB for analysis.

For the analysis by university, the number of papers and the JIF level were derived based on 22 standard fields in 2009, 2012 and 2015. And for the sectoral analysis, 22 standard fields were integrated into major categories and comparisons were made between universities.

3. Conclusion and Contribution

As a result of the analysis based on the six major classification standards, the quantitative performance of research was generally high in KAIST and the UNIST in qualitative performance was superior. Specifically, the quantitative performance of KAIST's papers was the highest in all fields except agriculture, and quantitative and qualitative performance in clinical medicine and life sciences was found to be the best at the same time. UNIST's overall quantitative performance is the second highest following KAIST, and it has the highest qualitative performance in agriculture, engineering, multi-disciplinary and natural sciences. GIST shows good qualitative performance in clinical medicine, engineering and life sciences, and low qualitative performance in agriculture and natural sciences. DGIST has low qualitative performance in clinical medicine, engineering, and multi-disciplinary fields, and yet there is no field that produces outstanding results.

As a result of analyzing the research performances of the universities of each period, it is found that there is some difference in strengths among the universities, but the compatibility with the fields derived from the existing policy is low. As the core strength fields of each university presented in 2011 are different from those derived from performance analysis at present, it is necessary to reevaluate the effectiveness of the core fields announced in the policy and to derive a new strategic field

A Study on the Establishment of Government Investment Strategy for Basic Research of University in South Korea

Aelee Shin

Korea Institute of S&T Evaluation and Planning, South Korea

Sujin Yun

Korea Institute of S&T Evaluation and Planning, South Korea

Abstract

Government investment in basic research is an essential factor in driving innovation and is becoming more important. Our government is also investing continuously in Basic Research area. In 2015, the total expenditure on Basic Research projects was 3,819 Million dollars. Among the sector of performance, “universities” had the largest percentage at 47.4.

In contrast to the other types of R&D (including development, which is directed at production and design; and applied research, aimed at meeting a specific need with particular consideration for commercial application), basic research is directed toward developing big-picture

understanding and general knowledge enhancement. For this reason, basic research is the foundation of all other knowledge and the ultimate foundation of an innovative society. Universities are better suited to basic research than are private firms or other research organizations (such as government laboratories). The university performs basic research and at the same time fostering advanced research personnel.

Due to the limit of total R&D budget, a rational and effective discussion-making becomes an important issue in process of R&D budget allocation and adjustment. In order to strengthen our basic research strategy of universities and suggest an effective investment portfolio, the investment status of basic research programs of our government is investigated.

This study analyzes the Investment and characteristics of university based research program supported by the government.

It develops a typology of basic research programs of university funded by government by its purpose.

The results include:

1. Analyzing the trends in S&T policies and technological developments in order to devise our measures for the strategic national investments of basic research of university
2. Providing support for establishing the directions for the effective national R&D investments and the standards of budget deliberation for the government-funded basic research programs of university
3. Proposing the effective investment portfolio of R&D budget allocation and adjustment for the next fiscal year, reflecting key government S&T policies and current issues in technological developments

These results will be used to support budget allocation and its coordination of government R&D programs and to establish the objectives set by national R&D strategies and S&T policies

Awareness and adoption of educational technology tools in undergraduate teaching in Singapore

Veena Jadhav

S P Jain School of Global Management, Singapore

Shanty Coomaraswamy

S P Jain School of Global Management, Singapore

Chee Huei Lee

SUTD, Singapore

Abstract

There is an increased emphasis for universities to adopt educational technologies in their teaching, yet the actual adoption by students and faculty is limited and slow (Aldunate & Nussbaum, 2013), (Selwyn, 2007). The undergraduate students are heavy users of technology tools (Goerke & Oliver, 2007) and hence there is a need to study technology adoption in the context of undergraduate teaching. The universities in Singapore are looking to further enhance learning through the use of technology (Janarthanan, 2015). This study aimed to identify awareness and adoption of teaching technology tools by faculty in undergraduate classrooms using a qualitative research methodology. The findings indicate that the technology adoption in class room is not a result of greater faculty awareness of existence of teaching technology tools and is not necessarily higher for faculty teaching Engineering and Sciences stream. The research covers other areas related to infrastructure and support, faculty aptitude and training, students. The paper concludes by discussing future scope such as students' adoption of educational tools and relevance to the curriculum and learning.

LUNCH: 12:00 – 14:00

Buffet Lunch at BRASSERIE LES SAVEURS

SESSION IV: 14:00 – 15:00

Session Chair: Janine Kruger, Nelson Mandela Metropolitan University, South Africa

Barriers to Tech Adoption Among Educators and Why Training Is Not Always The Solution

Soofrina Mubarak

Dyslexia Association of Singapore, Singapore

Abstract

The cries to bridge the digital literacy gap have been resonating since the importance of the digital economy was emphasised and the calls for innovating approaches to delivering lessons and preparing the learners to thrive in the coming wave of changes has been placed upon educators to some considerable extent. Digital illiteracy is a problem that affects both the young and old alike and wishful thinking to the contrary, it is not one that will solve on its own as technology proliferates and becomes the commonplace.

Millennials may be immersed in digital technology and consider it mundane. However, they may not necessarily be more adept in utilising it effectively simply because they may have grown up immersed in technology-rich environments but research has shown that this does not necessarily equate to good understanding and effective use of technology, especially in the purview of educational technologies in the classroom context.

Tapping on educational technologies for teaching, facilitating, assessing and differentiating are some of the areas where educators find challenging and the presence of some levels of barriers. This presentation will cover some of the barriers and challenges faced by educators and administrators in the use of educational technology and also share how the DAS EdTech team uses alternative approaches to supplement professional development in this context instead of relying only on training. About the latter, discussion will be on the importance of a “sharing-culture” - which is not new thanks to the tutelage of social media, and why learning through sharing can be more impactful than typical professional development training sessions.

Factors to influence medical students' thoughts to the positive attitude for working with the community by Education Technology Survey: transformative learning in medical rural studies at Suranaree University of Technology, Thailand.

Seekaow Churproong

Suranaree, University of Technology, Thailand

Pakwimon Subhaluksuksakorn

Suranaree University of Technology, Thailand

Abstract

Background: the education of transformative learning is important for medical students who will be the doctors with humanity. Their thoughts can be changed in the positive attitude of working with community while studying in the pre-clinical year. Medical Rural Studies (MRS) aims to give early exposure to the work of rural doctors. MRS have implemented in the Medical curriculum at Suranaree University of Technology(SUT). Aims: this study report factors to influence medical students' thoughts to the positive attitude for working with the community after they experienced MRS in their attitude of working with the community. Methods: this study is an observational survey from learners' feedback by open-end questions via education technology. 160 medical students were surveyed and 153(95.6%) of online questionnaires were responded. The outcome measure was analysed by using descriptive statistic. Results: 103 (67%) participants reflected that MRS had an empowerment to change their thoughts to the positive attitude of working in the community. The results revealed that; visiting patients in the hospital and home, meeting role model, learning the process of group reflection, and living with the folks who gave the warm hospitality were causative factors of perception to change the thought of self-being; 39.9%, 35.45%, 19.09%, and 6.36%, respectively. Although direct experiences have an effect on contemplative education, perception to change the thought to positive attitude did not occur in all experiences. Conclusion: transformative learning depends on students' consciousness and critical reflection. Finally, a well-trained facilitator in the community is posited as a key success factor to empower students for the positive attitude in community.

COFFEE BREAK: 15:00 – 15:30

SESSION V: 15:30 – 16:30

Session Chair: Veena Jadhav, S P Jain School of Global Management, Singapore

Adopting On-line Ethnography as an English Learning Activity for Telecollaboration

Sa-Hui Fan

National Taichung University of Education, Taiwan

Martine Derivry

The University of Bourdeaux, France

Abstract

As technology has been adopted intensively at the educational settings worldwide since the last two decades of the 20th century, the Internet has been long considered as a feasible way to contribute to more frequent and cheaper intercultural contacts, which were not possibly happening before (O’Dowd, 2007). The current project focuses on how ethnographic telecollaboration can serve as an effective online intercultural activity for college-leveled English learners to both practice English and develop intercultural abilities. Previous research on telecollaboration has identified 12 types of activities and task sequences help foster successful partnerships for language learners’ linguistic development and cultural understanding in the target language (O’Dowd &Waire, 2009). These intercultural tasks have been further organized into three main categories: (1) information exchange tasks; (2) comparison and analysis tasks and (3) collaborative tasks. In this current project, the focus expands on this base of knowledge from foreign language education to develop an ethnographic intercultural tasks that can be practiced through synchronous as well as asynchronous online communications. This ethnographic intercultural project covered all the features of the previously identified three categories of intercultural tasks. The current project had lasted for 5 weeks. There were totally 10 French undergraduate students and 55 Taiwanese undergraduate students participating. Their English proficiencies fell into a similar range, between CEF B1 and B2. The Internet modalities adopted by the students in this project included the Moodle platform, Skype, Google hangouts, Google drive, Facebook messenger and emails. Students from both ends collaborated and employed an ethnographic mode for information collections to produce together a cultural report of comparing the cities where they stayed, namely Paris and Taichung, on a same topic chosen by the students. Their report topics covered shopping

areas, cafes, public gardens, museums, transportations, monuments, food and eating habits and sports. English was the language medium used in communication. This research project remains qualitative and the data resources included students' journal logs, feedback after in-class group discussion and the final group reports. Findings of this project show that the ethnographic telecollaboration projects facilitate the students to ask questions for understanding the cultural on the other end beyond the surface level. Therefore, their intercultural gains naturally went beyond the surface and reached on the levels of critical awareness. This also echoes Claire Kramsch's (1993; 2003) notion of the connection between culture and language teaching. Conclusively, this ethnographic telecollaboration, combining the features of the three categories of intercultural activities, offers an effective opportunity for students from different cultures to intensively work online together so that their intercultural abilities have been, hence, challenged.

Student Final Grade Prediction via Artificial Neural Network Versus Linear Regression Models

Senyang Jiang

Hangzhou Foreign Languages School, China

Abstract

Objective: This study aimed to build a predictive model for student final grade using artificial neural network versus linear regression models.

Methods: A public data on student final grade was used in this study: <https://archive.ics.uci.edu/ml/datasets>. Student final grade was the outcome of interest (numeric: from 0 to 20) and 30 other features were used as predictors, namely, 1 school, 2 sex, 3 age, 4 student's home address type, 5 family size 6 parent's cohabitation status, 7 mother's education, 8 father's education 9 mother's job, 10 father's job, 11 reason to choose this school, 12 student's guardian, 13 home to school travel time, 14 weekly study time, 15 number of past class failures, 16 extra educational support, 17 family educational support, 18 extra paid classes within the course subject, 19 extra-curricular activities, 20 attended nursery school, 21 wants to take higher education, 22 Internet access at home, 23 with a romantic relationship, 24 quality of family relationships, 25 free time after school, 26 going out with friends, 27 current health status, 28 number of school absences, 29 workday alcohol consumption, 30 weekend alcohol consumption. All the records were randomly assigned into 2 groups: training sample (75%) and testing sample (25%). Two models were built using training sample: artificial neural network and linear regression. For artificial neural network, the input layer has 30 inputs, the

two hidden layers have 5 and 3 neurons and the output layer has a single output. Mean squared errors (MSE) were calculated and compared between both models. A cross validation was conducted using a loop for the neural network and the `cv.glm()` function in the `boot` package for the linear model. A package called “neuralnet” in R was used to conduct neural network analysis.

Results: Students in rural areas had worse final grade than those in urban areas. Students spending less time had worse grade. Students who failed some past classes or who had extra educational support had worse grade. Students who wanted to take higher education had better grades than those who did not. Students who had higher workday alcohol consumption had worse grade than those with less workday alcohol consumption (all p -values <0.05)

For testing sample, the MSE was 6.54 for the linear regression and 12.75 for the artificial neural network. Artificial neural network performed worse clearly. In cross validation, the average MSE for the neural network (16.78) is higher than the one of the linear model (7.69) and there seems to be a certain degree of variation in the MSEs of the cross validation. This may depend on the splitting of the data or the random initialization of the weights in the net.

Conclusions:

Failure of previous classes, higher alcohol consumption, less time spent on study, lower motivation for higher education were significant predictors of worse grade.

In this study, we built a predictive model for student final grade using neural network and compared its performance with a more popular approach---linear regression. Linear regression performed better according to MSE measure which might be due to the fact that the variable of interest only had discrete numeric variable with twenty-one values.

END OF CONFERENCE
