The 2020 International Conference on Education Development and Studies
(ICEDS 2020)

2020 International Conference on Leadership and Management
(ICLM 2020)

March 03-05, 2020   Paris, France

Co-sponsored by

UNIVERSITY OF
PLYMOUTH

香港教育大學
The Education University
of Hong Kong

IEDRC.org

General Information of Conference

➢ Welcome Remarks

We welcome you to Paris, France to attend The 2020 International Conference on Education Development and Studies (ICEDS 2020) and 2020 International Conference on Leadership and Management (ICLM 2020). We're confident that over the next three days you'll get theoretical grounding, practical knowledge, and personal contacts that will help you build long-term, profitable and sustainable communication among researchers and practitioners working in a wide variety of scientific areas with a common interest in Education Development, Studies, Leadership and Management.

The conferences received submissions from more than 12 different countries and regions, which were reviewed by international experts. Approximately 55% papers have been selected for presentation and publication.

We hope that your work and that of your institution or company will be enhanced both by what you learn and whom you connect over the next 3 days. Our field is enriched by the dialogue among colleagues from around the world which occurs during presentation sessions as well as informal conversations. We hope this will be a memorable, valuable, and enjoyable experience!

On behalf of all the conference committee, we would like to thank all the authors as well as the Program Committee members and reviewers. Their high competence, their enthusiasm, their time and expertise knowledge, enabled us to prepare the high-quality final program and helped make the conference a successful event. We hope that all participants and other interested readers will benefit scientifically from the proceedings and also find it stimulating in this process. Finally, we would like to wish you success in your technical presentations and social networking.

Once again, thank you for coming to this conference. We are planning more and better international conference experiences. We will sincerely listen to any suggestion and comment; we are looking forward to meeting you next time.

Conference Chair
Prof. Shaofeng Liu
Plymouth University, UK

➤Conference Venue

Novotel Paris 17 Hotel
https://www.accorhotels.com/en/hotel-4987-novotel-paris-17/index.shtml

Address: 34 Av Porte d'Asnières, 75017, Paris, FRANCE

Tel: +33 1 44 40 52 52　/ E-mail: H4987@accor.com

L'hôtel Novotel Paris 17 se trouve à la porte d'Asnières (17ème arrondissement de Paris). Situé proche de la porte de Clichy, du centre commercial SoOuest, des Champs Elysées et du centre de Paris, l'hôtel Novotel Paris 17 dispose de 140 chambres spacieuses et insonorisées avec wifi offert. L'hôtel propose également un espace jeux pour enfants, un bar, un restaurant moderne, un parking privé payant et 8 salles de réunions modulables. En venant au Novotel Paris 17, vous serez aux portes de notre Capitale.

Le Novotel Paris 17 est situé à seulement 15 min de l'Arc de Triomphe (bus 341) et du Palais des Congrès Porte Maillot (bus PC). Le métro ligne 3 (arrêt Pereire) vous déposera en 15 min au pied de l'Opéra de Paris. L'arrivée en voiture est facilitée par son accès direct du Bd Périphérique. L'accès au Tram T3B facilitera tous vos déplacements. L'hôtel vous offre un séjour agréable au calme avec une rapidité d'accès aux lieux phares de Paris tels que la Défense, la Tour Eiffel ou encore le Louvre.

The Novotel Paris 17 hotel is located in the Porte d'Asnières area (17th arrondissement of Paris). Located close to Porte de Clichy, So Ouest shopping center, the Champs Elysées and the center of Paris, the hotel has 140 spacious, soundproofed rooms with free WIFI. The hotel also boasts a children's play area, bar, modern restaurant, private car park (charges apply) and 8 modular meeting rooms. Come to the Novotel Paris 17 and enjoy a stay on the doorstep of our capital.

Novotel Paris 17 is only 15 minutes from the Arc de Triomphe (bus 341) and the Palais des Congrès Porte Maillot (bus PC). Metro Line 3 (Pereire stop) to Opéra de Paris in 15 minutes. Easy to reach by car, with direct access to the peripheral Bd. Easy travel with the T3B Tram. The hotel offers a pleasant, calm stay with quick access to the main Paris sights, such as the Défense, Eiffel Tower or Louvre.

➢Instructions for Presenters

◆ Onsite Registration

✧ You can also register at any time during the conference.
✧ Certificate of Participation can be collected will be awarded at the end of your session.
✧ Your paper ID will be required for the registration.
✧ The organizer won't provide accommodation, and we suggest you make an early reservation.

◆ Oral Presentation

✧ Devices Provided by the Conference Organizer:
✧ Laptops (with MS-Office & Adobe Reader)
✧ Projectors & Screens
✧ Laser Sticks
Materials Provided by the Presenters:
✧ Power Point or PDF Files (Files should be copied to the conference laptop at the beginning of each session)
Duration of each Presentation (Tentatively):
✧ Regular Oral Presentation: 15 Minutes of Presentation, including Q&A
✧ Keynote Speech: 40 Minutes of Presentation, including Q&A
✧ Plenary Speech: 30 Minutes of Presentation, including Q&A

◆ Poster Presentation

Materials Provided by the Conference Organizer:
✧ The place to put poster
Materials Provided by the Presenters:
✧ Home-made Posters
✧ Maximum poster size is A1
✧ Load Capacity: Holds up to 0.5 kg

◆ Best Presentation Award

✧ One Best Oral Presentation will be selected from each presentation session, and it will be awarded at the end of the session.

◆ Dress Code

✧ Please wear formal clothes or national representative clothing.

◆ 2019-nCoV Protection Tips

✧ **Due to the outbreak of the 2019-nCoV, all participants are required to wear masks during the whole conference and keep a safe distance when you are talking (above 1m). If you don't have mask during conference date, please ask conference secretary for help at registration desk.**
✧ **When you enter the conference venue, please consciously check the temperature at the registration desk. If you feel unwell, please tell conference secretary before the conference starts.**

➤ Introductions for Keynote Speakers

◆ *Keynote Speaker I*

Prof. Shaofeng Liu,
Plymouth University, UK

Shaofeng Liu is Professor of Operations Management and Decision Making at University of Plymouth, UK. She is the Research Director for the Product and Service Value Chain Group, specializing in digital business, knowledge management, decision making, and value chain innovation. She obtained her PhD degree from Loughborough University, UK. She sits on the Management Board for Euro Working Group on Decision Support Systems. She is currently a Senior Editor for Cogent Business and Management, and on Editorial Boards for a number of international journals. She has undertaken a number of influential research projects funded by UK research councils and the European Commission with a total value over €40M. She is currently principal investigator and co-investigator for 4 EU projects (3 of which are funded by Horizon 2020 and one by Erasmus Plus) and 1 project funded by UK research council - Innovate UK. She has published over 150 peer-reviewed research papers.

Speech Title: **The Role of Leadership in Creating Organisational Competence in Knowledge Economy**

Abstract: Knowledge has been recognised as the most important asset that creates competence for organisations in the current economy. How to most effectively manage knowledge to achieve excellent business performance is one of the most challenging and demanding tasks for business leaders in organisations. This talk will focus on the role of leadership in knowledge management, especially in supporting organisational learning achieve the status of learning organisations. A number of models and frameworks that highlight the key role of leadership in learning will be examined. Relationships between leadership and other important management elements will be established before recommendations are suggested to managers and leaders in business practice. This talk is based on state-of-the-art research achievements from an EU funded Horizon 2020 project "RUC-APS" (https://ruc-aps.eu/) and author's new book "Knowledge Management: An Interdisciplinary Approach for Business Decisions" (https://www.amazon.co.uk/EFFECTIVE-INTERNAL-COMMUNICATIONS/dp/074949 4832).

◆ *Keynote Speaker II*

Prof. Joy Kutaka-Kennedy,
National University, USA

Before entering higher education Dr. Joy Kutaka-Kennedy spent over twenty years teaching students from pre-school through high school in regular education, gifted education, at-risk education, and special education. She has taught over fifteen years at the university level, emphasizing special education teacher preparation in academic course work and clinical practice supervision. Having extensive experience with online education, course development and program evaluation, she won Quality Matters recognition for innovative course design and student engagement. She has given numerous national and international presentations on creativity and collaboration in the online venue; individual accountability in online group work; emerging technological trends in higher education; implications of generational differences and technological innovation in higher education; and the future of Artificial Intelligence, machine learning and deep learning in education. Her university faculty responsibilities include course design and oversight, field work supervision, and mentoring new faculty in higher education. Dr. Joy Kutaka-Kennedy serves as an officer of the California Association of Professors of Special Education, mentors prospective grant writers, completes program reviews for state and national accreditation, and performs editorial reviews for professional publications. She currently is working on designing new curricula to align with new state credentialing standards.

Speech Title: **Effective Online Pedagogies to Maximize Student Learning**

Abstract: In the last decade technological changes have revolutionized our collective way of life. We are now more connected to each other and the world than ever before, with easy, instantaneous access to all recorded human history, scientific knowledge, and cultural aspirations. The digital world keeps expanding its borders into every aspect of our lifestyles, from smart biosensors monitoring the quality of our sleep to programmable doorbells greeting guests to autonomous vehicles driving the roadways. Fewer and fewer activities can evade online migration as the Internet of Things encompasses more aspects of daily life. Similarly, online education has become increasingly ubiquitous over the last few years. Universities who are avoiding the online venue are losing market share to expanding numbers of new institutions who offer shortened time frames to earn degrees, credentials and licenses. Older, more traditional universities are finding themselves left behind as these new start up institutions promise easy, on-demand access, anytime, anywhere and on any device to the new college students of today. Online education has even expanded into the publicly funded, K-12, elementary through high school realms, where one can find 5th graders logging in a few times a week for brief 40-minute instructional sessions and completing extensive learning activities or homework monitored by parents or other key mentors. Given the inevitable platform of online teaching, what pedagogies are best suited to maximize student learning? What can we keep of our current teaching practices, what should we toss, and what can we adopt to best reach and teach students of today and tomorrow?

.

◆ *Keynote Speaker III*

Assoc. Prof. Eric C.K. Cheng,
The Education University of Hong Kong, China

Dr. Eric Cheng is a specialist in knowledge management, educational management and Lesson Study. He is currently associate professor of the Department of Curriculum and Instruction of the Education University of Hong Kong. Eric earned his Doctor of Education in education management from the University of Leicester. He has been publishing locally and internationally, with over 50 articles in various media covering the areas of knowledge management, school management and Lesson Study. He is the author of an academic book entitled Knowledge Management for School Education published in 2015 by Springer. Eric has been successful in launching more than 10 research and development projects with external and competitive funds in the capacity of Principal Investigator (PI). He received the Knowledge Transfer Project Award from EDUHK in 2014-15, Scholarship of Teaching Award in 2013-14 and Knowledge Transfer publication Awards in 2012-13 form Faculty of Human Development of EDUHK.

Speech Title: Knowledge Management Strategies for Sustaining Lesson Study

Abstract: This study explores the strategies and practices that have been implemented by principals in Hong Kong schools for facilitating and sustaining Lesson Study for teachers' knowledge sharing and internalization. Lesson Study refers to a synergistic process of knowledge creation in which teachers share their knowledge through social interactions, and they apply and check the knowledge by practicing lesson design and teaching materials through few research lessons. Knowledge management (KM) in school context is an organization management approach that utilizes knowledge as resources for school improvement through effectively implementing their teaching and learning plans.

A cross-sectional quantitative survey was conducted to collecting data from 184 principals in Hong Kong. Confirmatory factor analysis and reliability test were utilized to examine the constructed validity and the reliability of the instrument. A structural equation model was applied to confirm the predictive effect of people-based and information technology-based knowledge management strategies on teachers' knowledge sharing and internalization through conducting Lesson Study. Results show that people-based knowledge management strategy predicts teacher's knowledge sharing and internalization. However, the information technology-based knowledge management strategies only predicts teachers' knowledge sharing, but not on their knowledge internalization.

This implication of the paper are that cultivating communities of practice, professional learning communities and mentoring schemes in schools could nurture a knowledge sharing culture for facilitating and sustaining Lesson Study for teacher learning. Institutionalizing information technology system could help teachers to retrieve, share and store the school's explicit knowledge. The paper not only contributes to school management strategies and practices to school leaders to facilitate and sustain Lesson Study, but also brings in a new research dimension, knowledge management, to the research area of Lesson Study.

◆ *Keynote Speaker IV*

Prof. Sérgio Dominique-Ferreira,
Polytechnic Institute of Cavado and Ave, Portugal

Sérgio Dominique-Ferreira is Professor of Marketing at the Polytechnic Institute of Cavado and Ave. He holds a PhD degree in Business and Management Studies - Marketing and Strategy from the Faculty of Economics of Universidade do Porto. Previously, he has been a researcher in the Department of Methodologies of the University of Santiago de Compostela (Spain), as well as researcher in the Department of Business Organizations and Marketing, Faculty of Business, University of Vigo (Spain). His main research topics are: price sensitivity, bundling strategies, customer satisfaction and loyalty, brand image and supply chain management.

Speech Title: Emotional Intelligence or/and Artificial Intelligence in Business Marketing and Management: from the Employee Perspective to Consumer Preferences

➢ Instructions for Plenary Speaker

◆ *Plenary Speaker*

Assoc. Prof. Mido Chang,
Florida International University, USA

Dr. Mido Chang's research deals with statistical issues of Hierarchical Linear Models, Survival Analysis, Structural Equation Models, and Longitudinal Growth Models. She also applies the statistical models to a wide range of issues associated with the provision of equitable access to educational resources for all students, including linguistic and racial minority students. Her research findings support efforts to improve educational practice and policies for school programs, teacher instructional practices, and parent involvement. Dr. Chang's research projects have been funded from the Discovery Research K-12 Program of the National Science Foundation (NSF) and from the U.S. Department of Health and Human Services. She has served on review panels for national and international funding agencies and professional journals.

Speech Title: How Can We Be an Intelligent Researcher Using Statistics?

Abstract: Through research, we discover and explain new findings. Undeniably, remarkable research has contributed to improving our lives in every way. It is our dream to be a researcher to make a significant contribution to our academic field with unique, meaningful research. Then, how can we produce studies with critical outcomes? Many believe that excellent research uses an objective and valid process to find new knowledge and provide reliable evidence of findings. In particular, when we use quantitative analysis, we widely adopt a significance level of our results.

Most of the time, the significance level of a study determine the major conclusion of the research. One step further, the significance of research determines the researcher's success. When a researcher many significant studies, they can publish them in prestigious journals, get funding supports, become promoted, and obtain a reputation of a productive scholar.

The problem of the significance level of a study, researchers often find that they can't publish their unique, exciting results if they are not statistically significant. Do we have to throw away the crucial results when they are not statistically significant? Is there any other way to let the world know about critical information? In a similar vein, we often come up with research results that are not reproducible. Do we have to discredit the results? We face several conflicts depending on the significance level.

Because of the flaws, there are loud voices from frustrated researchers to abolish the term of statistical significance. If you see the background of the significance level, we will find a good reason for it. The significance level is developed by Ronald Fisher, who is the father of statistics, to provide a guide for the decision making of quantitative analysis in 1925. Before his invention, there is no clear guideline to differentiate the meaningful findings from insignificant ones. Basically, it gives us a confidence level for which they do want to be correct. Therefore, the significance level gives the flexibility of each researcher to be incorrect. Our researcher wants to be right about their outcome 95% of the time, or the researcher is willing to be incorrect 5% of the time.

Due to the clarity and shortcut to making the decision, the overall scientific fields, including Nature, still embraces statistical significance because it is a convenience that provides the strength of an observation. At the same time, we as researchers prepare ourselves to cope with the issues of the misuse and to come up with proper strategies to use the significance level.

Concerning potential solutions as a researcher using statistics, I propose the following two suggestions. First, we should be an ethical researcher from design, data collection, analysis, and interpretation. Second, we should equip with good knowledge of research methods, including qualitative research methods.

➤ Conference Agenda

◆ March 3, 2020 (Tuesday)

(Note: March 3, 2020 is only for onsite Registration, but on March 4, 2020, the registration is also open outside the conference room on 1st Floor)

Lobby	10:00-16:00	Onsite Registration and Material Collections

◆ March 4, 2020 (Wednesday)

9:00-9:10	**Opening Remark** **Prof. Shaofeng Liu, Plymouth University, UK** **Venue: Sakke Perire**	
9:10-12:10	**Keynote Speeches** **Venue: Sakke Perire**	
09:10-09:50		**Prof. Joy Kutaka-Kennedy,** National University, USA **Speech Title**: Effective Online Pedagogies To Maximize Student Learning
09:50-10:10	**Coffee Break & Group Photo**	
10:10-10:50		**Assoc. Prof. Eric C.K. Cheng,** The Education University of Hong Kong, China **Speech Title**: Developing Metacognitive Teaching Skills Through a Tripartite School Partnership Model
10:50-11:30		**Prof. Sérgio Dominique-Ferreira,** Polytechnic Institute of Cavado and Ave, Portugal **Speech Title**: Emotional Intelligence or/and Artificial Intelligence in Business Marketing and Management: from the Employee Perspective to Consumer Preferences

11:30-12:10		**Prof. Shaofeng Liu,** Plymouth University, UK **Speech Title**: The Role of Leadership in Creating Organisational Competence in Knowledge Economy
12:10-13:30		**Lunch Time**
13:30-14:00		**Plenary Speech** **Venue: Sakke Perire**
13:30-14:00		**Prof. Mido Chang**, Florida International University, USA **Speech Title**: How Can We Be an Intelligent Researcher Using Statistics

◆ March 4, 2020 (Afternoon)

Authors' Presentations **Time:** 14:00-17:30	
14:00-15:45 **Venue: Sakke Perire**	**Session I**: Computer Aided Instruction **Session Chair**: Prof. Joy Kutaka-Kennedy
14:00-14:15 **RC0036**	Using Gamification to Develop Self-Directed Learning Ernesto Armando Pacheco-Velazquez **Presenter:** Ernesto Armando Pacheco-Velazquez *Tecnologico de Monterrey, Mexico*
14:15-14:30 **RC0013**	The Effect of Simcity as Instructional Media in Geography Learning on Learners' Spatial Intelligence Exsa Putra, Bima Aji Tantular and Iwan Setiawan **Presenter:** Exsa Putra *Universitas Pendidikan Indonesia, Indonesia*
14:30-14:45 **RC0037**	The Use of Videos to Develop and Evaluate Mathematical Skills Linda Margarita Medina **Presenter:** Linda Margarita Medina *Tecnologico de Monterrey, Mexico*
14:45-15:00 **RC0039-A**	Digital Technologies and Multimodality: Reshaping Literacy for the 21 Century Martine Pellerin **Presenter:** Martine Pellerin *University of Alberta, Canada*

15:00-15:15 **RC0046**	A Methodology to Teach Complex Variable Concepts based on Visualization Rubén Darío Santiago Acosta, Ernesto Manuel Hernández Cooper, Juan Carlos Del Valle Sotelo **Presenter:** Rubén Darío Santiago Acosta *Tecnológico de Monterrey, México*
15:15-15:30 **RC0020**	Item Response Theory and Developing Scales for E-learning Irina Maslyakova **Presenter:** Irina Maslyakova *Plekhanov Russian University of Economics, Russia*
15:30-15:45 **RC0024-A**	New Challenges in Education: Industry 4.0 an Opportunity to Transform Engineering Education for a Better Society Olga Lopez Rios, Leopoldo Julian Lechuga and Gisela Lechuga **Presenter:**Olga Lopez Rios *Tecnológico de Monterrey, México*
15:45-16:00	**Coffee Break**
16:00-17:30 **Venue: Sakke Perire**	**Session II**: Educational Research **Session Chair:** Assoc. Prof. Eric C.K. Cheng
16:00-16:15 **RC0018**	Creating a Model of Assessment of Mathematical Education Quality on the Example of Plekhanov Russian University of Economics Ekaterina Troneva and Maksim Babushkin **Presenter:** Maksim Babushkin *Plekhanov Russian University of Economics, Russia*
16:15-16:30 **RC0038**	Chemistry Teacher's Perception toward STEM Learning Ari Syahidul Shidiq, Anna Permanasari and Hernani Hernani **Presenter:** Ari Syahidul Shidiq *Universitas Pendidikan Indonesia, Indonesia*
16:30-16:45 **RC00019**	Bologna Declaration and Mathematical Education in the Countries of the Former USSR (by the example of Russia and Latvia) Marianna Maksimenko, Inta Volodko, Sarmite Cernajeva and Irina Eglite **Presenter:** Marianna Maksimenko *Plekhanov Russian University of Economics, Russia*
16:45-17:00 **RC0009**	Internationalization Without Traveling: The Effect of Cross-cultural Communication on Future Expectations of Students Michal Milka Schodl and Noela Haughton **Presenter:** Michal Milka Schodl *The Hebrew University of Jerusalem, Israel*
17:00-17:15 **RC2006-A**	Creating Essential Leadership Competencies of a Japanese Energy Company to become a Global Leader Ryota Nagai, Hirohisa Nagai, Yi Zhu **Presenter:** Ryota Nagai *University of Tsukuba, Japan*

17:15-17:30 **RC2007-A**	Can we all be positive leaders? A conceptual work for the selection of positive leaders Anna-Sophie Risch **Presenter:** Anna-Sophie Risch *Catholic University Eichstätt-Ingolstadt, Germany*
18:00	**Dinner**

Authors' Presentations

◆ **Session I**
Theme: Computer Aided Instruction
Time: 14:00-15:45
Venue: Sakke Perire

Session Chair: Prof. Joy Kutaka-Kennedy, National University, USA

*The time slots assigned here are only tentative. Presenters are recommended to stay for the whole session in case of any absence.
**After the session, there will be a group photo for all presenters in this session.

14:00-14:15 RC0036	Using Gamification to Develop Self-Directed Learning Ernesto Armando Pacheco-Velazquez **Presenter:** Ernesto Armando Pacheco-Velazquez *Tecnologico de Monterrey, Mexico* *Abstract:* A fundamental task for the teaching activity is to create pedagogical designs that invite students to give a meaning to the academic contents taught in a classroom. Moreover, these pedagogical designs must not only have the capacity to increase the acquisition of knowledge, but also must promote those skills that will be indispensable in the 21st century labor world. Gamification has had a positive impact when there is a pedagogical design that supports the game, and has been shown to promote various skills in students. The purpose of this article is to narrate the experience of a pedagogical design in the logistics area where we have used a serious game developed by professors from our university to promote student learning and develop Self-directed learning skill.
14:15-14:30 RC0013	The Effect of Simcity as Instructional Media in Geography Learning on Learners' Spatial Intelligence Exsa Putra, Bima Aji Tantular and Iwan Setiawan **Presenter:** Exsa Putra *Universitas Pendidikan Indonesia, Indonesia* *Abstract:* Indonesia is a vast archipelago and has a variety of potentials. Indonesia's potentials can be developed if individual spatial intelligence is also developed. The development of spatial intelligence can be done in educational institutions through geography learning. Currently, spatial intelligence development through the use of geography learning needs to be enhanced since the instructional media used in teaching are unattractive. Therefore, an instructional medium that can attract and develop learners' spatial intelligence is the SimCity Game. This study will investigate the effect of SimCity game on learners' spatial intelligence. This study employed the quasi-experimental method to eleven grade students of Angkasa Bandung Senior High School. The subjects were students from two classes, XI-A as experiment group and XI-B as control group. The quasi-experimental method in this study utilized pre-test and post-test. This study involved the use of SimCity Game as the independent variable and spatial intelligence as the dependent variable with location, distance, direction, and relief as indicators. The instrument used in this study was multiple-choice test. The normality was tested by using Kolmogorov-Smirnov Z Test, the homogeneity using Levene's Test, and hypothesis test using independent sample T-test. The result of the study indicated that SimCity Game as medium instruction for Geography learning could develop learners' spatial intelligence in experiment class significantly. However, compared to conventional media, SimCity was proven to expand learners' spatial intelligence. Therefore, it is necessary to use SimCity in

	the learning process in the classroom.
14:30-14:45 **RC0037**	The Use of Videos to Develop and Evaluate Mathematical Skills Linda Margarita Medina **Presenter:** Linda Margarita Medina *Tecnologico de Monterrey, Mexico* *Abstract:* This paper presents how to develop and evaluate mathematical skills using videos. A methodology is used to develop mathematical skills in engineering students, which includes the use of 3d tools and videos. We present a scale to measure eight mathematical skills: argumentation, communication, modeling, problem solving, representation, mathematical language and use of technological tools. This scale is used to evaluate videos as pre-test and post-test. Alternatively, a final test is applied that measures the level of development of mathematical skills. It is found that the average relative gain in the development of mathematical skills is 33.7%. It is also found that there is a statistically significant relationship between the learning gain measured with the videos and the final test of the students.
14:45-15:00 **RC0039-A**	Digital Technologies and Multimodality: Reshaping Literacy for the 21 Century Martine Pellerin **Presenter:** Martine Pellerin *University of Alberta, Canada* *Abstract:* The digital technologies are now ubiquitous on all spheres of our daily activities. The use of these digital tools that incorporate multiple media and modalities does contribute to the evolution of the concept of traditional literacy (Oskoz et Elola, 2016; Toohey et al., 2015). It also does lead to new educational issues that demand critical reflection on the emergence of new literacy skills adapted to the needs of citizens working in this digital age (Romero, Lille and Patiño, 2017). In light of these new challenges regarding the use of digital technologies for the development of 21st century literacy skills, this study focuses on the contribution of the affordances offered by these new digital tools in the creation of multimodal and multisensory learning environments for the development of literacy skills in the digital age. The study was carried out in primary and secondary classrooms in a French second language context in one of the English-speaking provinces of Canada. The analysis of digital data, such as videos and multimodal artifacts created using apps by students, reveals the contribution of the affordances offered by new digital tools in the development multimodal skills in literacy. The results indicate in particular the contribution of the possibilities offered by these tools in the creation of new modes of expression, representation of thought, action and engagement which, in turn, promote the development of multimodal skills needed in the 21st century.

15:00-15:15 **RC0046**	A Methodology to Teach Complex Variable Concepts based on Visualization Rubén Darío Santiago Acosta, Ernesto Manuel Hernández Cooper, Juan Carlos Del Valle Sotelo **Presenter:** Rubén Darío Santiago Acosta *Tecnológico de Monterrey, México* *Abstract:* A methodology based in visualization of complex variable concepts for engineering students is presented in this work. Our study is based on the usage of graphic interactive units developed in the software Mathematica. The main goal is to enhance the competencies of students that are related with the use of concepts and complex analysis tools, which are required for engineering applications. The learning material was uploaded into the web, and it provides an interactive environment, which can be accessed at any time and with any mobile dispositive. The web site that has been developed contains electronic support material, explanatory videos, activities where the usage of technology is required, sessions on computational visualization of concepts and an exercise trainer for complex variable problems. The visualization sessions were developed by using the Mathematica and Desmos packages. Complex variable function plotting, Cauchy-Riemann equations, residues computation among others, are the type of subjects contained into the visualization sessions. In this work, several elements that were used to develop the learning material are shown. The results obtained from 62 students at Tecnológico de Monterrey are evaluated.
15:15-15:30 **RC0020**	Item Response Theory and Developing Scales for E-learning Irina Maslyakova **Presenter:** Irina Maslyakova *Plekhanov Russian University of Economics, Russia* *Abstract:* When creating virtual courses, it is necessary to develop a very accurate system of assessment of the level of knowledge. Standards of online training should not differ from the standard level of training on campus. IRT has proven itself well in creating standardized tests. The article discusses the application of IRT methods to create testing scales in e-learning. On the example of mathematical disciplines, a method is developed in which the student can move to another level only when the corresponding result is achieved. It considers not only the correctness of the answer, but also the time for which this answer was received.
15:30-15:45 **RC0024-A**	New Challenges in Education: Industry 4.0 an Opportunity to Transform Engineering Education for a Better Society Olga Lopez Rios, Leopoldo Julian Lechuga and Gisela Lechuga **Presenter:**Olga Lopez Rios *Tecnológico de Monterrey, México* *Abstract:* The requirements of Industry 4.0 provide a new opportunity for universities. As it will lead to a substantial transformation of their educational programs and methods to enhance students' skills and competencies required for a new labor market given the rapidly emerging industry changes. This called Fourth Industrial Revolution is based on cutting-edge technological tools and data collection. Motivating new and innovative ways to operate and transform processes. These new tools and innovative education strategies, using trailblazing technologies, in engineering programs can potentially transform our society for the better. Well oriented, these revolutionary transformations, supported by updated universities' study programs, could lead to better and faster replies to global

	environmental, economic and social challenges the world had been facing during the last century. In this paper we present the last advances of a whole assessment method applied to an undergraduate industrial engineering program to measure the impact of virtual reality use for the enhancement of industrial processes in a set of eleven transversal student's competencies, focused on the Fourth Industrial Revolution. The importance of measuring this impact is of the major relevance for the educational challenge of improving study programs; which plan to include front-line technologies to respond to the skill set required by Industry 4.0. Our measures were tested statistically and qualitatively in a class of statistical engineering with a group of students in their last semester of the industrial engineering program in the Tecnologico de Monterrey Mexico. The group was exposed to challenges related to the enhancement of industrial processes, these challenges were presented to the students; first traditionally using descriptions and 2D video films of the processes and in a second part using immersive 3D films. The results obtained were a positive impact on five of the set of eleven competencies, the statistical validation was made using traditional hypotheses tests. We also added a qualitative measure by means of a survey opinion pool, which showed the great satisfaction of students experimenting with virtual reality environments. This assessment method was iteratively applied and improved during the last three years. This closes the experience of measuring the impact of the use of virtual reality environments to enhance industrial processes on relevant competencies regarding Industry 4.0. We present the last achievements related to tests, rubrics and results. We have added a direct evaluation on competencies which complement our previous attempts and experiences.
15:45-16:00	**Coffee Break**

◆ Session II
Topic: Educational Research
Time: 16:00-17:30
Venue: Sakke Perire

Session Chair: Assoc. Prof. Eric C.K. Cheng, The Education University of Hong Kong, China

*The time slots assigned here are only tentative. Presenters are recommended to stay for the whole session in case of any absence.
**After the session, there will be a group photo for all presenters in this session.

16:00-16:15 RC0018	Creating a Model of Assessment of Mathematical Education Quality on the Example of Plekhanov Russian University of Economics Ekaterina Troneva and Maksim Babushkin **Presenter:** T Maksim Babushkin *Plekhanov Russian University of Economics, Russia* *Abstract:* Educational process is inextricably connected with learning and the control of the level of acquired knowledge — this is exactly what determines the relevance of the chosen topic. When checking up tests, taking exams it is relatively difficult to exclude the examiner's bias, lack of informational content in the tasks, personality traits of the student. The purpose of the work is, on the basis of existing models, to develop an approach to compiling student performance assessment systems, most informatively reflecting students 'knowledge levels, as well as to build and test a model for checking the level of knowledge for an objective assessment of students' level of preparedness in mathematical disciplines. In this paper, educational programs were analyzed for the depth of study of mathematical disciplines using syllabus and the proposed assessment tools; an experiment was conducted to study specific statistics of distributions of test results that reflect the correspondence of existing assessment tools and IRT (Item Response Theory); the results were evaluated in the context of other knowledge control tools. As a result of the study, the first outcomes were obtained, which can be further used in the preparation of control and measuring materials to assess the level of knowledge of students of Plekhanov Russian University of Economics (REU).
16:15-16:30 RC0038	Chemistry Teacher's Perception toward STEM Learning Ari Syahidul Shidiq, Anna Permanasari and Hernani Hernani **Presenter:** Ari Syahidul Shidiq *Universitas Pendidikan Indonesia, Indonesia* *Abstract:* Chemistry learning problems, industry needs and existing problems in society can be discussed and integrated into the classroom by applying the STEM (Science, Technology, Engineering, and Mathematics) approach. The focus of STEM research conducted previously was on improving the skills possessed by students, few paid attention to the perceptions and attitudes of teachers in chemistry class. The purpose of this study was to determine the chemistry teacher's perception of the application of the STEM approach in chemistry learning. The purposed-design survey was used in this study. A total of 37 chemistry teachers were used as respondents. The sampling technique used was random sampling by giving questionnaires to chemistry teachers from various backgrounds in Indonesia. The questionnaire instrument was used to determine teacher perceptions of STEM learning in chemistry learning. The results of the survey conducted were chemistry teachers had a positive perception of the application of chemistry learning using the STEM approach. The main obstacle faced by teachers to implement the STEM approach is that teachers are not accustomed to applying the STEM approach and there is little time available for the learning process with STEM. Meanwhile, according to the teachers, by applying the STEM approach in chemistry class, it can improve the students' skills needed in the 21st century.

16:30-16:45 **RC00019**	Bologna Declaration and Mathematical Education in the Countries of the Former USSR (by the example of Russia and Latvia) Marianna Maksimenko, Inta Volodko, Sarmite Cernajeva and Irina Eglite **Presenter:** Marianna Maksimenko *Plekhanov Russian University of Economics, Russia* *Abstract:* More than twenty years have passed since the adoption of the Bologna agreements, and disputes between their supporters and opponents do not cease. On the one hand, after the Erasure of borders in Europe in connection with the formation of the Schengen area and the collapse of the USSR, young people began to show interest in studying in other countries and got the opportunity to realize their interest. And in order to be able to start education in one country, and continue in another one you need to have a debugged system of credit transfer of disciplines and some kind of similarity in the sequence of subjects presentation. On the other hand, the Bologna agreements entailed the destruction of centuries-old traditions and the collapse of established schools of Higher education. In the countries of the former USSR, despite the generally negative (to varying degrees, depending on the country) attitude to all Soviet, there is respect for the Soviet education system. The teachers who had experience of teaching in the Soviet school, remember with nostalgia how they worked then, how strong students were, how seriously they had to prepare for each lesson. However, there was almost no need to fill out a lot of papers. Now the cliche "Soviet education" is back in use. But in fact, the Soviet education system is the successor of the German education system, which came to the Russian Empire in the XVIII century in the time of Peter I. In general, in Europe until recently two education systems dominated: Anglo-Saxon, i.e. .German, and Latin. As a result of the adoption of the Bologna agreements, it turned out that the Latin system won. At least, it happened in Latvia and in Russia. As math teachers of Higher School, we are interested in changes regarding the teaching of mathematics in Higher education. In this article the changes that had occurred as a result of the signing of the Bologna Convention were analyzed using the examples of Latvia and Russia.
16:45-17:00 **RC0009**	Internationalization Without Traveling: The Effect of Cross-cultural Communication on Future Expectations of Students Michal Milka Schodl and Noela Haughton **Presenter:** Michal Milka Schodl *The Hebrew University of Jerusalem, Israel* *Abstract:* Internationalization is the preparation of students to thrive in a globalized world. Internationalization has many approaches including franchise agreements, international campuses, and deliberate changes in curricula to integrate international dimensions (Brookers & Becket, 2011; Caruana \& Hanstock, 2008). We present a cross-cultural, technology-supported communication assignment in the curriculum of two academic courses, one in Organizational Behavior (Israel) and in Education (American). Students from each course were matched and worked together. The Israelis' goal was to consult with their partners in English and to support their partners' understanding of instructional issues English Language Learners (ELLs) may face. The Americans' goals were to improve their instructional planning and assessment skills, especially as these related to diversity and English Language Learners. Both groups of students completed pre and post assessment scales. The Israelis completed twice 5-items scales that assessed future professional expectations. The American's planning and assessment abilities were measured using an 11-item and 19-item scale, respectively. The overall future global expectation of the Israelis (scale average) increased significantly, t(22)=-3.45, p=.001, d=0.529 from Time1 to Time 2; The items that contributed significantly

	to this increase were the items concerning skills that were directly practiced in the assignment: having social relations with people from different countries t(22)=-2.011, p=.0028, d=0.42 and writing working-documents in English t(22)=-2.598, p=.008, d=0.54. The American's overall planning (scale1) and assessment (scale 2) abilities increased significantly from Time 1 to Time 2, t(52)=-14.134, p=.000, d=1.942 and t(52)=-17.299, p=.000, d=2.376, respectively. The potential contribution of internationalization through cross-cultural joint assignments is discussed.
17:00-17:15 RC2006-A	Creating Essential Leadership Competencies of a Japanese Energy Company to become a Global Leader Ryota Nagai, Hirohisa Nagai, Yi Zhu **Presenter:** Ryota Nagai *University of Tsukuba, Japan* *Abstract:* This paper studies an incentive contract design problem based on principal-agent theory in the context of virtual enterprise, which considers the mutual assistance behavior of agents and optimizes the total profit of virtual enterprise and completion time of project. Through modeling analysis, it is proved that mutual assistance helps to improve the effort level of agents in virtual enterprise. The results show that mutual assistance among agents in the virtual enterprise is beneficial to revenue increases and efficiency of management work. Under the action of incentive contract, individual's egoistic thought is affected to a certain extent to induce mutual assistance with benefits, thus obtaining greater benefits.
17:15-17:30 RC2007-A	Can we all be positive leaders? A conceptual work for the selection of positive leaders Anna-Sophie Risch **Presenter:** Anna-Sophie Risch *Catholic University Eichstätt-Ingolstadt, Germany* *Abstract:* Today, companies are faced with the challenge of changing mentalities across the generations, the lack of motivation of employees, and the increasing digitalization of the working environment. With the help of the leadership model positive leadership, which has evolved from positive psychology, managers are able to meet these challenges. Positive leadership pursues the goal of identifying and promoting strengths, which creates the basis for work happiness and consequently increases the productivity of the individual and the entire organization. Various studies have scientifically proven the success of this leadership model. In addition to the scientific results, many positive leadership training approaches have been developed in practice in recent years, with the help of which managers are introduced to positive leadership and learn what makes this leadership style so special. Today, the concepts of positive leadership are becoming increasingly important. According to JENEWEIN, however, not all managers can be developed towards positive leadership. The question arises which leaders are suitable for the concept of positive leadership so that the full potential of the approach can be utilized and thus optimal results for the organization can be achieved. Furthermore, the question arises how a leadership selection process must be designed in order to identify "real" positive leaders. The aim of the paper is the conceptualization of a holistic personnel selection procedure for leaders in the context of positive leadership with a scientific-theoretical background. With the help of the developed concept, it should be possible to select managers who can unfold the full potential of the Positive Leadership approach and, as a result, achieve optimal results for the organization, i.e. "real" Positive Leaders. The unique selling proposition of this concept is that it does not consist of a pure "assessment center", but that the leaders can be trained at specific points during the selection process before they move on to the next stage of the selection process. For many people, positive leadership is new, so it is important to develop it towards positive leadership, which is made possible by the possibility of using accompanying training. The development of

	the concept is based on previous study results from, among others, leadership theory, psychology, motivation theory and positive psychology, supplemented by expert interviews. What is new about this work, apart from closing the scientific as well as practical research gap, is that one of the most successful concepts of innovation management, the Stage-Gate Process by Robert G. Cooper, is transferred and applied to the human resources area. This is the first paper that deals with the conceptualization of a leadership selection process for positive leadership. The work builds on the previous results of this research field, extended by expert interviews. This concept offers an added value for HR work in companies that live Positive Leadership or want to live it in the future. Human resource managers receive a "ready- made" concept that they can directly apply/implement during the selection process.
18:00	**Dinner**

➢ Poster Presentations

Venue: Sakke Perire, Time: 17:30-18:00 on March 4, 2020

RC2003	Optimal Incentive Contract to Motivate Task Effort and Mutual Assistance for R&D Project within Virtual Enterprise **Mingze Li**, Yunpeng Geng, and Wenyi Sha *Hefei University of Technology, China* *Abstract:* This paper studies an incentive contract design problem based on principal-agent theory in the context of virtual enterprise, which considers the mutual assistance behavior of agents and optimizes the total profit of virtual enterprise and completion time of project. Through modeling analysis, it is proved that mutual assistance helps to improve the effort level of agents in virtual enterprise. The results show that mutual assistance among agents in the virtual enterprise is beneficial to revenue increases and efficiency of management work. Under the action of incentive contract, individual's egoistic thought is affected to a certain extent to induce mutual assistance with benefits, thus obtaining greater benefits.
RC0047	Describing Original Methods of Teaching English Grammar to Non-Linguistic Students **Irina Chernobylskaya**, Irina Likhacheva and Elena Krivosheeva *RUDN University, Russia* *Abstract:* The given article is devoted to the problem of describing original methods of teaching English grammar to non-linguistic students. The authors view algorithms and stages of organizing communicative activities of students in the grammar field by means of innovative methods of teaching English grammar. The article deals with the illustration of the correlation between communicative aspects of non-linguistic students in the process of development grammatical skills based on the use of new methods. The results show the significant increase in the number of students with high level of grammar competence according to the following criteria: cognitive (11,5% in the first cut to 48% in the final cut), operational (from 9,5% to 41%), functional (from 8,5% to 52%) aspects.
RC1006	Research on the Construction of New Engineering Specialty based on Integration of School – enterprise **Lihong Wang** and Jing Lu *Heihe University, China* *Abstract:* N view of the current situation of engineering talents training in Local Application-oriented Undergraduate Colleges, this paper puts forward the ideas and ideas of integrating school- enterprise to build a new engineering major. It expounds and analyzes four aspects, including the precise formulation of talent training objectives, the determination of talent training programs, the integration of teaching resources construction and the construction of guarantee system. It also discusses the construction of new engineering major to improve talent training In order to provide reference for the construction of new engineering major and the cultivation of high-quality engineering and technical talents in Local Application-oriented Undergraduate Colleges, we should set up the way of level and the means of talent cultivation quality.
RC0032-A	A Study on the Changing Perceptions of Teachers and the Educational Environment of ICT Education with Reference to OECD TALIS Results **Ritsu TANIGUCHI** *Waseda University, Japan*

	Abstract: In this presentation, I will focus on the recent international teacher environment survey: TALIS (Teaching and Learning International Survey). TALIS is an international survey conducted by the OECD on school learning environments and teacher work environments. The first survey was conducted in 2008, and the second and the third surveys were conducted in 2013 and 2018. Participating countries increased from 24 in 2008 to 48 in 2018. In this presentation, I will analyse changes in survey results from the first to the third surveys, focusing on the field of ICT (Information and communication technology) education and examining the predominant characteristics of each year. I will also provide an analysis of teachers' awareness of ICT education and facility and equipment status based on the survey results of each country.
RC0006	Analysis on the Reform process of College Entrance Examination and its market potential **Shuning Zhang** *Central South University, China* *Abstract:* Initiated in 2014, the first round of college entrance examination reform has been steadily promoted to the third round and the pace appeared to slow down a bit. A new selection and enrollment rule, namely "3+1+2" was adopted. The new trend has witnessed the increase of the market demand for K12 training and quality education. Moreover, the new trend in course selection, enrollment and course arrangement also bring more opportunities in Education Technology (also known as "EdTech").
RC0040-A	The Motives of Choosing Occupation of Polish Teachers Katarzyna Szorc and Beata Kunat **Presenter:** Katarzyna Szorc and Beata Kunat *University of Bialystok, Poland* *Abstract:* The aim of this study was to answer these questions as well as to present a current picture of the motives of choosing the occupation of polish teachers. The article refers to aspects of autobiographical research relating to the specific of the professional development of teachers. In this research we applied concepts of professional development of teachers which treats this process as a transformation of teacher's individual experiences (Day, 2008, 2017; Fessler, 1995; Huberman, 1993, 1995). In the first part of article various elements of the research are presented including the object of analysis, characterisation of the environment of investigations and an investigative test. A characteristic analysis, as applied in the autobiographical method/ thematic biography (Denzin, 1990). Furthermore, an evaluation of the autobiographical material is also presented. A large part of the article is devoted to the presentation of the research results relating to the specific of the first stage of a teacher's professional development: the motives for choosing the occupation of polish teacher. The article also refers to the most recent investigations into this particular area of interest (Dróżka, 2010, 2016; Dyrda, 2010; Dróżka, Michalak, 2017; Gierula, 2018; Gliński, 2014; Kosiba, Madejski, Jaworski, 2014; Kowalczyk, 2003; Miszczuk, 2010; Tabor, 2008). The last part of the article includes the research conclusions. Furthermore, implications for theory, practice and research on professional development of polish teachers are also discussed. This study reveals the insightful findings of these interviews and offers several valuable lessons for all teacher educators. The results of this research could be useful for educational politics, executives of institutions dealing with education of teachers.

➢Social Program

- **Route:**

Novotel Paris 17 Hotel→The Eiffel Tower →The Louvre→The Arc de Triomphe → Novotel Paris 17 Hotel

Time	Destination
9:00	Gather at the lobby of Novotel Paris 17 Hotel
9:10	The bus leaving from the hotel
10:00-11:30	The Eiffel Tower
11:10-13:00	Lunch
13:00-15:00	The Louvre
15:00-17:00	The Arc de Triomphe
17:00	Back to Novotel Paris 17 Hotel

➢Upcoming Conferences

2020 4th International Conference on Education and Multimedia Technology (ICEMT 2020)

Kyoto Japan, 19-22, July, 2020

2020 4th International Conference on Education and Multimedia Technology (ICEMT 2020) will be held in **Kyoto Japan** during **19-22, July, 2020**. ICEMT aims to bring together researchers, scientists, engineers, and scholar students to exchange and share their experiences, new ideas, and research results about all aspects of Education and Multimedia Technology, and discuss the practical challenges encountered and the solutions adopted. The conference will be held every year to make it an ideal platform for people to share views and experiences in Education, Multimedia Technology and related areas.

◆ Publication

The accepted papers by ICEMT 2020 published in conference proceeding, which will be sent to be indexed by **EI Compendex** and **Scopus** and submitted to be reviewed by Thomson Reuters Conference Proceedings Citation Index (ISI Web of Science).

◆ Topics

Topics of interest for submission include, but are not limited to:

Systems, Design and Technologies	Cross-cultural
practices and cases in e-education	education
systems and technologies in e-education	e-Learning strategies
applications and integration of e-education	Social benefits of e-Learning
e-learning evaluation and content	e-Learning effectiveness and outcomes
campus information systems	Web-based learning
e-learning technologies, standards and systems	Academic participation and freedom

◆ Submission Methods

1. E-mail: icemt@academic.net.
2. Electronic Submission System: http://confsys.iconf.org/submission/icemt2020

◆ Important Dates

Submission Deadline	April 20, 2020
Notification Deadline	May 10, 2020
Registration Deadline	May 30, 2020
Conference Dates	July 19-22, 2020

http://www.icemt.org/

2020 The 4th International Conference on E-Society, E-Education and E-Technology (ICSET 2020), which will be held in Ming Chuan University, Taipei, Taiwan during August 15-17, 2020. Organized by IEDRC and co-organized by the Institute of General Education of Ming Chuan University, the dual conference aims to provide an interdisciplinary global forum for scholars, experts and practitioners from academia and industries to exchange practical, teaching and research ideas and present results of ongoing practical and scholarly inquiries in the most state-of-the-art areas of current emerging interest in a wide variety of fields, including but not limited to the adoption of E-technology in social studies, education.

◆ Publication

The accepted papers by ICEMT 2020 published in conference proceeding, which will be sent to be indexed by **EI Compendex** and **Scopus** and submitted to be reviewed by Thomson Reuters Conference Proceedings Citation Index (ISI Web of Science).

◆ Topics

Topics of interest for submission include, but are not limited to:

Social Integration	Mobile learning
Social Bookmarking	Virtual learning environments
Social Software	Computer aided assessments
E-Democracy	Marketing and promoting e-learning
Digitization, heterogeneity and convergence	Organization learning
Interactivity and virtuality	Portals and Virtual learning
Citizenship, regulation and heterarchy	Course design

◆ Submission Methods

3. E-mail: icset@academic.net
4. Electronic Submission System: http://confsys.iconf.org/submission/icset2020

◆ Important Dates

Submission Deadline	April 20, 2020
Notification Deadline	May 10, 2020
Registration Deadline	May 30, 2020
Conference Dates	August 15-17, 2020

http://www.icset.org/

Note

Note