

#### THE ATHENS INSTITUTE FOR EDUCATION AND RESEARCH

# **Abstract Book:**

19<sup>th</sup> Annual International Conference on Education
15-18 May 2017, Athens, Greece

Edited by Gregory T. Papanikos

# Abstracts 19<sup>th</sup> Annual International Conference on Education 15-18 May 2017, Athens, Greece

Edited by Gregory T. Papanikos

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#### **Preface**

This book includes the abstracts of all the papers presented at the 19th Annual International Conference on Education, 15-18 May 2017, organized by the Athens Institute for Education and Research (ATINER). In total 160 papers were submitted by 170 presenters, coming from 40 different countries (Australia, Austria, Belgium, Brazil, Canada, Chile, China, Colombia, Croatia, Cyprus, Czech Republic, Finland, FYROM, Germany, Hong Kong, Hungary, India, Ireland, Israel, Italy, Japan, Jordan, Kazakhstan, Kenya, Malaysia, Qatar, Russia, Saudia Arabia, Singapore, Slovenia, South Africa, Spain, Sweden, Switzerland, Thailand, Turkey, UAE, Uganda, UK and USA). The conference was organized into 39 sessions that included topic areas such as educational foundations, language learning, online education, leadership, education technology, and more. A full conference program can be found beginning on the next page. The papers presented during this conference will be considered for inclusion in one of ATINER's many publications.

The purpose of this abstract book is to provide members of ATINER and other academics around the world with a resource through which to discover colleagues and additional research relevant to their own work. This purpose is in congruence with the overall mission of the institute. ATINER was established in 1995 as an independent academic organization with the mission to become a forum where academics and researchers from all over the world could meet to exchange ideas on their research and consider the future developments of their fields of study.

It is our hope that through ATINER's conferences and publications, Athens will become a place where academics and researchers from all over the world regularly meet to discuss the developments of their discipline and present their work. ATINER has organized more than 400 international conferences and has published nearly 200 books. Academically, the institute is organized into seven research divisions and forty research units. Each research unit organizes at least one annual conference and undertakes various projects.

For each of these events, the involvement of multiple parties is crucial. I would like to thank all the participants, the members of the organizing and academic committees, and most importantly the administration staff of ATINER for putting this conference and its subsequent publications together.

Gregory T. Papanikos President

#### FINAL CONFERENCE PROGRAM

#### 19th Annual International Conference on Education, 15-18 May 2017 Athens, Greece

#### **PROGRAM**

Conference Venue: The Stanley Hotel, 1 Odisseos Str., Karaiskaki Square Athens, Greece

#### <u>C O N F E R E N C E P R O G R A M</u>

#### **Monday 15 May 2017**

#### 08:00-08:45 Registration and Refreshments

**08:45-09:00 (Room C - 1**<sup>st</sup> Floor) Welcome and Opening Address by Gregory T. Papanikos, President, ATINER.

09:00-11:00 Session I	09:00-11:00 Session II	09:00-11:00 Session III	09:00-11:00 Session IV
(Room A - Ground Floor):	(Room B - Ground Floor):	(Room C - 1st Floor):	(Room D - 3 <sup>rd</sup> Floor):
Educational Foundations I	Language Learning I	Higher Education I	Online Education
Chair: Vasilis Skianis,	Chair: Zoi Charalampous,	Chair: Despoina-Eirini	Chair: Olga Gkounta,
Research Fellow, ATINER	Researcher, ATINER.	Katzoli, Researcher,	Researcher, ATINER.
· ·	i i	ATINER.	· ·
1. Yaacov J Katz, President,	1. Donald Livingston,	Gregorio Rodriguez	1. *Maureen Andrade.
Michlala – Jerusalem	Professor, LaGrange	Gomez, Professor,	Associate Vice President.
Academic College and	College, USA & Sharon	University of Cadiz,	Utah Valley University,
Professor Emeritus, Bar-	Livingston, Assistant	Spain & Maria Soledad	USA. Online Learning:
Ilan University, Israel &	Professor, LaGrange	Ibarra Saiz, Professor,	Strategies for Success.
Racheli Zaretzky,	College, USA. Preparing	University of Cadiz,	2. *Laura Gaudet, Professor
Lecturer. Michlala –	TESOL Instructors to	Spain. Enabling Progress	and Chair, Department of
Jerusalem Academic	Acquire Cultural	towards Assessment as	Counseling Psychological
College, Israel. The	Proficiency through	Learning and	Sciences and Social Work.
Relationship between	Critical Reflective	Empowerment. The Role	Chadron State College,
Teachers' Perceptions of	Approaches.	of Students' Assessment	USA & Peter Moriasi.
Emotional Labour.	2. Liu Jian, Lecturer, The	Literacy.	Assistant Professor.
Teacher Burnout and	Chinese University of	2. *Elif Bengu, Assistant	Chadron State College,
Teachers' Educational	Hong Kong, Hong Kong.	Professor, Abdullah Gül	USA. Implementation and
Level.	How Practical Teaching	University, Turkey.	Evaluation of Screencast
2. M. Katie Flanagan,	Methods Applying in	Application of Team-	Videos for Graduate
Associate Professor,	Chinese Pronunciation	Base Learning at a Health	Online Counseling
Florida State University,	Class.	Science Course: A Case	Courses.
USA. Making Service	3. Xiaohui Sun, Lecturer,	Study.	3. Khaled Asad, Lecturer,
Learning a High Impact	Beijing Normal	3. James Smiley, Instructor,	Al-Qasemi Academic
Practice in College	University, China &	Online Course Developer,	College of Education and
Curriculum.	Shaoqian Luo, Professor,	UC Berkeley / Associate	Beit-Berl Academic
<ol><li>Jeffery Mangram,</li></ol>	Beijing Normal	Professor, San Jose State	College of Education,
Associate Professor,	University, China. A	University / Professor,	Israel, Moanes Tibi,
Syracuse University,	Narrative Inquiry into	Diablo Valley College,	Lecturer, Beit-Berl
USA. Peeping Through	EFL Teacher Change in	USA. Education	Academic College of
the Keyhole: Social	Chinese Primary Schools.	Reimagined.	Education, Israel & Jamal
Studies, Media Literacy	4. *Maria Rosaria D'	4. *Dennis Kramer,	Raiyn, Head of the Faculty
and the Construction of	Acierno, Associate	Assistant Professor and	of Exact Sciences, Al-
the Subject.	Professor, Università	Director of Institute of	Qasemi Academic College
4. <u>Lars</u> <u>Samuelsson</u> ,	degli Studi di Napoli	Higher Education,	of Education, Israel.
Associate Professor /	Federico II, Italy.	University of Florida,	Teaching Programming to
Senior Lecturer, Umea	Reading in a Second	USA. Student Responses	Primary School Pupils
University, Sweden &	Language at Elementary	to the (Dis) Incentives of	through Visual and
Niclas Lindstrom,	Level for Adult	Postsecondary Fiscal	Interactive Programming
Associate Professor /	Students.	Policies.	Environments.
Senior Lecturer, Umea		5. Sharita Bharuthram,	4. Barbie Stanford, PhD
University, Sweden.		Senior Lecturer,	
Associate Professor / Senior Lecturer, Umea University, Sweden & Niclas Lindstrom, Associate Professor / Senior Lecturer, Umea University, Sweden. Teaching Ethics to Non- Philosophy Students.		University of the	Teaching Assistant, Sam
Philosophy Students.		Western Cape, South	Houston State University,

5.*Lou L. Sabina, Visiting Assistant Professor, Stetson University, USA & *Chris Colwell, Associate Professor, Stetson University, USA. Challenges of Principal Succession: Examining the Challenges of Hiring Internal Vs. External Candidates.		Africa. Lecturers' Perceptions on the use of Assessment Rubrics to Inform Teaching Practice and Curriculum Review and Development. 6. *Romina da Costa, PhD Student, University of Maryland, USA. Women's Proportionate Representation and Faculty Work Environments: An Exploratory Case Study of Tenured and Tenure- Track Faculty at the University of Maryland, College Park.	USA, Ana Marcela Montenegro, PhD Student / Graduate Teaching Assistant, Sam Houston State University, USA & Lori Haas, Assistant Professor, Sam Houston State University, USA. Blogging and Online Book Clubs: Preservice Teachers' Experiences and Perceptions.
11:00-12:30 Session V (Room A - Ground Floor): Teacher Education I	11:00-12:30 Session VI (Room B - Ground Floor): A Panel on Bilingual Education: Opportunities and Challenges I	11:00-12:30 Session VII (Room C - 1 <sup>st</sup> Floor): Science and Mathematics Education I	11:00-12:30 Session VIII (Room D - 3 <sup>rd</sup> Floor): Education Technology I
Chair: Chris Colwell, Associate Professor, Stetson University, USA.	Chair: Nancy Burkhalter, Lecturer, Seattle University, USA.	Chair: Dennis Kramer, Assistant Professor and Director of Institute of Higher Education, University of Florida, USA.	Chair: Maureen Andrade, Associate Vice President, Utah Valley University, USA.
1.*David Carey, Dean, College of Progressive Education, Ireland. Ireland-Kenyan Partnership in Teacher Training: Challenges and Opportunities.  2. Jackie HeeYoung Kim, Associate Professor, Armstrong State University, USA. Professional Development Framework to Enhance Teachers' Self-Efficacy.  3. Jaime Diamond, Assistant Professor, University of Georgia, USA. Should Preservice Teachers Engage in Discussion About Transfer?  4. *Frances Vitali, Lecturer III, The University of New Mexico, USA & Deborah Roberts-Harris, Assistant Professor, The University of New Mexico, USA. Stories from a Voiceless Profession.	1.*Denise Egea, Professor, Nazarbayev University, Kazakhstan. Three Francophone Writers: The Challenges and Opportunities of Their Bilingualism. (EDUBIL) 2. Cristina Escobar Urmeneta, Professor, Universitat Autònoma de Barcelona, Spain. Internationalisation in Pre-service Primary Teacher Education: Opportunities and Challenges. (EDUBIL) (Monday) 3. Emmanuel O. Acquah, Lecturer, University of Turku, Finland, Jenni Alisaari, Professor, University of Turku, Finland & Nancy L. Commins, Clinical Professor, University of Colorado at Denver, USA. Finnish Teachers' Knowledge about Teaching Bilingual/Multilingual Learners. (EDUBIL) 4. Giselle Martinez Negrette, PhD Student, University of Wisconsin-Madison, USA. Exploring Bilingual Education: An in Depth Case Study of a Bilingual	1. Bernie Garrett, Associate Professor, University of British Columbia, Canada & Roger Cutting, Associate Professor, University of Plymouth, UK. Magical Science: Discriminating Science and Pseudoscience in Media Messaging with Undergraduate Students.  2. Maria Uribe, Senior Instructor, University of Colorado Denver, USA, Ron Tzur, Professor, University of Colorado Denver, USA, Sally Nathenson-Mjia, Professor, University of Colorado Denver, USA & Nicola Hadkowski, PhD Student, University of Colorado Denver, USA. Teacher Learning to Promote Bilingual Learners' Mathematical Reasoning.  3. *Michael Katz, Senior Lecturer, Haifa University, Israel. Perceptions of Infinity.	1. Patricia Alejandra Behar, Professor, Federal University of Rio Grande do Sul, Brazil, Tassia Grande, Researcher / Teacher, Federal University of Rio Grande do Sul, Brazil, Leticia Machado, Researcher / Teacher, Federal University of Rio Grande do Sul, Brazil, Leticia Machado, Researcher / Teacher, Federal University of Rio Grande do Sul, Brazil & Larissa Camargo Justin, Student, Federal University of Rio Grande do Sul, Brazil. Construction of Digital Educational Materials for Seniors. 2. Alfred Klampfer, Vice Rector, Private University of Education, Austria. Virtual / Augmented Reality in Education. Analysis of the Potential Applications in the Teaching / Learning Process. 3. *Franz-Josef Schmitt, Scientist, Technische Universität Berlin, Germany, Christian Schroeder, Researcher, Technische Universität Berlin, Germany, Marcus Moldenhauer, Researcher,

	Classroom in a Public School in the Southwestern United States. (EDUBIL)		Technische Universität Berlin, Germany & Thomas Friedrich, Professor, Technische Universität Berlin, Germany. Student Centred Teaching in Laboratories Supported by Online Components in the Orientation Program MINTgruen.  4. Juanjuan Chen, PhD Student, The University of Hong Kong, Hong Kong & Minhong Wang, Associate Professor, The University of Hong Kong, Hong Kong, Concept Mapping-Mediated Inquiry Learning in an Online Environment.
12:30-14:00 Session IX	12:30-14:00 Session X	12:30-14:00 Session XI	12:30-14:00 Session XII
(Room A - Ground Floor):	(Room B - Ground Floor):	(Room C - 1st Floor): A	(Room D - 3 <sup>rd</sup> Floor):
Research in Education	Special Education	Panel on Educational Leadership	Information Systems Development I
Chair: David Carey, Dean,	Chair: Cristina Escobar	Chair: Denver Fowler,	Chair: Franz-Josef Schmitt,
College of Progressive	Urmeneta, Professor,	Assistant Professor, The	Scientist, Technische
Education, Ireland.	Universitat Autònoma de	University of Mississippi,	Universität Berlin,
	Barcelona, Spain.	USA.	Germany.
*Jeffrey Brymer-Bashore,     Director of IT and	1. Regina Heidrich, Professor, Universidade	1.*Sonia Rodriguez, Assistant Professor,	1.*Harish Bahl, Professor, California State
Operations, The Ohio	Feevale, Brazil, Marsal A.	National University,	University, Chico, USA.
State University /	Branco, Universidade	USA. The White Males	Improving Application
International Data	Feevale, Brazil, João B.	Legacy as Women of	Software by Integrating
Evaluation Center, USA.	Mossmann, Universidade	Colour Access the	Master Scheduling with
Collecting Data and Supporting one of the	Feevale, Brazil, Anderson Schuh, Universidade	Gateway to the Professorship.	Material Requirements Planning in Supply Chain
Largest Randomized	Feevale, Brazil & Emely	(EDULEA)	Management.
Control Trials in	Jensen, Universidade	2. Courtney Preston,	2. Ovidio Felippe Pereira da
Educational Research in	Feevale, Brazil. Games to	Assistant Professor,	Silva Junior, Professor,
the United States. 2. *Roy Carr-Hill, Professor,	Assist People with Mobility Limitations in	Florida State University, USA, Peter Goff,	Universidade do Vale do Itajaí, Brazil, Bruno
UCL Institute of	the School Inclusion	Assistant Professor,	Panerai Velloso,
Education, London, UK.	Process.	University of	Professor, Instituto
Finding Out-of-School 15	2. *Effie Papoutsis Kritikos,	Wisconsin-Madison,	Federal de Santa Catarina,
Years old: Is PISA-D a	Professor and Interim	USA & Maida Finch,	Brazil, Maria de Lourdes
Step too Far. 3. Linda Mabry, Professor,	Chair, Counselor and Special Education,	Assistant Professor, Salisbury University,	de Souza, Professor, Universidade Federal de
Washington State	Northeastern Illinois	USA. Hiring Bias or	Santa Catarina, Brazil &
University Vancouver,	University, USA &	Differential Preferences:	Carmem Regina
USA. Impact of	*Mark Melton, Associate	An Analysis of Gender	Delziovo, Secretaria de
Standardized Testing in Education.	Professor, Northeastern Illinois University, USA.	and Race in the American School	Estado da Saúde do Governo do Estado de
4. Richard Chant, Associate	Culturally Responsive	Leadership Labor	Santa Catarina, Brazil.
Professor, University of	Teacher Preparation in	Market. (EDULEA)	Maternal Mortality
North Florida, USA &	Special Education.	3. Raymonnesha Edwards,	Analytical Observatory:
<u>Brian Zoellner</u> , Assistant Professor, University of	(EDUCHI) 3. Michael Rozalski,	Student Presenter, The University of	Management Information System Design to
North Florida, USA.	Associate Professor,	University of Mississippi and Alcorn	System Design to Generate Accurate
Using Personal	Binghamton University,	State University, USA.	Indicators e Mortality
Theorizing to Guide	USA. Children and	An Investigation of	Ratios.
Action Research within Graduate Teacher	Adolescent Literature as Intervention Tool for	State Superintendents in the United States:	<ol> <li>Petr Kurka, Professor, Academy of Sciences and</li> </ol>
Education.	Students with Emotional	the United States: Ethical Leadership	Charles University in
5. *Patrick Baughan, Senior	and Behavioural	Perspectives, State	Prague, Czech Republic.
Lecturer, City, University	Difficulties.	Leader Demographics,	Bimodular Number
of London, UK. The Case	4. <u>Ulrika Gidlund</u> , PhD	and State Education	Systems.

for Phenomenography as an Approach for Researching Sustainability in Education. 6. Andry Charalambous, PhD Student, Frederick University of Cyprus, Cyprus. Measuring the perceptions and attitudes of teachers regarding inspectors' role in teachers' professional development in Cyprus.	Student, Mid Sweden University, Sweden & Lena Boström, Professor, Mid Sweden University, Sweden. What is Inclusive Didactics? Teachers' Understanding of Inclusive Didactics for Students with EBD in Swedish Mainstream Schools.  5. Luanjiao Hu, PhD Student, University of Maryland at College Park, USA & Jing Lin, Professor, University of Maryland at College Park, USA. A Confucian Cultural Perspective: Compulsory Education of and Social Attitudes on Students with Disabilities in China.	Characteristics. (EDULEA)	4. Carsten Lecon, Professor, Aalen University of Applied Sciences, Germany. Rapid Learning Object Generating for Blended Learning Scenarios.
14:00-15:00 Lunch			
15:00-17:00 Session XIII (Room A - Ground Floor): Educational Foundations II	15:00-17:00 Session XIV (Room B - Ground Floor): Language Learning II	15:00-17:00 Session XV (Room C - 1 <sup>st</sup> Floor): Teaching Methodology	15:00-17:00 Session XVI (Room D - 3 <sup>rd</sup> Floor): A Colloquium on Online & Distance Education
Chair: Jeffrey Brymer-Bashore, Director of IT and Operations, The Ohio State University / International Data Evaluation Center, USA.	Chair: Effie Papoutsis Kritikos, Professor and Interim Chair, Counselor and Special Education, Northeastern Illinois University, USA.	Chair: Elif Bengu, Assistant Professor, Abdullah Gül University, Turkey.	Chair: Till Haenisch, Professor, BW State University, Heidenheim, Germany.
1.*Stephen D. Benigno, Assistant Professor, Texas A&M International University, USA. Running Head: The Urban Experience. 2.*Nurit Elhanan-Peled, Lecturer, Hebrew University and David Yelling Academic College, Israel. Holocaust Rhetoric in Israeli School Books. (Monday) 3. Ilona Millei, Financial Director, SZILTOP Nonprofit Ltd. and PhD Student, University of Pécs, Hungary. Roma Identity and Social Mobility. 4. Paola Alessia Lampugnani, PhD Student, DISFOR - University of Genoa, Italy, Andrea Traverso, Assistant Professor, University of Genoa, Italy, Simona Binello, Educational Service Coordinator, AGORA', Italy, Alessia Olivieri, Degree Student,	1. Amy Roberts, Associate Professor, University of Wyoming, USA. Internationalization at Home in a Global Perspective: A Niche for World Language Centers.  2. *Nancy Burkhalter, Lecturer, Seattle University, USA. Teaching Critical Thinking to English Language Learners.  3. Lena Shaqareq, Instructor, University of North Florida, USA. Versed In English: Using Poetry to Tackle Common ESL Errors. (Monday)  4. Keli Pontikos, PhD Student, Cleveland State University, USA. "Retaining Ancestral Language-Are We Barbarians?".	1. *Gabriela Z. Pickett, Director, Center for the Study of Child Development, USA & *William A. Mosier, Professor, Wright State University, USA. Looping in Cuban Classrooms: A Qualitative Analysis of Teacher and School Administrator Perceptions. 2. *Daniel Alston, Assistant Professor, University of North Carolina Charlotte, USA. Classroom Patterns that Characterize the Different Levels of Inquiry Instruction.	1. Emanuel Johannes Spamer, Executive Director, Unit for Open Distance Learning, North-West University, South Africa, Johanna Maria Van Zyl, Director, Unit for Open Distance Learning, North-West University, South Africa & Martin Combrinck, Manager, Unit for Open Distance Learning, North-West University, South Africa. Critical Success Factors at a South African Dual Mode University: A Case Study. (EDUONE) 2. Lindsey Hamlin, Director of Continuing and Distance Education, South Dakota State University, USA, Merrill Johnson, Professor, Colorado State University, USA & Richard Speaker, Retired Professor, University of New Orleans, USA. From Oculus Rift to Pokémon Go: Is

University of Genoa, Italy & Helena Barbera, Student, University of Genoa, Italy. Unaccompanied Migrant Children and Childhood Representations in Contexts of Refugee Emergency. A Qualitative Participative Research.	17:00-18:30 Session XVIII	17:00-18:30 Session XIX	Augmented Reality the Next Wave for Online Learning? (EDUONE)  3. Celeste Lawson, Head of Course, Professional Communication, CQUniversity, Australia. Engaging Online and Distance Students in Teamwork Assessment for Higher Education. (EDUONE)  4. *Lydia Rose, Associate Professor, Kent State University, USA. Rethinking the "Live" Component of Online Courses: Advantages and Disadvantages of the Polished Canned Course. (EDUONE)  5. Qiyun Wang, Associate Professor, National Institute of Education, Singapore & Choon Lang Quek, Nanyang Technological University, Singapore. Designing a Blended Synchronous Learning Environment for Graduate Students. (EDUONE)  6. Michele Domenico Todino, PhD Student, University of Salerno, Italy, Giuseppe De Simone, Researcher, University of Salerno, Italy & Maurizio Sibilio, Professor, University of Salerno, Italy & Waurizio Sibilio, Professor, University of Salerno, Italy Wirtual Reality Head-Mounted Display Used in Online & Distance Education. (EDUONE)
(Room A - Ground Floor): Early Childhood and Elementary Education	(Room B - Ground Floor): A Panel on Bilingual Education: Opportunities and Challenges II	(Room C- 1 <sup>st</sup> Floor): Higher Education II	(Room D - 3 <sup>rd</sup> Floor): Cloud, Internet of Things, Industry 4.0
Chair: Leslie S. Woodcock, Academic Member, ATINER.	Chair: Amy Roberts, Associate Professor, University of Wyoming, USA.	Chair: William A. Mosier, Professor, Wright State University, USA.	Chair: Lydia Rose, Associate Professor, Kent State University, USA.
1. Michael Allen, Associate Professor, Kingston University, UK, Lynette Harper, Senior Lecturer, Kingston University, UK & Zoe Clark, Senior Lecturer, Kingston University, UK. Links between Concepts of	1. Alexandra Neves, Assistant Professor, Western New Mexico University, USA. Intercultural Competence: Who Benefits? (EDUBIL) 2. Cristina Huertas-Abril, Assistant Lecturer,	Nen Ma, Associate     Professor, Le Moyne     College, USA. Cross-     cultural Teaching     Experiences and     Perspectives: Chinese     Professors at American     Universities.     Hala Aly, Assistant	1. *Till Haenisch, Professor, BW State University, Heidenheim, Germany. An Architecture for Reliable Industry 4.0 Appliances. 2. Faisal Abu Rub, Head of MIS

#### 19th Annual International Conference on Education, 15-18 May 2017, Athens, Greece: Abstract Book

- Digestion and Young Children's BMI.
- 2. Laura Coetzer, Senior
  Lecturer, Tshwane
  University of
  Technology, South
  Africa. Early Childhood
  Development: A
  Collaboration
  Community Project to
  Support Enhanced
  Progress for pre-School
  Learners.
- 3. Sumate Noklang,
  Lecturer, Innovative
  Learning Center,
  Srinakharinwirot
  University, Thailand.
  The Development of
  Self-Directed Learning
  through CommunityBased Recreation on
  Primary Student.
- University of Córdoba, Spain. The Use of Micro-Video within Bilingual Education. (EDUBIL)
- . Maria Andria, Postdoctoral Researcher, Autonomous University of Barcelona, Spain, Georgina Paris Manas Researcher Autonomous University of Barcelona, Spain & Cristina Escobar Urmeneta. Professor. Autonomous University of Barcelona, Spain. Exploring Primary Education Student-Teachers' Perceptions towards CLIL Internships: First Approach. (EDUBIL) (Monday)
- PhD Paul Polanco, Southern Student. Methodist University, USA & Doris Luft de Baker, Assistant Professor, Southern Methodist University, USA. Bilingual Programs in the United States: An Evidence-based Review. (EDUBIL)

- Professor, King Saud bin Abdulaziz University for Health Sciences, Saudi Arabia. Investigate the Relationship between Self-Concept and Self-Directed Learning Readiness among Undergraduate Nursing Students in Jeddah.
- 3. Rafael Vescovi Bassani, Teacher, Unisinos, Brazil. Playing with Lego and Building Knowledge: Gamification in the Discipline of Logistic Distribution.
- \*Christopher Weagle, Instructor and PhD Student. American University of Sharjah, UAE. Mapping Motivations and Perceptions of Professional Development in University Teaching and Non-Teaching Staff.
- 5. \*Daphne Vidanec, Senior Lecturer. Balthazar University of Applied Sciences, Narratively Croatia. Designed Human Agency: On Narrative Approach to Selected Ethical Issues within Higher Education Context

- Department, University of Petra, Jordan. Influence of Cloud Computing Technologies on Achieving Agility in Organizations: An Empirical Investigation.
- 3. Nicola Fabiano, Partner at Studio Legale Fabiano, Italy. Internet of Things and the Legal Issues related to the Data Protection Law according to the new European General Data Protection Regulation.

18:30-20:30 Session XXI (Room A- Ground Floor): A Symposium on Academic Publishing and Researching in the 21st Century

#### Chair: Alexander Makedon, Head, Education Research Unit, ATINER.

- 1. Gregory T. Papanikos, President, ATINER, Greece. "ATINER's Experience with Publishing".
- Yaacov Katz, Professor Emeritus, Bar-Ilan University & President, Michlalah Jerusalem Academic College, Israel. "Journal Prestige and Journal Ranking".
- 3. Janet Alsup, Professor, Literacy and Language Education, & Head, Department of Curriculum and Instruction, Purdue University, USA. "Negotiating Tensions between Tradition and Innovation: Academic Publishing and Research in the US".
- Carmen Cozma, Professor, "Alexandru Ioan Cuza" University of Iasi, Romania. "Sharing editorial experience concerning the academic journal Agathos: An International Review of the Humanities and Social Sciences".
- 5. Patricia Scherer Bassani, Professor, Feevale University, Brazil. "Brazil's Experience with Publishing and Researching".
- Vladimir V. Petrov, Associate Professor, Novosibirsk State University, Russia. "The development of entrepreneurial universities in Russia in the context of globalization".
- Effie Papoutsis-Kritikos, Professor, Chair and Counselor, Northeastern Illinois University, USA. "Budget Effects on Publishing and Researching".
- 8. Denver J. Fowler, Assistant Professor, Educational Leadership, The University of Mississippi, USA. "Research and Publication in Higher Education: Redefining Our Emphasis"

For details on the discussion please click here.

21:30-23:30 Greek Night and Dinner (Details during registration)

#### Tuesday 16 May 2017

07:30-10:30 Session XXII (Room A - Ground Floor): An Educational Urban Walk in Modern and Ancient Athens

Chair: Gregory Katsas, Vice President of Academic Affairs, ATINER & Associate Professor, The American College of Greece-Deree College, Greece. Group Discussion on Ancient and Modern Athens. Visit to the Most Important Historical and Cultural Monuments of the City (be prepared to walk and talk as in the ancient peripatetic school of Aristotle) 11:00-13:00 Session XXIV 11:00-13:00 Session XXV 11:00-13:00 Session XXVI 11:00-13:00 Session XXIII (Room D - 3<sup>rd</sup> Floor): (Room A - Ground Floor): (Room B - Ground Floor): (Room C - 1st Floor): **Educational Foundations** Language Learning III **Higher Education III Education Technology II** Chair: Roy Carr-Hill, Chair: Donald Livingston, Chair: Daniel Alston, Chair: Harish Bahl, Professor, UCL Institute of Professor, California State Professor. LaGrange Assistant Professor. Education, London, UK. College, USA. University of North University, Chico, USA. Carolina Charlotte, USA 1.Carlos Turner Cortez, 1. \*Berna Bridge, Head, 1. Shaoqian Luo, Professor, 1. \*Savilla Banister, Deniz College, Turkey. Normal President, San Diego Professor, Bowling Green Beijing Architecture University. China. Continuing Education. State University, USA & Teaching Character: Xiaohui Sun, Lecturer, USA. The Past, Present \*Rachel Reinhart. Professor, Bowling Green "Professional Ethics" in and Future of Non-credit Beijing Normal China & the Faculty of University, in California Community State University, USA. Yumei Zhang, PhD Architecture in Turkey. Colleges. Developing Student, Beijing Normal 2. Maria 2. Richard Speaker, Retired Implementing Hantzopoulos, China. Associate Professor, University, Chair, Department of Instrumentation for Digital Vassar College, USA. Innovative Theories and Curriculum High School Curricula: A Restoring Dignity in Practices in Teaching Instruction, University of Regional Study of a Public Schools: Centering English Reading: The New Orleans, USA & Rubric for Instructional Human Rights Education Effect of Sustained Stephen J. Grubaugh, Quality. in US School Reform. Reading on Professor, University of 2. Menachem Silent Domb. Students' Reading (Tuesday) Nevada Las Vegas, USA. Professor. Ashkelon Ability. 3. \*Nancy Nelson, Professor Higher Education in the Academy, Israel. An Policy, and Meadows Endowed 2. Pongthep Bunrueng. Aftermath of Adaptive Classification Economic, and Natural Chair for Excellence in Assistant Professor, Loei Framework for Data Rajabhat Education, University of University, Disasters: New Orleans Streaming Anomaly North Texas, USA. Thailand. The Use of Ten Years After. Detection. (Tuesday, Interculturalism Project Work 3. Vladimir Petrov, morning) Multiculturalism Stimulating Language Professor, 3. \*Richard Kitchen, Associate in Global Context: Contrasts Learning through Local Professor, University of Novosibirsk State over Space and Time. Art and Culture. University, Russia & Denver, USA. (Tuesday) 3. \*Elizabeth Diaz, Assistant Vladimir Diev, Professor, Computer-Assisted 4. \*Rollin "R.D." Nordgren, Professor, University of Novosibirsk Instruction (CAI) Reliable State Professor, National Texas, USA. Reading and University, Russia. to Promote Students' University, USA. Writing by Using University in the "Triple Mathematical Reasoning? Educating Refugees in Smartphone Apps: Mi Helix" Innovative 4. Ziaul Abedin Forhad, Sweden: Effect on Two Lecturer. ABC. (Tuesday) Development Conception: Assumption Communities... 4. Qi Wang, Lecturer, The Russian Specifics. University, Thailand. Inand Possible Global Impact. Chinese University of 4.\*David Ssekamate, PhD service Teachers' Hong Kong, Hong Kong. Target Training (Tuesday) Student, University of Attitudes toward and Usage of Information 5. \*Denver Fowler, Oldenburg, Germany. The Assistant Professor, The on Chinese as a Tonal Opportunities Communication University Language for Better Challenges Technology (ICT) Tools in of for Mississippi, USA. Communication. Universities in Africa in Professional Practice: A Addressing Leading Climate Study of an International and Implementing Change in Change: A Qualitative School Bangkok, Schools: Educational Comparative Case Study Thailand. Leadership, Ethics, of Makerere University 5. \*Adam Hart, PhD School Climate, and (Uganda) and University Candidate, University of School Culture. Salford, UK. Experiential of Dar es Salaam 6. \*Chang Ha Lee, PhD (Tanzania). Learning Technologies in Student, University of 5.Basak Ercan, Instructor of the Modern Music

English,

Akdeniz

Classroom.

Maryland,

USA.

Comparative Perspective on Teacher Shortage Issue in Cuba.		University, Turkey. The Opinions of ERASMUS Students, who Studied at Akdeniz University, Turkey about Multi-Culturalism: A Case Study.  6.*Hala Bayoumy, Associate Professor, Cairo University, Egypt and King Saud bin Abdulaziz University for Health Sciences, Saudi Arabia & Gehan Atya Albeladi, Nurse Student, King Saud bin Abdulaziz University for Health Sciences, Saudi Arabia. An Assessment of Clinical Judgement Skills among Junior Level Nursing Students Enrolled in Adult Health	
13:00-14:00 Lunch		Nursing Course.	
14:00-16:00 Session XXVII (Room A - Ground Floor): Teacher Education II	14:00-16:00 Session XXVIII (Room B - Ground Floor): Language Learning IV	14:00-16:00 Session XXIX (Room C - 1 <sup>st</sup> Floor): A Panel on Education, Technology, Social Media, and Transformative Change: Interdisciplinary Perspectives	14:00-16:00 Session XXX (Room D- 3 <sup>rd</sup> Floor): Management Information Systems Development
Chair: Rollin "R.D." Nordgren, Professor, National University, USA.	Chair: Elizabeth Diaz, Assistant Professor, University of Texas, USA.	Chair: Ksenia Troshina, Instructor, The Hong Kong Polytechnic University, Hong Kong.	Chair: Richard Kitchen, Professor, University of Denver, USA.
1. Victoria Carr, Professor, University of Cincinnati, USA & Mary Boat, Director, School of Education, University of Cincinnati, USA. "You Say Praise, I Say Encouragement" — Negotiating Positive Behavior Support in a Constructivist Preschool. (Tuesday) 2. *Alice Merab Kagoda, Professor, Makerere University, Uganda. Reflections of Teacher Trainees Experiences of Microteaching: A Case Study Geography Teacher Trainees School of Education, Makerere University, Uganda. (Tuesday) 3. Li Liu, Associate Professor, Shaanxi Normal University, China. A Study of Teacher Educators' Teaching Competencies by Delphi Method.	1. Chunling Xie, Senior Lecturer, The Chinese University of Hong Kong, Hong Kong. Feasibility and Possible Outcomes of Introducing Ancient Chinese Characters into the Curriculum of Teaching Chinese as a Foreign Language.  2. Qing Xiao, Lecturer, The Chinese University of Hong Kong, Hong Kong. Challenges in Teaching the News in Chinese as a Foreign Language.  3. Annabell Sahr, Lecturer, The University of Texas at El Paso, USA. Language Choices of Multilingual Learners of German in a Texas Border Town. (Tuesday)  4. Rolla Massri, PhD Student, University of York, UK. Attitudes of Saudi Foundation Year Students towards Learning English as a Foreign Language: A Qualitative	1. Leila Nunes, Professor, Universidade do Estado do Rio de Janeiro, Brazil. Improving the Performance of Multifunctional Resource Rooms Teachers in Using Alternative Communication (AAC) Resources. (EDUTEN) 2. Catia Walter, Adjunct Professor and Researcher, State University of Rio de Janeiro, Brazil. How to Promote new Practices using Alternative and Augmentative Communication with Especial Students. (EDUTEN) 3. Nikhil Ghodke, Assistant Professor, Manhattanville College, USA. Using Image-Editing Tools as a Fun Activity to add to Pedagogy. (EDUTEN) 4. Sonia Tiwari, Guest Lecturer, Educational Multimedia Research	1. Manfred Roessle, Head, Faculty of Business Information Systems, Aalen University of Applied Sciences, Germany & Rene Kuebler, Research Fellow, Aalen University of Applied Sciences, Germany. Quality Prediction on Die Cast Sensor Data.  2. Volodymyr Voytenko, Professor, Sheridan Institute of Technology and Advanced Learning, Canada. Context-Aware Mobile Applications and Their Integration with Decision Support Systems.  3. Marwa Qaraqe, Assistant Professor, Hamad Bin Khalifa University, Qatar & Qammer Abbassi, Post-Doc, Texas A&M University at Qatar, Qatar. Performance Evaluation of Body-Centric Nano Communication at Terahertz Frequencies.  4. Bernardo Panerai Velloso,

4.V D.1 '1	C <sub>1</sub> 1		F ' D 1
4. Vesna Podgornik, Assistant Professor, University of Ljubljana, Slovenia & Janez Vogrinc, Associate Professor, University of Ljubljana, Slovenia. Principals', Teachers' and School Counsellors' Views on the Importance of Carrying out self- Evaluation Research. 5. Marilete Terezinha De Marco, Teacher, Universidade Estadual Paulista "Julio de Mesquita Filho" (UNESP), Brazil & Elieuza Aparecida Lima, Teacher, Universidade Estadual Paulista "Julio de Mesquita Filho" (UNESP), Brazil & Elieuza Aparecida Lima, Teacher, Universidade Estadual Paulista "Julio de Mesquita Filho" (UNESP), Brazil. Perceptions of Young Children Education Public School Teachers about their Formation and	Study.	Center, India. Design and Evaluation of Character-Driven Applications for Elementary Education. (EDUTEN) 5. Janice Tsang, English Teaching Assistant, The University of Hong Kong, Hong Kong. Struggles of Independent Intellectuals in Hong Kong Reader Bookstore and the Intercommon Institute. (EDUTEN) 6. *Sinela Jurkova, PhD Candidate, University of Calgary, Canada. Transcultural Competence as Transformative Learning that Fosters an Inclusive Society. (EDUTEN)	Executive, Bernardo Panerai Velloso MEI, Brazil, Maria de Lourdes de Souza, Professor, Universidade Federal de Santa Catarina, Brazil & Ovídio Felippe Pereira da Silva Junior, Professor, Universidade do Vale do Itajaí, Brazil. Analytical Observatory: Management Information System on Psychoactive Substance Dependence.
Educational Practice.  16:00-17:30 Session XXXI (Room A - Ground Floor): Teacher Education III	16:00-17:30 Session XXXII (Room B - Ground Floor): The Value of Subjectivity: Exploring Affective Dimensions of Educational Research	16:00-17:30 Session XXXIII (Room C - 1 <sup>st</sup> Floor): Science and Mathematics Education II	16:00-17:30 Session XXXIV (Room D- 3 <sup>rd</sup> Floor): Information Systems Development II
Chair: Nancy Nelson, Professor and Meadows Endowed Chair for Excellence in Education, University of North Texas, USA.	Chair: Janet Alsup, Professor and Head, Department of Curriculum and Instruction, Purdue University, USA.	Chair: Michael Katz, Senior Lecturer, Haifa University, Israel.	Chair: Savilla Banister, Professor, Bowling Green State University, USA.
1.*Christie Sweeney, Associate Professor, Plymouth State University, USA. Paradigms, Principles, and Perception: Building Leadership Competencies from the Inside Out.  2. Ying Xie, Assistant Professor, Northern Illinois University, USA & Shu-Yuan Lin, Clinical Assistant Professor, Idaho State University, USA. Anchoring Group Discussions on Preservice Teachers' Self-Generated Tagclouds: How Does It Affect Their Learning? 3. Reyhan Tekin Sitrava, Assistant Professor, Kirikkale University, Turkey & Mine Isiksal Bostan, Associate	1. Janet Alsup, Professor and Head, Department of Curriculum and Instruction, Purdue University, USA. Why Reading Fiction Matters in an Age of Scientific Objectivity and Standardization. (Panel)  2. Ileana Cortes Santiago, PhD Candidate, Purdue University, USA. The Power of Community-based, Transformative Research. (Panel)  3. Lisa Schade Eckert, Professor, Northern Michigan University, USA. Keeping the Reader in Close Reading: The Importance of Affective Response in Teaching Multimodal Text. (Panel)	Alain Gholam, Assistant Professor, American University in Dubai, UAE. Visual Thinking Routines: Classroom Snapshots.     Paivi Perkkila, Senior Lecturer, Kokkola University Consortium Chydenius, University of Jyvaskyla, Finland. A Case of Four Prospective Adult Primaries Teachers' Mathematical Identity Work.	1. Linda Hayden, Professor, Elizabeth City State University, USA. Mentoring the Next Generation of Science Gateway Developers and Users. 2. Susantha Herath, Professor and Chair, Department of Information Systems, Saint Cloud State University, USA & Jayantha Herath, Saint Cloud State University, USA. Transforming Next Generation Minds and Lives: Interdisciplinary Cybersecurity for non- Computing Majors. 3. Philipp Kornreich, Professor Emeritus, Syracuse University, USA. Information Theory Model for the Analysis of Symbol Strings. 4. Alexis Koster, Professor,

Professor, Middle East Technical University, Turkey. A Study on Investigating Middle School Teachers' Knowledge on Instructional Strategy: The Case of Volume of 3D Solids.  4. Flavia Alfenas Amorim, Researcher, Fundação Getúlio Vargas – FGV, Brazil, Dulci Joao Assis, Researcher, University of the State of Minas Gerais (UEMG), Brazil & Luiz Vicente Fonseca Ribeiro, Researcher, Federal University of Juiz de Fora (UFJF), Brazil. Conditions of Teacher Offer and Proficiency in the Brazilian Literacy Assessment.		San Diego State University, USA. The Transformative Impact of Internet Music Distribution.
17:30-19:00 Session XXXV (Room A - Ground Floor): Educational Foundations IV	17:30-19:00 Session XXXVI (Room B - Ground Floor): A Panel on Bilingual Education: Opportunities and Challenges III	17:30-19:00 Session XXXVII (Room D- 3 <sup>rd</sup> Floor): Education Technology III
Chair: Christie Sweeney, Associate Professor, Plymouth State University, USA.	Chair: Cristina Huertas-Abril, Assistant Lecturer, University of Córdoba, Spain.	Chair: Thomas Fehlmann, Senior Researcher, Euro Project Office AG, Switzerland.
1. William Bintz, Professor, Kent State University, USA & Sara Moore, Mathematics Education Consultant, SDM Learning, USA. Using Tri-Texts to Support Intertextual Teaching & Learning across the Curriculum.  2. Jose Dario Herrera Gonzalez, Professor, Universidad de los Andes, Colombia. Think the Pedagogy from the Practical Philosophy.  3. Jitra Dudsdeemaytha, Lecturer, Graduate School, Srinakharinwirot University, Thailand. The Effect of Siam Laughter Program for Enriching Inner Happiness on Primary Student in Rural Community.  4. Mohamad Saifudin Mohamad Saleh, Lecturer, Universiti Sains Malaysia, Malaysia, Rani Ann Balaraman, Senior Lecturer, Universiti Sains Malaysia & Sharifah Nadiah Syed Mukhiar, Senior Lecturer, Universiti Sains Malaysia, Malaysia. Green Citizens: Environmental Education by the Media and Environmental Non-Governmental Organisations (ENGOs) in Malaysia.  5. Rebekah Granger Ellis, PhD Candidate, University of New Orleans, USA & Richard Speaker,	1. Luz Mora D., Head of the Department of English, Fundación Universitaria Unipanamericana, Colombia. Literature Analysis for Developing the Intercultural Competence: The Construction of a New Mixed Identity in Álvar Núñez Cabeza de Vaca's The Relation (1528-1536). (EDUBIL)  2. Bernhard Markert, Professor, Environmental Institute of Scientific Networks, Germany & Simone Wuenschmann. Professor, Environmental Institute of Scientific Networks, Germany. Multilingual Education of Students on a Global Scale and Perspective - International Networking on the Example of Bioindication and Biomonitoring (B & B Technologies). (EDUBIL)  3. Dina C. Castro, Professor and Velma E. Schmidt Endowed Chair, University of North Texas, USA & Evienia Papadaki, Founder and Director, The Bilingual School of Monza, Italy. Intercultural Competencies of Teachers in Bilingual Programs: An Open Dialogue between a Teacher Education Professor and the Director of a Bilingual School. (EDUBIL)  4. Wim De Grieve, Inspector,	1. Patricia Scherer Bassani, Professor, Feevale University, Brazil, Cristina Ennes da Silva, Researcher, Feevale University, Brazil & Inajara Vargas Ramos, Researcher, Feevale University, Brazil. Personal Learning Environments as a Strategy to Promote the use of Digital Technologies in Education.  2. Eliane Schlemmer, Researcher, Unisinos, Brazil, Wagner dos Santos Chagas, Unisinos, Brazil & Cleber Portal, Unisinos, Brazil. In Vino Veritas: The Game.

- Jr., Retired, University of New Orleans, USA. Teaching the Whole Brain in Performance-Driven School Culture: Immersing Affective-Behavioral-Cognitive Instruction within the Constructs of the Academic Curriculum.
- \*Gail Dickinson, Associate Professor, Texas State University, USA. Retooling Cambodia's Teachers: Progress and Challenges of National Reform.
- Fédération Wallonie-Bruxelles, Belgium. Questions to EMILE. (EDUBIL)
- 5. Sonja Schwarze, Research
  Assistant, Westfaelische
  Wilhelms-University Muenster,
  Germany. Content and Language
  Integrated Learning: How
  Bilingual Geography Classes Serve
  as a Fertile Resource to make
  Lessons more Sensitive towards
  Students' Language Challenges in
  Monolingual Settings. (EDUBIL)

#### 19:00-20:30 Session XXXVIII (Room A - Ground Floor): Educational Foundations V

#### **Chair:** Alexander Makedon, Head, Education Research Unit, ATINER.

- Roberta Devlin-Scherer, Professor, Seton Hall University, USA & Nancy Burns-Sardone, Associate Professor, Georgian Court University, USA. edTPA Process and Progress. (Late-afternoon, Tuesday)
- 2. Claudia Giraldo, Professor, Universidad Santo Tomás de Colombia, Colombia & Angela Nino, Chair, Universidad Santo Tomás de Colombia, Colombia. Ethical Education: A Philosophical Reflection on Forgiveness from the Peace Processes in Colombia.
- 3. Sarah McPherson, Retired Associate Professor Consultant, Recent Chair Instructional Technology, New York Institute of Technology, USA. Transformative, Competency-based Curricular Changes.
- Neffisatu Dambo, Assistant Professor, Southern Illinois University, USA & Louis A. Akainya, Southern Illinois University, USA. School Counsellors' Role: Supporting the Transitions of Immigrant and African-American Students.
- 5. Victoria Parker, Programme Director, Andrés Bello University, Chile & María Theresa von Furstenberg, Master in Human Resources General Director, Andrés Bello University, Chile. Inclusion: The Experience of a Socio Labour Training Programme Inserted in a University Environment
- 6.\*Christopher Momanyi, Lecturer, Strathmore University, Kenya. Freedom of Education; an Aristotelian Interpretation.

#### 19:00-20:30 Session XXXIX (Room D- $3^{rd}$ Floor): Special Topics

#### Chair: Carsten Lecon, Professor, Aalen University of Applied Sciences, Germany.

- Goran Bidjovski, Assistant Professor, University American College Skopje, FYROM. Displaying Navigation from Websites on Users Computers and Analyzing Their Characteristics.
- \*Thomas Fehlmann, Senior Researcher, Euro Project Office AG, Switzerland. The Role of Mathematics for Success in Business.
- 3. Haruka Miyazawa, PhD Student / Junior Research Associate, Osaka University / RIKEN Quantitative Biology Center, Japan. Information, Computation and Linguistic System. (COMSCI)
- Marina Burdack, Academic Staff, Aalen University of Applied Sciences, Germany & Manfred Rossle, Professor, Aalen University of Applied Sciences, Germany. Flexible Serious Game to Train Business Processes in Higher Education.
- 5. Jan Collie, Senior Forensic Investigator, Discovery Forensics Ltd, UK. A Strategic Model for Forensic Readiness.

21:00- 22:30 Dinner (Details during registration)

#### Wednesday 17 May 2017 Educational Tour: (Details during registration)

Thursday 18 May 2017
Educational Tour: (Details during registration)

#### Hala Abdou

Assistant Professor, King Saud bin Abdulaziz University for Health Sciences, Saudi Arabia

# Investigating the Relationship between Self-Concept and Self-Directed Learning Readiness among Undergraduate Nursing Students in Jeddah

In the last few decades development of nursing profession demands acquirement of skills that encourage lifelong learning. Self-concept is an important predictor and outcomes through educational learning environment of student personal interest and satisfaction. In addition, self-directed learning has become a focus for nursing education and critical skills for nursing students due to the complexity and changes in nursing profession development.

This study aimed to the purpose of this study is to investigate the relationship between self-concept and self-directed learning readiness among undergraduate nursing students in Jeddah. A descriptive correlational comparative study design was selected for fulfilling the aim of this study. The area of studying was carried out at College of Nursing – King Saud Bin Abdul-Aziz University for health science – Jeddah.

The study subjects composed of junior and senior undergraduates nursing students at College of Nursing – King Saud Bin Abdul-Aziz University for health science – Jeddah. Non probability convenience sampling technique was utilized for this study. The estimated number of students' 50 junior and 50 senior nursing students from CONJ.A package composed of two questionnaires was used to collect data namely; nurses self – concept questionnaire. (NSCQ) and a self-directed learning readiness scale (SDLRS). Data were analysed using descriptive and implemented statistics.

Results showed that the main finding of this study was that positively significant correlation ranged between moderate and strong correlation except between desire for learning and undergraduate nursing students' self-concept. Moreover, the study confirmed that socio-demographic characteristics as educational level, age and marital status undergraduate nursing students have an effect on their perception of self-concept dimensions and also, there was no statistically significant difference among undergraduate nursing students regarding dimensions of nurses' self-directed learning readiness and their socio-demographic characteristics except for marital status and self-control.

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Therefore, the study recommended that educators should foster a partnership with students to help them assess their learning needs, develop specific learning objectives and promote life-long learning.

#### Faisal Abu Rub

Head of MIS Department, University of Petra, Jordan

# Influence of Cloud Computing Technologies on Achieving Agility in Organizations: An Empirical Investigation

Wining new customers, increasing customer satisfaction, and meeting customers' expectations are considered priority in most organization, but organizations face very dynamic and changeable business. Therefore, organizations need to handle unexpected challenges through smart ways in order to achieve organizations' goals. Today, many organizations invest in cloud computing technologies. Many Cloud Computing Technologies can be considered as essential pillar for most of organizations to accomplish their goals. This paper aims to investigate the impact of cloud computing technologies usage on achieving agility in organization. A new model has been developed. An empirical investigation was performed on a banking sector in Middle East to test the new model. Although the initial results show that the impact of cloud computing technologies usage on bank's agility is significant, the variance of bank's agility that is explained by cloud computing technologies is weak. This indicates that there are other significant variables that contribute to the agility in organization within banking sector. Moreover, the results show that the current agility drivers (competency, flexibility, quickness and responsiveness) are more restricted on manufacturing than banking sector. Finally, further work should look at the drivers of agility given the difference in the characteristics between service sectors and manufacturing sectors.

#### Emmanuel O. Acquah

Lecturer, University of Turku, Finland Jenni Alisaari

Professor, University of Turku, Finland

Въ

#### Nancy L. Commins

Clinical Professor, University of Colorado at Denver, USA

# Finnish Teachers' Knowledge about Teaching Bilingual/Multilingual Learners

Globalization, economic migration and the movement of refugees are resulting in a number of social challenges globally, particularly the linguistic and cultural backgrounds of public school student populations. Teachers across Europe and Finland find themselves working with students from diverse cultural and linguistic backgrounds. Too often teachers find themselves without the tools needed to meet students' need to learn both the language and the content of their instruction. The new Finnish core curriculum (2016) requires every teacher to be linguistically responsive, that is to take into consideration the linguistic challenges multilingual learners (MLLs) may have in learning content area subjects in school. However, currently in Finland there are limited opportunities for teachers to develop skills in these areas and research suggests that Finnish teachers' lack adequate knowledge in linguistically responsive teaching (Acquah, Tandon, Lempinen, 2015). Analyses of PISA results show that students from diverse linguistic and cultural backgrounds who are largely immigrants, have lower academic outcomes than native Finnish students in reading and literacy, mathematics, and science (Itkonen & Jahnukainen, 2007). Yet, very little is known about Finnish teachers' knowledge about teaching bi/multilingual learners. This study investigated 822 teachers' knowledge linguistically responsive teaching. **Participants** questionnaire with both open and closed ended questions regarding their awareness of and ability to use strategies for teaching students learning content and literacy through their second (or third) languages. The results indicate that the teachers have a positive attitude toward bi/multilingual learners, but they lack knowledge about how to take into account both the linguistic needs of their learners and the language demands of their content. Binary logistic regression revealed that the number of years of teaching MLLs predicted teachers' ability to employ strategies that are effective with MLLs. The findings of this study are important for designing effective teacher training and professional development in Finland.

#### Flavia Alfenas Amorim

Researcher, Fundação Getúlio Vargas – FGV, Brazil **Dulci Joao Assis** 

Researcher, University of the State of Minas Gerais (UEMG), Brazil

#### Luiz Vicente Fonseca Ribeiro

Researcher, Federal University of Juiz de Fora (UFJF), Brazil

# Conditions of Teacher Offer and Proficiency in the Brazilian Literacy Assessment

The article aims to evaluate, from multilevel analytical models, the relationship between teacher education, teacher stress, teacher regularity and results obtained in the National Literacy Assessment (ANA) held by the Brazilian Institute of Educational Studies Anísio Teixeira (INEP) in 2014. Thus, we present the discussion in the light of the educational theories that deal with the "school effect", the association levels between teacher supply conditions and literacy results. In order to better specify the effects of the factors of interest, we consider in our study the time period in which the student is studying, location (urban/rural, capital/interior, north-northeast/south-central), administrative dependence, the socioeconomic level and school size (number of students). The analysis revealed that all variables included, except for the turn and urban location, showed statistically significant and consistent impact on the proficiencies of the students.

### Michael Allen

Associate Professor, Kingston University, UK **Lynette Harper** 

Senior Lecturer, Kingston University, UK

&

### Zoe Clark

Senior Lecturer, Kingston University, UK

### Links between Concepts of Digestion and Young Children's BMI

The literature suggests links between people's understandings of nutrition and their actual dietary habits, where knowledge of good practice translates into low body mass index (BMI). In order to investigate a similar effect in preschool children, a sample of 25 four year-olds will take part in structured interviews devised to assess their knowledge of the three processes of digestion, absorption and egestion. Data will be analysed quantitatively to give performance scores, which will be compared with children's body mass index. If links are found there are potential consequences for early years biology education, where the enhancement of nursery children's knowledge of the digestive system could contribute towards positive health outcomes.

#### **Daniel Alston**

Assistant Professor, University of North Carolina Charlotte, USA

# Classroom Patterns that Characterize the Different Levels of Inquiry Instruction

In the United States, reform movements have been a part of the science education community for decades. Inquiry-based instruction has a long history in reform documents and while it is not explicitly used in the Next Generation Science Standards (NGSS), the underlying tenants of this instructional strategy are still evident. Thus, inquirybased instruction remains a strategy that science teachers can use to address the expectations set forth in the NGSS. Therefore, it is crucial that researchers provide science teachers with information concerning the characteristics their inquiry-based lessons should exhibit. This study utilized 5 years of data collected on inquiry based lessons to search for distinctive patterns between at least proficient and below proficient lessons. Specifically, we were seeking to describe these patterns in terms of the amount of time spent in the different components of inquiry and levels of student cognitive engagement. We ran MANOVAs to determine if distinct patterns existed. Results showed that at least proficient inquiry lessons spent more time allowing students to explore scientific concepts and getting students to display higher-order thinking skills. Implications of these findings speak to at least proficient inquiry instruction being a viable instructional strategy to accomplish the goals set forth in the NGSS.

### Janet Alsup

Professor and Head, Department of Curriculum and Instruction, Purdue University, USA

# Why Reading Fiction Matters in an Age of Scientific Objectivity and Standardization

This presenter will discuss a scholarly project examining the positive cognitive, emotive, and interpersonal effects literature can have on adolescent readers. Attention will be paid to how current political forces in education have marginalized literature teaching in the US and what educators can do to argue for literature's importance.

#### Maureen Andrade

Associate Vice President, Utah Valley University, USA

### Online Learning: Strategies for Success

Distance education is a common way to meet the increasing demand for higher education and provide flexibility for today's diverse learners. However, success in distance courses requires learners to possess some degree of autonomy, particularly the ability to control the factors and conditions that affect learning. The presenter will introduce a model for online course design and teaching based on the theories of transactional distance (Moore, 2013) and self-regulated learning (Dembo, Junge, & Lynch, 2006; Zimmerman, 2002). The model can be applied to a variety of contexts.

To enable learners to take responsibility for their learning, the model integrates the components of transactional distance—structure, dialogue, and autonomy—with the dimensions of self-regulated learning—motive, methods of learning, time, physical environment, social environment, and performance. The latter are associated with higher learner achievement in a variety of contexts including face-to-face and distance (e.g., see Andrade & Bunker, 2009; Dembo, Junge, & Lynch, 2006; Caneiro & Steffens, 2006; Zimmerman & Risemberg, 1997).

Structure occurs through the course design (e.g., lessons, assignments, due dates) while dialogue is reflected in teacher-student interaction (e.g. feedback, e-mail, announcements, discussion). Learners are less autonomous when levels of structure and dialogue are high and more autonomous when they are low. The dimensions of self-regulation, reflected in goal setting, strategy application, and reflection, facilitate the development of learner autonomy. As students interact with the content, other learners, and the instructor; apply concepts; and participate in self-regulated learning activities, they can increase their self-regulation and likelihood of persisting in the course.

The presenter will introduce the model and share examples of self-regulated learning activities in online English language courses. Participants will explore how the dimensions of self-regulated learning can be integrated into courses they are designing or teaching in order to increase learner success in distance courses.

### Maria Andria

Postdoctoral Researcher, Autonomous University of Barcelona, Spain Georgina Paris Manas

Researcher, Autonomous University of Barcelona, Spain

Вr

### Cristina Escobar Urmeneta

Professor, Autonomous University of Barcelona, Spain

# **Exploring Primary Education Student Teachers' Perceptions towards CLIL Internships: A First Approach**

Content and Language Integrated Learning (CLIL) programs are gaining increasing interest and have been adapted in different countries and educational contexts. During the last decade, primary and secondary schools in Spain have incorporated these programs in their curricula. Therefore, the reality of the Spanish educational system now calls for teachers who are trained and well prepared in order to conduct successful CLIL classes. The Autonomous University of Barcelona's (UAB) Faculty of Education based in Catalonia, Spain, a bilingual community, offers to its fourth grade students an one-semester school internship focusing on CLIL; that is, the student-teachers have to design and implement a teaching sequence of any content in English.

The purpose of the present study is to explore UAB student teachers' perceptions towards CLIL internships. Perceptions were elicited through questionnaires and focus groups. The qualitative analysis of the data provided insights into the way a student teacher encounters the different CLIL reality in every school and helped us identify the opportunities that this kind of internship offered to the students, as well as the challenges that they had to face. Findings suggest that despite certain challenges, participants perceived this CLIL internship as a fruitful and valuable experience for their teaching training and they recognized CLIL as powerful tool that can have a positive impact on both content and language learning of the pupils.

#### Khaled Asad

Lecturer, Al-Qasemi Academic College of Education and Beit-Berl Academic College of Education, Israel

### **Moanes Tibi**

Lecturer, Beit-Berl Academic College of Education, Israel

&

### Jamal Raiyn

Head of the Faculty of Exact Sciences, Al-Qasemi Academic College of Education, Israel

### Teaching Programming to Primary School Pupils through Visual and Interactive Programming Environments

New generations are using and playing with mobile and computer applications extensively. These applications are outcomes of programming work that involves skills such as, computational and algorithmic thinking. Learning programming is not easy for all students, neither for children. In recent years, academic institutions like MIT institute and hi-tech companies such as Google and Khan Academy, have introduced online programming environments to facilitate learning and teaching programming. Most of these environments are web-based, interactive and supported with visual Multimedia features. Therefore, they became easy to use, very attractive and helpful to teach children how to program and to develop their algorithmic skills and computational thinking.

The proposed presentation will describe a research aimed at examining teaching a course to primary school children, through three on-line visual and interactive environments: "Plastelina" for logic games, "Code with Anna and Elsa" via Hour of Code project for block-programming, and the "Turtle Academy" for open textual programming in Logo language

The research included the development, implementation and evaluation of a course comprise of 12 meetings, total of 24 hours, taught to 22 pupils in 4th and 5th grades at elementary school in in northern Israel. During the program, the children solved interactive logic games, built programs using visual programming blocks and wrote text programs using the Logo language. The pupils were asked to build/write basic and challenging programs and accomplished a final programming project.

Data were collected by means of pre-post attitude questionnaire, written exam, analysis of the final project and class observations.

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Experimental results indicate that teaching programming in visual and interactive developing environments fosters children problem solving skills. In addition, the presentation will report more results of the research such as the students' achievements in learning programming in the course and its impact on children attitudes to learn programming and computers.

#### Harish Bahl

Professor, California State University, Chico, USA

# Improving Application Software by Integrating Master Scheduling with Material Requirements Planning in Supply Chain Management

Supply chain management planning systems begin with supply network planning. As a next step, in order to fulfill production requirements, each production facility makes decisions about master production schedules (MPS) for all products and, subsequently, material requirements planning (MRP) and capacity requirements planning for all subassemblies and components made in the production facility. Currently, these decisions are made iteratively and by trial and error methods, resulting in inefficient and suboptimal decisions. This paper proposes a linear programming model to help managers make these decisions in an integrated model to avoid iterative loops. This model can be incorporated in supply chain management software for improved managerial decisions. The proposed model is illustrated with the formulation and solution of a sample problem.

### Savilla Banister

Professor, Bowling Green State University, USA

&

### Rachel Reinhart

Professor, Bowling Green State University, USA

# Developing and Implementing Instrumentation for Digital High School Curricula: A Regional Study of a Rubric for Instructional Quality

As our world has continued to become more dependent on digital communication and collaboration, online learning environments have become more sophisticated. Demand for online and/or hybrid-learning materials has increased, not only in higher education arenas, but in elementary and secondary schools, as well. This study focuses on developing and implementing an evaluative rubric for high school digital curricula created for a United States regional consortium of schools, charged with expanding quality digital learning environments for their students.

Digital instructional units for ten high school courses were created. Each Design Team, consisting of 4-7 teachers, developed digital curriculum for one of the ten core high school courses. With the goal of creating 1/3 of a year's curriculum, teams developed 2-4 units per course. A total of 30 units were developed and evaluated.

In collaboration with project leaders, the Center for Assessment and Evaluation Services (CAES) developed the Evaluation Rubric for Digital Curriculum that was used to assess curriculum units. The rubric consisted of 36 criteria organized by eight areas: 1) Overview, 2) Learning Targets, 3) Instructor Support, 4) Accessibility, 5) Instructional Materials, 6) Learner Interaction and Engagement, 7) Technology, and 8) Assessment. A variety of sources contributed to rubric development: Quality Matters K-12 Secondary Rubric (2013), Blended Course Peer Review Form (Blended Learning Toolkit, 2014), and the National Standards for Quality Online Programs (iNACOL, 2009). The evaluation process utilized a team of reviewers: five content experts, and three curriculum/technology experts. A third evaluator then summarized the two reviews for every unit, providing a score for each criterion along with detailed comments and feedback.

Based upon these results, the area of Assessment was in most need for improvement, followed by Technology and Instructor Support. Project Leadership met with CAES to discuss revision priorities and communication methods with Design Teams.

### Patrick Baughan

Senior Lecturer, City, University of London, UK

# The Case for Phenomenography as an Approach for Researching Sustainability in Education

Phenomenography is a research approach that focuses on identifying variation in experiences of a given phenomenon amongst a pre-selected sample population. It has been used for investigating issues including learning and teaching (Shreeve et al., 2010), curriculum (Fraser, 2006) and academic leadership (Ramsden et al., 2007). Meanwhile, sustainability in higher education has attracted significant international interest, as demonstrated in various areas of policy, practice, and research. However, although many universities have been successful in campus environmental issues, there remains debate about what sustainability 'means', whether the sector should have responsibility for progressing it, and whether and how sustainability might be included in curricula. This paper will bring together the phenomenographic approach with the contested issue of sustainability, the following central research question: phenomenography be used as a research approach to study variation in understandings and accounts of sustainability in higher education, and contribute to more meaningful engagement with sustainability? Drawing on relevant empirical studies and the author's own published work (Baughan, 2016), it will be argued that there is potential for phenomenographic research to offer new perspectives on areas of debate in sustainability, particularly in the context of different disciplines and stakeholders. This could help inform a fuller engagement with this phenomenon, aid future policy, and provide assistance to staff about whether and how to include sustainability in their curricula.

### Hala Bayoumy

Associate Professor, Cairo University, Egypt and King Saud bin Abdulaziz University for Health Sciences, Saudi Arabia

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### Gehan Atya Albeladi

Nurse Student, King Saud bin Abdulaziz University for Health Sciences, Saudi Arabia

### An Assessment of Clinical Judgment Skills among Junior Level Nursing Students Enrolled in Adult Health Nursing Course

**Background:** As the acuity of patients, so does the necessity for nurses who are capable of making excellent clinical judgments that support the complex care needs of patients and contribute to optimum patient care outcomes (Lasater, 2011). The recent call to renovate nursing education to meet practice realities recommended incorporating classroom and clinical teaching using a variety of pedagogies to develop students' clinical judgment skills (Samuels & Leveille, 2010) which requires extensive work from nursing faculty to ensure students are given the satisfactory conditions to develop their judgment. Adequate assessment of student clinical judgment throughout different levels of the nursing education program is therefore required.

**Methods:** The aim of this research study was to assess clinical judgment abilities of nursing students studying adult nursing courses under Bachelor nursing program. A non-experimental, descriptive cross – sectional research design was used in the study. Study participants consisted of forty-six nursing students who satisfied the following inclusion criteria: junior students who were active in nursing program and registered for adult nursing courses at King Saud Bin Abdel Azziz University for Health Science for the academic year 2015-2016.

Two instruments were utilized in the current study. These were the sociodemogramphic and educational background sheet, as well as the clinical judgment assessment questionnaire developed by Chipps et al. (2011). The questionnaire consisted of four Vignettes, which required participants to: (1) rate of severity, (2) rate of perceived risk of error, and (3) identify potential contributing factors leading to the error.

**Results:** Error classified by majority of students as level H in vignette 1, E in vignette 2 and 3, while in vignette 4, it was classified as either D or G by majority (30.4%, 21.7%, 28.3%, 19.6%; respectively). There were high agreements that these errors presented across different

vignettes have high probability of occurrence (58.8%, 47.9%, 56.5%, 58.7%; respectively). Clinical experience, poor decision-making, clinical knowledge and failure to follow acceptable standards were identified as the most identify potential contributing factors leading to the errors.

Conclusion: On the basis of the study results, junior student showed a critical analysis and perception of the risks associated with errors identified across the four different vignettes. They had satisfactorily identified the levels of risks. Future studies should explore the development of the clinical judgment skills among nursing students across schooling period through longitudinal studies. Educational institutions should focus on identifying and incorporating curricula, experiences, or teaching styles that facilitate development of clinical judgment among students.

### Patricia Alejandra Behar

Professor, Federal University of Rio Grande do Sul, Brazil **Tassia Grande** 

Researcher/Teacher, Federal University of Rio Grande do Sul, Brazil **Leticia Machado** 

Researcher/Teacher, Federal University of Rio Grande do Sul, Brazil

### Larissa Camargo Justin

Student, Federal University of Rio Grande do Sul, Brazil

### **Construction of Educational Materials Digital for Seniors**

The increasing use of digital technologies for the elderly, such as mobile devices, computers and their online tools, provides new research in education. A possibility to accommodate this new profile of elderly people is through the use of educational materials covering the older audience needs. Building digital educational materials is relevant (DEMs) that can meet this audience, considering, in addition to usability issues, but also their cognitive and motor needs, their social context and previous knowledge of life. The DEM is one that have digital resources in their manufacture. Since usability is the factor that ensures that products are efficient, pleasant and easy to use, the user's point of view. The purpose of this research is to discuss possible indicators for the construction of DEM for the elderly. The methodology was qualitative and quantitative type design science research. The study involved 23 elderly people, aged over 60 years. The results show that the DEMs for the elderly should be developed considering the following: ability to support the DEM, the prevention of errors, aspects related to the text (size, etc.), visual design according to the public, distribution of elements on the screen properly, the size of buttons, navigation, accessibility, interactivity, the language used, autonomy, motivation to learn and the ability to provide a critical reflection or not. It is observed that owing to the variety of resources that can compose a DEMDs, it is relevant investigate in accordance with the policies if they are in agreement with the public that will be used. Thereby, an investigation is increasingly relevant about important characteristics with regard of these materials, including with the regarding usability.

### Elif Bengu

Assistant Professor, Abdullah Gül University, Turkey

### Application of Team-Base Learning at a Health Science Course: A Case Study

The purpose of the study is to identify student's reactions with the implementation of Team-Based Learning as an instructional strategy in a pharmacology course. Team-Based Learning is an active form of learning that encourages individual and team involvement in learning in an academic setting. Team-Based Learning is one of the learning techniques/methods that are being adopted as an instructional strategy used increasingly in medical education. Literature shows that unlike traditional pedagogy aimed at lecture delivery with application of concepts later tested, Team-Based Learning strategy fosters immediate involvement in applying concepts in the classroom long before exams are taken. Research supports that faculty are more engaged with the students in Team-Based Learning than in traditional lecture or other small group approaches and they know quickly what their students are achieving. There are limited studies in Turkey that examined the applications of Team-Based Learning in a higher education setting. Therefore, this study describes the use of Team-Based Learning technique in an undergraduate health sciences course. The researcher elaborates on the challenges and successes in implementing Team-Base Learning in the classroom. In addition, the researcher provides further suggestions for the implementation of the Team-Base Learning technique. The researcher also presents strategies for faculty development sessions that should implemented in schools.

### Stephen D. Benigno

Assistant Professor, Texas A&M International University, USA

### Running Head: The Urban Experience

We are constantly talking about urban education and the trials and tribulations related to the administration of these institutions of learning. We discuss the unfortunate circumstances that many of the students who attend these schools endure in their homes and in their community. We discuss the various interventions and solutions that are or should be implemented. We discuss the various curriculum development strategies and the assessments that go along with the implementation of those strategies. My experiences with student discipline, curriculum, teacher evaluation, gang suppression and community involvement is central in the development of this manuscript. Specific instances of conflict, trauma, humor and jubilation are revealed in this paper. The cultural and demographic differences and similarities between the urban schools of California, Oklahoma and Florida are examined and discussed. As an administrator in the urban school, I was able to observe firsthand the futility with which the public school system attempts to develop programs and opportunities for the students in these schools. I have developed and implemented specific strategies that have been successful in some very high-risk environments. I have a plethora of experiences and strategies that I have already begun to translate into articles appropriate for publication. The specific academic and community programs that were created and implemented in the schools would be explained and the results of the programs would be presented to the participants. What is the answer? What are the solutions to the perpetuating problems that face urban educators on a daily basis? These are the questions that I would entertain in my presentation.

#### Sharita Bharuthram

Senior Lecturer, University of the Western Cape, South Africa

# Lecturers' Perceptions on the use of Assessment Rubrics to Inform Teaching Practice and Curriculum Review and Development

Assessment is an integral component in the teaching and learning process. In recent years more emphasis has being placed by university management and students themselves for university academics to make their assessment practices transparent. In heed of this call, many academics are making use of the rubric to make assessment tasks more authentic and to demystify the learning process. By means of a qualitative data collection method this article discusses the ways in which rubrics are designed and used by a select group of academics. It also explores the value that rubrics have for these lecturers, both in terms of the impact, if any that it may have on their teaching practice as well as in curriculum review and development. Some of the challenges experienced by the lecturers when using rubrics are also discussed.

The data shows that while many academics acknowledge the rubric as a reflective tool for students they do not see it as having the same benefits for them. Furthermore, it seems that many lecturers use the rubric in a very mechanical and unconscious manner and view it mostly as a grading tool with limited instructional value. As such the findings point to a lack of awareness by academics of the many uses of rubrics and therefore more conversations around the role that rubrics can play in informing one's teaching practice and course design is suggested.

### Goran Bidjovski

Assistant Professor, University American College Skopje, FYROM

# Displaying Navigation from Websites on Users Computers and Analyzing Their Characteristics

In this scientific paper, the subject of the research is description of opportunity of navigation through the websites, with special emphasis on analyzing different type of navigation systems. Very important part of my work is analyzing the characteristics of variety navigations structure on the web pages, as well as analyzed technical method of displaying of navigation in computer monitor chosen by the web designer, along with its characteristic, on computers of various users. In addition, users can have different operating systems, different browsers, and different preferences in terms of their computers settings. All this technical issues will have an impact on how those websites will looks on the user's computer. Also is description interpretation of navigation on user's computer monitor. Special overview is made for correlation between navigations and all the other graphic elements in website from point of view of visual harmony of web pages. Additionally, overall directions for using navigation type and their characteristics when designing web pages, same as description of some advice and opinions on the same topic. After that, we analyze several problems which arise from displaying navigation on the web pages of the computer of users. In this text we will come across a few solutions for all of them, as well as recommendations for when to choose which solution.

#### William Bintz

Professor, Kent State University, USA

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#### Sara Moore

Mathematics Education Consultant, SDM Learning, USA

# Using Tri-Texts to Support Intertextual Teaching & Learning across the Curriculum

Intertextuality is an important construct in reading education. Conceptually, it is based on the notion that no text stands alone; every text is the intertext of another text. Operationally, intertextuality is the process of making connections between texts. Practically, readers make connections with past readings, prior ideas, and previous literary experiences, all of which can contribute to making sense of the current text. Simply stated, intertextuality is based on the notion that "past texts will be helpful in understanding current texts and making sense of current texts in light of past texts constitutes comprehension.

This session will share a variety of tri-texts along with a variety of research and classroom-based instructional strategies, all of which are intended to support intertextual teaching and learning across the curriculum. A tri-text extends recent research on paired text, two texts that are connected in some way, e.g. topic, theme, genre. Paired text, also known as twin texts, can involve a fiction text paired with a nonfiction text (hybrid text), a nonfiction text paired with an informational text, a fiction text paired with a wordless text, etc. No matter the type of text combined, research indicates that paired text developing positive dispositions on reading and improving reading comprehension across the curriculum.

Tri-text adds a third text. This third text adds much rigor and additional complexity by inviting students to make intertextual connections across three interrelated texts. We will share a variety of tri-texts across the curriculum (English/Language Arts, Social Studies, Science, and Mathematics) and pair them with several instructional strategies (category charts, interwoven texts, spokewheels) that can help English/Language Arts, Social Studies, Science, and Math teachers teach and students experience the important process of intertextuality.

### Berna Bridge

Head, Deniz College, Turkey

# Architecture with Character: Teaching "Professional Ethics" in the Faculty of Architecture in Turkey

An elective course called "Professional Ethics in the Built Environment" was designed and taught in the Faculty of Architecture, IZTECH, Izmir Institute of Technology, Turkey, which stands as the sole example of its kind in this professional area, in Turkey.

The need for such a subject had arisen because of the frequency of earthquakes, which result in large scale loss of life and property such as the 1999 Istanbul earthquake and the 2011 Van earthquake. The fact that some buildings sustained little damage while buildings next to them collapsed entirely points to a lack of professional integrity on part of the construction companies. These striking examples demonstrate how the use of substandard building material to increase profit margins contributes to the humanitarian crises in such devastating earthquakes.

This course was designed as an elective as "professional ethics" was not part of the compulsory curriculum of the university. The content of the elective was designed to foster intellectual and vocational integrity, impartiality, altruism, professional responsibilities and aspirations, setting good examples and included the written ethical codes of conduct of the Institute of American Architects and Turkish Architects. The course was designed as three 50-minute lectures per week for two terms, the academic year in Turkey consisting of two terms.

In discussions during the lectures, questions such as "how would you feel about designing a prison, a religious building, gas chambers of Nazi Germany, a slaughter house of meat industry, defence complexes" or readings from Aristotle to Theodor Adorno were posed to make students aware of choices that go deeper than putting the right amount of cement, steel or iron while the construction was going on. The course became popular immediately and while 8 to 10 students were choosing most of the other electives, over 50 students were choosing this elective, pointing to a demand in this area.

The course was requested by the Dean, Prof. Dr. M. Gunaydin. The lectures were given by Dr. B. Bridge who had designed a similar course on "Character Education for Teachers", in the year 2000, who also had published three books in 2003 called "Ethical Values Education" in Turkey. The book and the series of lectures of this course focuses on certain virtues of teachers such as trustworthiness, honesty,

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compassion, altruism, courage, gratitude, responsibility, fairness, compassion, civic virtues and to teach by example.

### Jeffrey Brymer-Bashore

Director of IT and Operations, The Ohio State University/International Data Evaluation Center, USA

### Collecting Data and Supporting One of the Largest Randomized Control Trials in Educational Research in the United States

In October 2010, Reading Recovery at The Ohio State University received a grant for \$45 million from the U.S. Department of Education's Office of Innovation and Improvement. This grant funded the scaling-up of Reading Recovery across the entire United States of America. As a part of the scale-up, the effectiveness of Reading Recovery was evaluated by external evaluators at the University of Pennsylvania and the University of Delaware. This evaluation included a randomized control trial (RCT) that involved almost 7,000 students at more than 1,200 schools over four years. This paper looks back at challenges my team faced to support this randomized control trial.

The paper starts off by explaining "What is Reading Recovery?" It is more than just a simple literacy intervention for children ages 6 to 7. It is a nation-wide literacy effort made up many different organizations. This includes 18 Universities that recruit, train, and provide on-going professional development for more than 5,600 teachers in about 1,100 school. As well as a non-profit organization that hosts regular conferences, maintains a professional membership database, and advocates for Reading Recovery at the State and National level. Finally, there is my department, the International Data Evaluation Centre, which is responsible for collecting and processing Reading Recovery data.

The paper then goes on to examine the purpose and the nature of the grant. It starts by detailing all of the institutions participating in the grant and what their roles were. It then goes on to identify the challenges related to the grant and how we approached those challenges. Finally, the paper offers an assessment of how we successfully overcame some of the challenges, how we were less successful at other challenges, and what we might have done differently.

### **Pongthep Bunrueng**

Assistant Professor, Loei Rajabhat University, Thailand

# The Use of Project Work in Stimulating Language Learning through Local Art and Culture

The aims of this research are to identify processes of learning management using project work and to investigate the results of using project work in stimulating language learning through local art and culture. The target group includes fifty-five third year students from Faculty of Education, Loei Rajabhat University. Research tools comprise 1) a specimen plan 2) an evaluation form for project outlines 3) an evaluation form for project work 4) an oral presentation form for project work 5) an evaluation form for writing competence and 6) an evaluation form for project work results.

Results of the research found that:

- 1) Processes of learning management in undertaking project work were made up of six plans under three stages: starting the project, developing the project and concluding the project. Thirteen pieces of project work were produced by those target groups. It was found that the evaluation form for project outlines rated at the highest level as did the evaluation form for project work, the oral presentation form for project work, while the evaluation form for writing competence rated at a high level.
- 2) The overall results of project work evaluation were at a high level. The highest aspect was Production of Project work followed by Knowledge Application, Project Collaboration and Using English language for Project Work Presentation.

### Marina Burdack

Academic Staff, Aalen University of Applied Sciences, Germany

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### Manfred Rossle

Professor, Aalen University of Applied Sciences, Germany

# Flexible Serious Game to Train Business Processes in Higher Education

In the digital age, we have many technologies and methods from the field of game programming to develop serious games for the adult education. But adults associate learning in daily life with work and effort. They don't see, that new knowledge can be learned playfully. But people have a special characteristic, which has been used mainly by the entertainment industry, they like to play. The attention of the education sector has increasingly been drawn to this feature. Because skills and deep understanding knowledge are key factors in professional life because of the change from the industrial age to the information age and the foreseeable lack of specialists.

So-called serious games for education and training are developed in growing numbers. They are based on the most important characteristics of games, their content, course and structure have to be pedagogically prepared and didactic concepts have to be fulfilled.

In a Serious Game the learner is in a protected learning environment which reflects the real working environment, he can generate knowledge from mistakes without fear of consequences and can transfer the knowledge in the real world. A well-known Serious Game in the field of medicine is the "3D Virtual Operating Room".

But what about students who are at the beginning of their education and who don't have the necessary knowledge to successfully play a serious game? Would it not be useful if the trainer could configure the learning area itself and these people might have a learning success?

These general findings have now been used to develop a first prototype of a serious game that includes a generator for flexible configuration of business processes. This generator is used to configure the learning area and to generate a coherent game in which the selected business processes are displayed visibly.

The paper is intended to show how the technologies of the entertainment industry can be interlinked with the knowledge of the education industry in a serious game to allow playful learning of business processes. It is also intended to show how the trainer can

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configure the learning area using predefined rules to generate a coherent game.

### Nancy Burkhalter

Lecturer, Seattle University, USA

### **Teaching Critical Thinking to English Language Learners**

Even if English as Second Language educators currently teach critical thinking, they may not know how to reach certain students new to such concepts and practices. That difficulty can be compounded if the English language learners come from vastly different educational systems, such as those emphasizing memorization and regurgitation and/or those with very authoritarian and repressive policies. These students may struggle with, say, answering open-ended questions, analyzing a problem, expressing opinions, and writing academic essays.

This paper defines critical thinking, outlines the difficulties some pupils may have adjusting to higher order thinking exercises, discusses possible reasons for such problems beyond language issues, and suggests some exercises and workarounds that can help bypass this mindset.

The paper is geared toward language educators who teach high school and higher. Novice teachers can also benefit. These methods arose out of my years teaching in the post-Soviet countries of Kazakhstan, Russia, and Kosovo, and distills my insights and approaches used in classes and workshops. I conclude that training ESL/EFL students in higher order thinking skills as they acquire the language introduces them to a valuable skill and one growing in necessity and demand around the world.

### **David Carey**

Dean, College of Progressive Education, Ireland

### Ireland-Kenyan Partnership in Teacher Training: Challenges and Opportunities

After over a full year of planning and organisation The College of Progressive Education, Dublin, Ireland and Amicus Teacher Training College, Nairobi, Kenya entered into a collaborative online educational programme training Kenyan teachers up to diploma level as Special Needs Associates.

This presentation presents the challenges and difficulties encountered in the planning process and the steps taken to overcome these issues. The course has been reviewed numerous times since its inception by educationalists in Ireland and Kenya. Participants have been queried about their educational experience. Participants come from varied backgrounds in mainstream primary and secondary schools and special education schools and organisations for the care of disabled Kenyan children.

We are currently training 21 fully qualified Kenyan teachers to become experts in the planning, delivery, evaluation and review of inclusive special education policy at school, local and national level. Lectures are given by video loop weekly, directly from Dublin over the course of six months. There are required and supplementary readings posted online weekly. Assignments are completed and submitted online. For Saturday face-to-face seminars, instructed by leading Kenyan educationalists are required. All assessment is completed by Dublin lecturing staff. Each participant must complete an action-based project in their school or institution.

The method of course delivery is through the use of Moodle, email and video material. The role of both Irish and Kenyan lecturers was refined and clarified. The process of implementing this collaboration will be outlined including:

- Formation of Irish and Kenyan steering committees
- Creation and Ratification of a Memorandum of Understanding
- Re-structuring of existing syllabus to meet Kenyan educational/cultural standards
- Organisation of course marketing and introductory seminars in Nairobi
- On-going issues of collaboration

Numerous difficulties had to be overcome and these will be discussed in the presentation.

### Victoria Carr

Professor, University of Cincinnati, USA

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### **Mary Boat**

Director, School of Education, University of Cincinnati, USA

# "You Say Praise, I Say Encouragement" - Negotiating Positive Behavior Support in a Constructivist Preschool

Early childhood educators work in varied types of preschool programs that are Montessori, Reggio Emilia, Waldorf, nursery school or within programs that have self-identified monikers and pedagogical orientations. Yet, most early childhood programs use curricula grounded in constructivism, where children construct knowledge through their interactions with materials, adults, their peers, and their ideas. Stemming from the tenets of what US educators call developmentally appropriate practice, teachers who are well-grounded in theory and constructivist practice, reject behavioral teaching belies constructivism because processes the reinforcement and direct instruction. However, within the scope of a high performing classroom that is developmentally appropriate, practices range from inquiry and scaffolding to intentional instruction techniques such as prompting, modeling, and other evidence-basedpractices. While terminology between behaviorist and constructivists continue to be hotly debated, when used properly, reinforcement can clearly communicate to children who have challenging behaviors what behaviors are appropriate, therefore increasing the chances the positive behavior will return. This is the essence of positive behavior support (PBS). Coupled with environmental supports, it is an effective method for addressing the function of inappropriate behaviors in early childhood classrooms.

implementing PBS practices in classrooms where Yet, constructivism philosophically grounds teacher-child interactions is challenging, especially when bridging a behaviorally oriented school psychology approach with constructivist laboratory preschool practices. Messages are very important; supporting growth versus reinforcing behaviors, and focusing on meaningful experiences whereby children create their own new understandings based on what they already know and believe is inherent in constructivist classrooms. PBS stems from a practical applied behavioral analysis stance to promote adaptive behaviors and reduce those behaviors that interfere with meaningful participation in classrooms and community. It is certainly a "given"

that children who have challenging behaviors or are in need of mental health supports are present in constructivist classrooms, but the use of teacher "praise" can be arbitrary or meaningless. Therefore, in one lab preschool at a research intensive university, constructivist master preschool teachers and school psychology doctoral-level consultants were charged with creating a working model of principles and practices that would allow for teacher comfort in providing positive behavioral support for children within a constructivist classroom, a concept we present as eco-constructivism.

We will present the outcomes of that collaboration for a Tier 1 Child Support Framework, with regard to the following: a) forming relationships, b) guidelines of the classroom, c) classroom schedule, d) classroom matrix of behavioral expectations for each classroom routine, e) transition signal, f) warning prior to transitions, g) pre-teaching, h) specific verbal encouragement, i) ratio of positive statements vs. redirections or planned ignoring, and j) acknowledgement system. This collaboration resulted in a viable and acceptable model for implementing PBS in an inclusive preschool that serves children funded through Head Start and tuition where approximately 15% of the children have special needs and/or challenging behaviors.

### **Roy Carr-Hill**

Professor, UCL Institute of Education, London, UK

# Finding Out-of-School 15 Years Old: Is PISA-D a Step Too Far?

PISA for Development is taking place in eight countries (Cambodia, Ecuador, Guatemala, Honduras, Panama, Paraguay, Senegal and Zambia). The PISA standard is to sample 15 year olds and not knowingly excluding 5% of the intended target population.

OECD say that "the project would fail in its aims if it did not look at methods for including out of school 15-year-olds in the assessment; [but that] "they lack adequate tools and methodologies to identify out-of-school youth, monitor progress towards universal basic education (defined as the first 9-10 years of schooling), measure the scope of and assess the reasons for exclusion, [and to] inform policy and planning". In particular, standard household surveys will be inappropriate for finding this marginalized group.

Important minorities of the marginalised – such as Out-of-School (OOS) 15-year-olds and their households - will be under-sampled in standard household surveys. This is because most of the marginalised in the participating countries will be found among the isolated rural poor and in informal settlements/ urban slums. Although, local city officials will, of course know where informal settlements and urban slums are, there needs to be more effort to concretise the estimates in this paper of the size and location of in terms of other groups that are marginalised and possibly missing from survey sampling frames. In particular, Carr-Hill (2016) has shown that at least 14% of urban population in developing countries are 'missed' from sampling frames – which most (e.g. Davies, 2006) – would agree was a very low estimate), then none of the countries would be less than 5%.

Finding those currently OOS will require a much more sophisticated approach than that being adopted by the contractors for PISA for Development who have only had experience of surveys in schools. As currently implemented, PISA for Development will not succeed in its attempt to include OOS 15 year olds in its assessment.

### Dina C. Castro

Professor and Velma E. Schmidt Endowed Chair, University of North Texas, USA

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### Evienia Papadaki

Founder and Director, The Bilingual School of Monza, Italy

# Intercultural Competencies of Teachers in Bilingual Programs: An Open Dialogue between a Teacher Education Professor and the Director of a Bilingual School

Children of the 21st century around the World are growing up in increasingly diverse communities, exposed to many languages and cultures. As a consequence, there is an increased need to prepare teachers to be effective in promoting development and learning in children who are bilingual or multilingual. Searching and appointing suitably qualified and experienced teachers to teach in a bilingual program has always been a challenge from both a linguistic and intercultural competencies point of view. The proposed presentation will discuss the competencies that teachers need to educate bilingual children using a twofold perspective: a) research on preparing teachers to work with bilingual learners, and b)the experience of a bilingual school where such competencies are required and put in real practice. A unique feature of this presentation is the multilingual and intercultural experience of the presenters, one is Peruvian conducting research on the education of bilingual learners in Peru and the United States and the second one, is from Greece and the founder and director of a bilingual school in Italy, working with teachers from around the World.

In the first part of this presentation, we will discuss the competencies identified from research in teacher preparation to be an effective teacher of bilingual and culturally diverse learners. We also will explore a variety of teacher education programs which claim to prepare teachers in bilingual education programs and how these best support the development of teachers' intercultural competencies. In the second part of the presentation we will discuss how the Bilingual School of Monza (BSM) addressed the challenges of the limited availability of teachers adequately prepared to educate bilingual learners, including the need to develop teachers' intercultural competencies. Teachers were supported with systems and practices put in place from the beginning of their assignment; a clear school philosophy, a shared school wide Language Policy, clear job

descriptions and teacher selection criteria, a set of Best Practice Guidelines and ongoing collaborative professional dialogue and development. Some concrete examples of the impact these have had on teaching and learning practices will be shared and discussed during the presentation.

Participants will have an opportunity to explore the profile of a teacher of bilingual learners might be from theoretical and empirical research, and a school context perspective. As well as, considering how some common challenges and opportunities might impact the future of both teacher education programs and the development of new or similar bilingual education settings.

Implications for future research on the preparation of effective teacher for bilingual learners will be discussed, building bridges between practice, policy making and the development of teacher preparation programs.

### **Richard Chant**

Associate Professor, University of North Florida, USA

&

### **Brian Zoellner**

Assistant Professor, University of North Florida, USA

# Using Personal Theorizing to Guide Action Research within Graduate Teacher Education

In Fall 2013, our department initiated a cohort-based masters degree (MED) program with a group of social studies, mathematics, and English teachers from a single secondary school in NE Florida. The program was designed to emphasize personal theorizing and action research as core constructs engaged with by cohort participants.

Elemental to the process was the early identification of participants' personal practical theories (PPTs). PPTs are the guiding beliefs that represent the conceptual structures and images that guide a teacher's actions and serve as a foundation for teacher personal theorizing (Cornett, 1990). Once established, participants reflected upon their PPTs in relation to content offered within various program courses as well as to their professional experiences gained through teaching. These efforts were completed to provide participants the opportunity to challenge and reify their personal theorizing in an on-going effort to refine their PPTs. Once completed, participants conducted PPT gap analyses, which are guided reflection activities that measure how and at what level their PPTs were evidenced in their teaching. The gap analyses led to a) action research questions, which were examined via literature reviews and b) action research designs, which were developed and implemented in Fall 2016.

This paper describes the personal theorizing and action research model employed throughout the MED program and analyzes selected artifacts that served as data points critical to participants' personal theorizing and action research processes. While the focus of action research and professional development will vary, we will use the framework of personal theorizing to examine fidelity (or lack thereof) of the participants' work to the programmatic model.

### **Andry Charalambous**

PhD Student, Frederick University of Cyprus, Cyprus

# Measuring the Perceptions and Attitudes of Teachers Regarding Inspectors' Role in Teachers' Professional Development in Cyprus

Teachers' professional development is an important priority for upgrading the quality of educational work and improving teaching and learning. This finding indicated through several research studies which are related either to the role played by the teacher in the educational process or by the programs, actions, carriers and factors of teachers' professional development. The professional development of teachers is affected, supported and related directly to the productivity and efficiency of educational work as teachers transform their teaching practice through their experience and their participation in formal and informal procedures of professional development.

Inspection of teachers and schools is a system which is applied in most European countries, such as United Kingdom, Germany, Holland, Sweden, Finland, Austria, Cyprus etc. Its ultimate and predominant aim is the improvement of education provided through the improvement of teaching and learning. Therefore, inspection is an important factor and carrier of teachers' professional development and improvement. The growth of current international research indicates that the question of the impact of inspection system is one of the most important issues of educational research in many countries.

At the same time, it indicates that the effectiveness of inspection is an ambiguous issue since the survey results do not reveal a consistent picture for school, teacher and students' improvement and so opinions vary. In Cyprus the inspection system is held by 1976 without any serious changes. Research on this issue is very limited and most of it has been contacted many years ago. Therefore, the need for contacting more empirical research on the issue of the effect of inspection system is urgent so as to provide new information and knowledge about it.

A research has been organized and is going to be implemented soon in order to examine and highlight the current situation concerning the perceptions and attitudes of teachers and principals regarding the inspectors' role in teachers' professional development for primary education. In addition, the research aims to write down the reasons that may hinder inspectors' role to contribute effectively to teachers' professional development so as to be recommended solutions proposals based on research findings.

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In this paper the research questionnaire is presented; the development process, the pilot research, the statistical results about its structural validity and reliability and its final structure.

### Juanjuan Chen

PhD Student, The University of Hong Kong, China

&

### Minhong Wang

Associate Professor, The University of Hong Kong, China

### Concept Mapping-Mediated Inquiry Learning in an Online Environment

Concept mapping has been widely used in education to support the communication of complex ideas. It has a potential to support learning in inquiry and problem-solving contexts by explicitly representing complex ideas and the relationships among them, making thinking and reasoning visible, and facilitating argumentation. However, there are few empirical studies on deploying it as a supporting tool for learning in inquiry and problem-solving contexts. This pilot study explored the implementation of concept mapping in a problem-solving based online learning module, and its effects on student attitude towards collaborative inquiry learning, and motivational and emotional experiences. The participants were 42 students (mean age 17 years, 18 male, 24 female) from a senior high school. They learned in small groups of three or four members to explore a fish death problem in an online environment, and constructed concept maps to support their thinking and reasoning during the problem-solving process. The mean score on individual post knowledge test (with the total score being 86) was 67.47 (SD = 7.78). Results from the questionnaire data showed that students had positive attitude towards collaborative inquiry learning (M = 4.31, SD = 0.60), and favorable motivational and emotional experiences in the inquiry process (M = 3.73, SD = 0.69). With respect to their response to the open-ended question, some students considered the concept-mapping mediated approach to be a new learning experience enabling them to learn how to think from different perspectives and in a logical way; others reported that they acquired a deeper understanding of the knowledge, improved problem-solving abilities and strategies, and developed teamwork spirits. The findings demonstrate how concept mapping can support student problemsolving process and enhance their learning motivations and emotions.

### Laura Coetzer

Senior Lecturer, Tshwane University of Technology, South Africa

# Early Childhood Development: A Collaboration Community Project to Support Enhanced Progress for pre-School Learners

In 1995, the Civic Association of the Greater Pretoria was approached to identify a need in disadvantaged communities. The then Department of Teacher Training at the previous Technicon Pretoria (now the Tshwane University of Technology/TUT) committed itself to make a contribution in the designated areas, i.e. greater Pretoria, now known as Tshwane Metropolitan. Day-care in those areas were prioritised, because of the pronounced need among day-care mothers for betters skills in their role as caretakers. A community development programme to train day-care mothers was initiated and has been running successfully over the past twenty-odd years. Over the course of the period an estimated 1 200 day-care mothers attended and completed the programme.

Another area in serious educational need, is the northern part of KwaZulu-Natal (deep rural) where literally hundreds of children under the age of 6 living on farms never get access to any educational activation. Here TUT has also interceded to train day care mothers for educational support.

Some perspective to this situation is given when the UNESCO (2015:47) report is added to the mix. The great importance of early childhood was recognised in 2000 at the World Education Forum in the elaboration on goal 1 of the Dakar Framework for Action.

The White Paper for Post-School Education and Training, 2013, of the Department of Higher Education and Training, announced that Early Childhood Development Programmes in South Africa has become a critical aspect of the National Educational Policy Framework. Deemed to be one of the flagship community projects of TUT, the researchers at the Faculty of Humanities realised the bigger need for effective training interventions, specifically in the underdeveloped and poor communities that TUT serves.

The Faculty of Humanities is the beneficiary of project funding from the Department of Higher Education and Training (DHET), which will culminate in the establishment of an ECD Centre of Excellence on the Soshanguve North Campus. It should also be stated that the private sector has been exemplary in their financial support of this project. Once the ECD-Centre is completed and functional, other further

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learning opportunities for transferring skills and knowledge on integrated disciplines will be explored. TUT decided that ECD will be a "niche area" whereby valuable skills and knowledge transference can be offered by the Faculty of Humanities. Research will be conducted by staff and students, providing valuable information to government, parastatals and early childhood organisations concerned with ECD.

For the immediate future the continuation of the informal capacity training programme is vital. The elevation thereof to the semi-formal stage, incorporating a registered learnership with the final stage being a formal short learning programme at TUT defines the vision.

#### Jan Collie

Senior Forensic Investigator, Discovery Forensics Ltd, UK

#### A Strategic Model for Forensic Readiness

Forensic readiness has been defined as: '...the capability of an organisation to use digital evidence in a forensic investigation'. For businesses, especially medium or small enterprises, gaining this capability can seem time consuming and expensive: it may involve a number of processes, it may require new hardware and software and people with specialised skill sets may need to be hired in order to implement any plan. Yet developing and maintaining a forensic readiness capability is vital in the digital age. Fraud and cybercrime cost almost £11bn in the UK alone last year. Across the European Union, the annual cost of cybercrime now accounts for 0.41% of national GDP. Recent figures have also shown that up to 95% of digital incidents are caused by malicious insiders.

This research proposes a structured, strategic approach to forensic readiness for businesses that is economic to implement and run. It is based on people and processes rather than complex electronic systems. Key to this approach are a firm's best asset - its own staff. It is theorised that the foundation stone of forensic readiness is a strong internal security culture. In order to achieve this aim, an unique, scalable model for efficient and inclusive planning is put forward with a reporting construct which assures company-wide involvement.

#### Ileana Cortes Santiago

PhD Candidate, Purdue University, USA

#### The Power of Community-Based, Transformative Research

Often, universities foster environments where deeply personal and affective dimensions are disconnected from academic engagements. But what happens when one of the most meaningful findings in a qualitative research project is the strength of relationships developed among individuals, in addition to the affection and healing experienced by a participant-researcher? The presenter will share her experience working with Latino/a families and a literacy educator who became allies and friends; with data sources that came to document moments of kinship and care; and with writing as a profoundly personal and invested experience documenting camaraderie, restoration, and love.

#### Maria Rosaria D'Acierno

Associate Professor, Università degli Studi di Napoli Federico II, Italy

## Reading in a Second Language at Elementary Level for Adult Students

In this essay I stress the difference in facing reading for adult students of English and adult students of Farsi or Urdu at elementary level. Reading is the main skill to acquire the cultural data belonging to the language studied, because it goes beyond the mere recognition of words or just the decoding the meanings of letters or words strewn together. It is much more, as to say a conscious and unconscious thinking process in which the reader, by applying various strategies, infers the intended meaning of the writer. The reader's prior knowledge is used to reconstruct the meaning of the text, but unfortunately the reader is much more familiar with the background belonging to his/her mother tongue rather than with that of the second language. In order to achieve a good comprehension of the text, the schemata of the foreign reader should adapt to the culture of the second language.

Viewed under this perspective, reading becomes a very difficult task, since the student has to overpass his/her cultural background in order to fully understand a foreign text. But, how can we improve this skill with our students of English and with our students of Urdu or Farsi? There is a big difference between these two groups, and this because our globalized world has affected the western countries much more than the Middle East, which still remains unknown to us either as languages or as culture. We all know now, about Halloween, Thanksgiving, Martin Luther King's day, and so on and we even celebrate these festivities. We also know what Ramadan is, but this is the only event among many others that we are recently getting familiar with. Rather, we attach to the people of the Middle East many cliché due to the media. As a consequence, it is extremely important to introduce cultural data as soon as possible through reading passages talking about Iran or Pakistan. Then, there is another problem linked to Farsi and Urdu, being these languages not so popular as English is. They are completely new to the learners, also because the similarities between the student's mother tongue are reduced to a very few words.

We suggest following different strategies when introducing cultural data belonging to English, Farsi and Urdu. We have given students of English reading passages in English straight from the beginning, while we have suggested the other groups to read passages translated into their mother tongue. In doing so, we stimulate the students of English to feel more confident with this language because, while comparing it with their mother tongue they realize that there are both cultural and syntactical and semantic likeness with their language - Italian - in our case. Considering the other group, it was not possible to give original reading texts. We tried, but it was too frustrating, because of the language and because of the context. Thus, after analyzing a series of translated passages we realized that we had a vast choice, because they were all very interesting either from the linguistic or the cultural side. In fact they were full of original linguistic structures, words and above all full of well contextualized ways of life. The students learned new words, new expressions and had also the chance to learn the real social, political and educational conditions belonging to those people without feeling inadequate or depressed. On the contrary they were stimulated to face Farsi or Urdu even thinking that at last they were not so difficult, because these languages belong to the Indo-European family.

#### Romina da Costa

PhD Student, University of Maryland, USA

## Women's Proportionate Representation and Faculty Work Environments: An Exploratory Case Study of Tenured and Tenure-Track Faculty at the University of Maryland, College Park

This study made use of publically available data on the gender make-up of tenured and tenure-track (T&TT) faculty at the University of Maryland, College Park (UMD), in order to examine how the presence of women among T&TT faculty impacts the work environment. The study relied on secondary data in the form of faculty work-environment surveys conducted through the ADVANCE program at UMD, an NSF funded program intended to improve the diversity of faculty at UMD through the advancement of women and minorities. The study focused on three different schools at UMD: the college of engineering, where women are a token group (15% representation); the college of behavioral and social sciences, where women's presence has increased from an established minority (30%) to close to gender parity in recent years; and the college of education, in which there is relative gender parity but where women are inching towards a majority status (60%). The results suggest that increases in the proportionate representation of women among T&TT faculty is correlated with decreased gender differences in faculty perceptions of their work environment. In addition, the presence of women is correlated with a decrease in instances of discrimination and marginalization on the basis of gender, and also with improvements in the work environment for men faculty as well, since they are better able to take advantage of family leave policies originally put in place for the benefit of women. The increased presence of women was correlated with improved perceptions of the work-life balance and work time allocation for both men and women.

#### Neffisatu Dambo

Assistant Professor, Southern Illinois University, USA

&

#### Louis A. Akainya

Southern Illinois University, USA

# School Counsellors' Role: Supporting the Transitions of Immigrant and African-American Students

Professional School counselors have an ethical and legal responsibility to support the academic, personal, social, and career development of *all* students. Similar to Immigrant students, African-American students have a high propensity to encounter cultural challenges that influence their identity development, academic, and career progression. There is also a distinct stratification amongst individuals from different socioeconomic and racial groups as it pertains to academic and career trajectories. Immigrants and African-American female high school students from low-income families need additional supports as they are classified as "at-risk" due to their propensity to drop out of school, become pregnant, and encounter other academic and vocational challenges limiting their pursuit of post-secondary education.

Given the proper supports, "at-promise" Immigrants and African-American females from low-income homes have overcome the predicted odds. They have made a significant contribution to the larger society, while demonstrating resilience, academic progression, career success, and socioeconomic development. The purpose of this article, therefore is to: (a) review challenges confronting Immigrants and African-American female students, (b) introduce resiliency theory as an approach to support these students, (c) offer systemic, practical interventions for school counselors to employ to promote the holistic development of these students, and (d) discuss benefits of multicultural competent educators and cultural pedagogy in intercultural schools.

#### Wim De Grieve

Inspector, Fédération Wallonie-Bruxelles, Belgium

#### **Questions to EMILE**

EMILE is the French acronym for CLIL. It means Enseignement de Matières par Intégration d'une Langue Etrangère. In this paper we shall have a look institutional, historic and didactic on the specificity CLIL in the primary schools of the French-speaking part of Belgium. As well Cognition, Competences, Culture as Content will be approached. The Strengths, the Weaknesses, the Opportunities and the Threats inherent to immersion in Wallonia are the following facts which will be analyzed. Finally, some results will be shared.

#### Marilete Terezinha De Marco

Teacher, Universidade Estadual Paulista "Julio de Mesquita Filho" (UNESP), Brazil

&

#### Elieuza Aparecida Lima

Teacher, Universidade Estadual Paulista "Julio de Mesquita Filho" (UNESP), Brazil

### Perceptions of Young Children Education Public School Teachers about their Formation and Educational Practice

This work aims to share studies accomplished during the Education Master's degree research completed at the Post-Graduation Program in Education of the Universidade Estadual "Júlio de Mesquita Filho" (UNESP) Campus Marilia, São Paulo. As the main objective of the research, we intended to check the perceptions of the Young Children Education teachers about their formation and their educational practice performed in four public schools of Medianeira city. Our studies were mainly guided by the theoretical fundamentals of the Cultural-Historical Theory of the human development defended by Vigotskii (1988) and by other contemporary authors as Libâneo (2004), Duarte (2007) and Saviani (2009), among others, that highlight the importance of the teacher's formation to contribute for a quality work with the young children. For the data production we used the semi-structured interview applied to eight young children teachers and we also observed two pedagogical situations of each investigated teacher to check how the formation impacts their pedagogical practice. The obtained results revealed that the initial and continuous formation failed to provide the contents considered essential for an educational practice focused on pedagogical actions that are capable to promote the whole development of the young children. At last, we comprehended that the Young Children Education must privilege knowledge from different areas searching for the effectiveness of the multiple possibilities and the learning capacity on this level of education. By this perspective, the teacher formation points to a process that covers the learning constitution and leads to an education focused on developing the children maximum possibilities regarding their individual needs and respecting the social, historical and cultural differences.

#### Roberta Devlin-Scherer

Professor, Seton Hall University, USA

&

#### Nancy Burns-Sardone

Associate Professor, Georgian Court University, USA

#### edTPA Process and Progress

In the past few years teacher education in America has been turning toward performance assessment for licensure of preservice teacher candidates. The edTPA (SCALE, Stanford University) system that is being adopted or piloted in various states offers what some believe is a more effective way than testing to analyze teacher candidate preparation for teaching. The system has candidates prepare detailed evidence of their work in three categories: Planning, Instruction, Assessment. Fifteen rubrics ask candidates to provide examples of teacher actions, such as addressing all students' needs, active participation, giving feedback. This session will provide a brief overview of the system and samples of student work from different academic fields for discussion and review.

#### Jaime Diamond

Assistant Professor, University of Georgia, USA

## **Should Pre-service Teachers Engage in Discussion About Transfer?**

Students' transfer of learning has been an issue of educational concern since the turn of the 20th century. At that time, the changing mission and structure of schools meant that teachers needed to prepare students to successfully engage with situations arising both in the real world and in their future classrooms. The same is true today. In fact, the continued emphasis on students' transfer of learning can be seen across disciplines in multiple standards documents that call for the development of students who can "apply" their classroom learning to an ever-expanding range of situations. Despite the fact that the last 115 years have brought a host of teaching recommendations outlining researchers' ideas regarding instructional supports for students' transfer of learning, we still do not know how teachers conceive of the phenomenon nor how they work to support it. This line of research examines transfer through the eyes of both in-service and pre-service teachers (PSTs). The purpose of the present study in particular is to examine (a) the impact of a mathematics methods course for elementary PSTs on PSTs' beliefs about transfer and (b) the necessity of engaging PSTs in explicit conversations about transfer. Findings indicate that after PSTs' engagement in the methods course, the number of teaching actions PSTs offered to support students' transfer of learning more than doubled. Moreover, the focus of PSTs' suggested teaching actions shifted from developing students' procedural fluency to developing students' conceptual understanding. Interestingly, those PSTs who engaged in explicit conversation about transfer outside of class developed more refined ways of thinking and talking about transfer than those who only engaged in the mathematics methods course. Such details will be presented during the presentation.

#### Elizabeth Diaz

Assistant Professor, University of Texas, USA

#### Reading and Writing by Using Smartphone Apps: Mi ABC

Research has demonstrated that all children become grammatically competent speakers of their first language by about age five. Subsequently spoken language development relates primarily to vocabulary acquisition and expansion of the functions for which language is used. However, competence in reading and writing develops much later or in some cases may not be universally achieved. Therefore, oral language competence precedes written and language competence in first language acquisition. Research in second language acquisition, highlights the importance of using the first language as a foundation for achieving higher levels of proficiency in English. Thus, the level of language competency in both languages can affect the influence of the learning experience on this development. Children learning two languages reap the benefits of gaining higher levels of cognitive flexibilities, shown by becoming balanced bilinguals in both languages (Cummins, 1976, 1979). Mi ABC fosters that foundation in the child's first language, while learning English in school. The App called, Mi ABC is a complete reading/writing tool in Spanish and Portuguese that is downloaded onto a mobile phone or iPad. It aims to teach children how to read and write in their first language. The purpose of Mi ABC is to accelerate language reading and writing learning by using components called WIS (word, image, and sound). The App provides a fully personalized system using three different games in which children apply their knowledge of the alphabet, vowel sounds, and consonant blends using two and three letters. Within the gaming section, each parent may personalize phrases using their own voice to motivate their children to complete each gaming section. Thus, incorporating the parents in the learning process.

#### Gail Dickinson

Associate Professor, Texas State University, USA

### Retooling Cambodia's Teachers: Progress and Challenges of National Reform

In September 2013, Dr. Hang Chuon Naron was appointed Minister of Education, Youth and Sport (MOYES) in Cambodia. He immediately set about an ambitious reform agenda to bring Cambodian education up to the standard of other ASEAN countries. Under Dr. Hang's leadership MOYES and UNICEF are working together to upgrade the knowledge and skills of the nation's secondary science teacher trainers. The first cohort teacher trainers is in their second semester of a threesemester Masters degree program in science education. The first semester lacked any pedagogy courses so the researcher was asked to conduct Saturday workshops on science teaching pedagogy during the second and third semesters. These ninety-minute workshops demonstrated inquiry lessons in four content areas: biology, mathematics, chemistry and physics. This pilot study uses qualitative analysis of instructor notes along with national data on teacher preparation to analyze the potential for reform in Cambodia. Although teacher trainers have successfully memorized complex content, they lack the ability to apply basic concepts. Teacher trainers are eager to learn pedagogy but have little opportunity to do so and even less opportunity to practice inquiry methods. During the third semester a formal pedagogy course will be included in the program. Based on qualitative analysis and recommendations from others researching Cambodian education reform, the researchers suggests revising future Master's programs to emphasize on knowledge for teaching and pedagogy. Additionally she recommends using constructivist textbooks from other countries as the basis for educative curricula that includes core sets of scripted lessons for each grade level.

#### **Menachem Domb**

Professor, Ashkelon Academy, Israel

### An Adaptive Classification Framework for Data Streaming Anomaly Detection

IoT and Control systems are enriched with sensors, which collect vast amounts of temporal data. Connecting these systems to the Internet increases the possibility of malicious data loaded to the system. Protecting the system from such cases requires anomaly detection means, which are used for classifying new cycles, identify anomalies and predicting future behavior. Typical anomaly detection tools require considerable computation power and space, which standard sensors are lacking. Due to these limitations, the original data cannot be stored as is, but rather must be compressed in such a way that it will still be valuable for classifying and analyzing new data cycles. We propose an adaptive method of representing the data in an optimal way. The approach is based on an adaptive composite of contributing parameters. The selected parameters and measurements can be adjusted to comply with the structure of the specific domain. We detail the workflow of finding the optimal parameter mix resulting with an optimal separation and reliable classification. We demonstrate our approach using an experimental case study.

#### Jitra Dudsdeemaytha

Lecturer, Graduate School, Srinakharinwirot University, Thailand

# The Effect of Siam Laughter Program for Enriching Inner Happiness on Primary Student in Rural Community

This research was a quasi-experimental design in one group included a pre-post test design. The objective of this study was to utilize Siam Laughter program for enriching inner happiness on primary student in rural community. The sample group consisted of 12 game-addicted primary students in rural communities by purposive sampling. The intervention of this study was Siam Laughter Program with the duration of 2 months, 1 hour/time and 2 times a week, totally 16 sessions. Research instruments were: 1) Siam Laughter Program: The core content of this program composed of breathing exercise, warming up, 10 postures of Siam Laughter exercise, presenting on the public stage. 2) Inner Happiness Inventory which comprised 5 factors, physical, emotional, social relationship, positive thinking and vitality, 25 items in total. The validation of inner happiness test was .85 The statistical analysis used Wilcoxon matched-pairs Test. The result of this study found that after participating Siam laughter Program, the sample group had inner happiness scores significantly higher than before participating in the program at 0.05 level.

#### Raymonnesha Edwards

Ronald E. McNair Scholar/Student Presenter, The University of Mississippi and Alcorn State University, USA

# An Investigation of State Superintendents in the United States: Ethical Leadership Perspectives, State Leader Demographics, and State Education Characteristics

The purpose of this study was to investigate the ethical leadership perspectives of state superintendents across the United States, including the District of Columbia, and the Department of Defense. Secondly, the researchers examined to what extent the ethical leadership perspectives of state superintendents were correlated with school leader demographics. Furthermore, the researchers examined to what extent the ethical leadership perspectives of the state superintendents were correlated with state education characteristics. Included in this survey were the Ethical Leadership Scale (ELS) and Social Desirability Scale (SDS). The ELS was used to measure the ethical leadership perspectives of superintendents in the study. The SDS was used to measure the social desirability of superintendents in the study.

Additionally, the researchers collected self-reported state leader demographics and state education characteristics. The survey was sent to 38 state superintendents in the United States of which 15 responded. A correlation analysis was used to analyze the data. This analysis was used to determine the correlation between the superintendents' ethical leadership perspectives and the self-reported state leader demographics and state education characteristics. Furthermore, the correlation analysis was used to identify which variables (state leader demographics and state education characteristics) have the strongest predictive relationship with the ethical leadership perspectives of the superintendents in the study.

#### **Denise Egea**

Professor, Nazarbayev University, Kazakhstan

# Three Francophone Writers: The Challenges and Opportunities of Their Bilingualism

This paper is based on the recorded testimonies of three Francophone writers' linguistic and cultural experiences in "the language of the other." Amadou Kourouma, novelist (Abidjan, Ivory Coast), would have liked to be able to write in his native language, Malinke, but it was not possible-Malinke was only an oral language. Therefore his "other language," French, was an "ineluctable imposition"; yet it is this second language which "was for [his people] liberating: enabling [them] to be heard ... acknowledged."Barry Ancelet, poet and lyricist (Lafayette, Louisiana, United States), also described how he uses Cajun as apolitical tool, to send out a message: he and the other Cajuns want to let the French-speaking world -which he says has forgotten them -know that the Cajuns are still there, and they want to do so through the Cajun language. Suzanne Dracius, novelist, poet and playwright (Fort-de-France, Martinique), considers Creole as her "dear native language." However, for her, becoming literate meant passing through the French language which became "a symbol of emancipation." These testimonies are discussed in the opening section. A reading of Jacques Derrida's Monolingualism of the Other; or The Prosthesis of Origin, enables us to analyze the experiences of these writers whose bilingualism provided "the only language [they] could use" to write and publish, and a symbol of emancipation or a weapon. It leads in the next section to a discussion of the impossibility of absolute monolingualism demanded by "linguistic imperialism," the multiplicity inherent in any language, and the violence of a language which claims to be unique, while serving some ideology or power. In the last part, I address the double interdict to which Derrida believes education must respond, and the double entitlement for which it is responsible.

#### **Nurit Elhanan-Peled**

Lecturer, Hebrew University and David Yelling Academic College, Israel

#### Holocaust Rhetoric in Israeli School Books

The paper is part of my current project whose working title is: "From holocaust education to peace education." It will examine mainstream Israeli textbooks in History, Geography and Civic Studies that have been published since 2000. This work continues my previous studies of the representation of Palestinians in Israeli textbooks published between 1994-2009, and its educational implications (Peled-Elhanan 2012 presented in ATINER conf. 2015). All the books will undergo a multimodal analysis that will adopt the Social Semiotic ways of inquiry and will ask how meanings are made with verbal and visual signs and how reality changes to a version of reality.

The paper will show how Israeli education treats all "others" – both Jewish (Ethiopian and Arab Jews) and Muslim or Christians - according to what Z. Bauman (1989: Modernity and the Holocaust) labeled: The gardening metaphor: whereas some "others" can and should be molded and shaped to fit the Israeli Zionist-Western "garden" there are "others" that can never be changed and therefore must be distanced, kept within strict boundaries, or symbolically and physically eliminated. Both groups are "racialized", namely treated like inferior races.

It is my contention that the use of racist discourse or in Memmi's terms "heterophobic" discourse towards "others", the mistrust of any non-Jew unless s/he is Zionist, the repulsion from anything "Arab", and the dread to become a powerless minority again, that prevail in Israeli social, political and educational discourse, the symbolic and physical segregation of "others" in all aspects of living, and the inculcation of uncritical admiration towards the military and towards military power from a very early age, cannot be understood nor overcome without studying the Holocaust rhetoric as it is expressed in school books. This "Holocaust rhetoric" has two facets: the rhetoric of victimhood and the rhetoric of power. Both imply the need to be always alert, always suspicious, always surrounded by wire fences and accompanied by fully armed soldiers, to "control" all the "others" at all times, for they are constantly occupied with jeopardizing our "defensive democracy" or our "Western" culture and the Jewish character of the state, from within and from without.

Drawing upon Dominick La-Capra (Writing History, Writing Trauma 2001), who distinguishes between two forms of remembering

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trauma and writing historically about it, I see two forms of educating children after the Shoa. One is to re-traumatize them and turn them into heterophobic human beings, and the other is working through the trauma and draw some lessons about our own present and future behavior. Looking at Israeli curriculum, one cannot but notice that Israeli education has chosen the first option so far. Peace education should choose the second.

#### **Basak Ercan**

Instructor of English, Akdeniz University, Turkey

# The Opinions of ERASMUS Students, who studied at Akdeniz University, Turkey about Multi-Culturalism: A Case Study

This paper aims at finding out the opinions of ERASMUS students about multi-culturalism in the frame of lifelong learning. In the study, the effects of the program on identity formation during youth period in socio-cultural changing dimension; the contribution to their education and development in professional development dimension and their opinions about the applications of curricula and inner-class communication in teaching process were tried to be specified. The study was carried out via descriptive model and qualitative research method. The study group consisted of nine ERASMUS students who were studying at different faculties of Akdeniz University İN 2015-2016 academic year. The author used a semi-structured interview form to collect the data and used frequency analysis technique to analyze them. The main results of the study are as follows: 1. Students joined the program for education and to gain experience abroad, culture, fun, to develop their foreign language skills, climate and to find themselves. 2. Knowing and understanding other cultures, knowing the Turkish culture beforehand, liking Turkish food and positive characteristics of Turkish people made their perception of social realities easier. 3. The program helped the remove of existing prejudice against other countries and cultures. 4. Students gained self-confidence. 5. They found the programme help improve their vocational skills. 6. Students found the content of the lessons simple.

#### Cristina Escobar Urmeneta

Professor, Universitat Autònoma de Barcelona, Spain

# Internationalisation in Pre-service Primary Teacher Education: Opportunities and Challenges

The democratization of CLIL (Content and Language Integrated Learning) programmes in primary education calls for teachers with advanced linguistic and methodological competences that enable them to conduct successful content lessons through English in inclusive classrooms. In 2012 The Universitat Autònoma de Barcelona's (UAB) Faculty of Education (FE) based in Catalonia, a bilingual Catalan-Spanish area, launched a pilot programme in which student-teachers take between 65% and 80% of the 240 ECTS credits of the teacher-education programme in English as a third language.

Three assumptions underlay the design of the English-Medium Bachelor's Degree in Primary Education (EMBDPE): (a) extensive and intensive contact with the target language together with the implementation of the approach known as "Integrating Content and Language in Higher Education" (ICLHE) will produce positive results in terms of foreign language development; (b) the language switch will not affect achievement rates, that is, students in the standard programme and those in the English-Medium Instruction (EMI) programme will obtain similar academic results; and (c) the student-teachers' competence in Catalan, the minority language in Catalonia, will not be negatively affected by the EMI programme.

After four years of existence, the EMBDPE has proved a true opportunity for the 'internationalization at home' of about 300 student teachers in spite of the various threats to quality that the programme has had to deal with over this period. This paper will present the design and outcomes of the EMBDPE in its first four years of existence (2012-2016), and its weaknesses and strengths as seen through the eyes of both student teachers and instructors. Finally, a set of general recommendations for EMI degrees and pre-service teacher-education will be presented.

#### Nicola Fabiano

Partner at Studio Legale Fabiano, Italy

# Internet of Things and the Legal Issues related to the Data Protection Law according to the new European General Data Protection Regulation

The Internet of Things phenomena should consider the legal issues related to the data protection law.

IoT is not exempt from the privacy and security risks because of the use of the technologies that often cannot guarantee absolutely any security level. There are several risks and threat in the Internet of Things but it is not possible to mention all of them. The main risk for privacy is the profiling because in this way is possible to identify a natural person through his/her personal information. However, regarding the privacy and security risks there are some issues with potential consequences about data security and liability. The IoT system allows you to transfer data on the Internet including personal data.

In this context it is important to consider the new European General Data Protection Regulation (GDPR) that will be in force on 25 May 2018.

The GDPR introduces Data Protection Impact Assessment (DPIA), data breach notification and very hard administrative fines in respect of infringements of the Regulation.

A correct law analyzes content to evaluate the risks and prevent wrong use of personal data and information.

#### Thomas Fehlmann

Senior Researcher, Euro Project Office AG, Switzerland

#### The Role of Mathematics for Success in Business

In old times, kings, emperors and polis states gathered scientists around them in order to raise knowledge about successful warfare and economics. The foundation of the University of Alexandria gave the Ptolemy kings in Egypt a significant advantage in the world of the 3<sup>rd</sup> century AD. Islamic empires and the Ottomans later profitably supported universities, thus withstanding Christian kingdoms of the west. Later, things turned around, some empires forgot about science, and Europe forged the leading nations based on their superiority in applying scientific results to power.

Mathematics played a major role for instance for the artillery, with its ability to predict ballistics.

Today, this is still the case, although not always visible to the general public. Many modern money-generating businesses rely on mathematics, often not exactly known to the user. Who is aware what made the digital storage and distribution of pictures and music possible? What exactly has Google Search in common with Linear Algebra? What is the foundation of Big Data? When was this invented? Was it already Euclid, or did something important happen after the 3<sup>rd</sup> century AD? Many people today have mathematical skills not superior to Euclid's students, but mathematics in the 20<sup>th</sup> century possibly made the biggest steps forward ever.

This talk explains a few of these secrets. The paper presents modern experiences from the last 40 years how to make businesses successful with a little bit of advanced mathematics – advanced means, Euclid didn't yet know about it.

In the Eighties, writing software was still a challenge. Computers were not performance and resources limited. Writing software was a tedious task, taking long. Nevertheless, logical programming offered a way to speed up programming and making it less error-prone. A story tells about a company that was able to deliver prototyping new software within a week, won the final contract and became a world-leading company afterwards.

In the Zeros of this century, writing software has become an engineering discipline, and the race was for features and functions. However, resources were still limited. Six Sigma transfer functions helped startup companies to concentrate resources on those tasks that customers liked most. It became possible to analyze customer

preferences based on the New Lanchester Theory, an application of Six Sigma transfer functions, and even predict the evolution of customer's needs, for instance with the Net Promoter® Score method, another application of Six Sigma transfer functions.

In the Tens of this century, the ICT world is changing at an incredible pace. Digitalization changes the way we do business. From a competitive approach, it moves into a collaborative approach, where alliances and the user's involvement transform customers into partners. With the Internet of Thing (IoT), everybody becomes programmer and creates applications for fun and for breadwinning. Now security and safety issues become predominant. The use of Combinatory Logic is required for managing and controlling the IoT. Features and functions, systems and programs are no longer stable and static but dynamically adapt to new wishes and ideas of its users.

We will sketch the mentioned techniques for logical programming, for Six Sigma transfer functions, and explain how combinatory allows measuring quality, security and safety of today's IoT applications, autonomous cars and beyond. Finally, a few consequences on education will be drafted and discussed.

#### Ovidio Felippe Pereira da Silva Junior

Professor, Universidade do Vale do Itajaí, Brazil Bruno Panerai Velloso

Professor, Instituto Federal de Santa Catarina, Brazil

Maria de Lourdes de Souza

Professor, Universidade Federal de Santa Catarina, Brazil

Вr

#### Carmem Regina Delziovo

Secretaria de Estado da Saúde do Governo do Estado de Santa Catarina, Brazil

## Maternal Mortality Analytical Observatory: Management Information System Design to Generate Accurate Indicators of Mortality Ratios

Maternal death is considered to be associated with preventable causes, usually because it is an event that affects a specific population with a clearly established duration. The United Nations General Assembly 189 Member States have agreed on a global commitment to the reduction of maternal mortality as a Millennium Development Goal. Two indicators are being used to measure the obtained results: the ratio of maternal mortality and the proportion of births attended by trained health professionals. In Brazil, it was identified that the maternal mortality ratio demonstrates the non-attainment of the agreed reduction and also the occurrence of unsafe practices that carry risks for the woman and for the newborn. In this context arise social technologies to improve society by supporting the process of the pregnancy and pós-natal period. Such as the Analytical Observatory, a Management Information System which has the function to generate reports out of the followup the Maternal Mortality Rates. The aim of this work is to design a technological architecture for an online analytical observatory capable to handle the data and generate the described indicators. Online Analytical Processing was used, in the manner of a data structure and processes with the capability to manipulate and analyze the available data. The Observatory is accessed as an online service, in the client-server model where the workload is distributed between the client applications (user application and/or browser) and server (Web site and data servers). MySQL is employed in the data structure, conditional to the technology already in place in the present records. MySQL is a free software that allows robust applications with functions and procedures necessary for the Observatory. Java Server Faces runs on the server, a programming language that allows the

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creation of web sites with focus on high performance, easy maintenance and integration of various databases in a Model, View, Controller architecture. xHTML structures the web pages, part of the user interface along with JavaScript, a client-side interpreted programming language. Free JavaScript libraries named Google Charts and Charts JS are adopted for the specific task of generating charts. The proposed system is under development as a functional prototype.

#### M. Katie Flanagan

Associate Professor, Florida State University, USA

#### Making Service Learning a High Impact Practice in College Curriculum

Pedagogical and experiential learning literature refers to service learning as a High Impact Practice (Kuh, 2008), that is an activity that engages students in active learning by encouraging students to make their own discoveries, ask questions, and grapple with complex problems. This is done through an intentional process comprised of multiple phases: Education, Observation, Participation & Interaction, Critical Analysis, Exploration and Application – and within and alongside this process - Ongoing Reflection. This presentation will provide examples of each of these phases and will also detail the logistics involved in the creation of these experiences. While much of the service learning literature focuses on the positive outcomes, this presentation will share not only the positives, but also many of the challenges and some failures.

Over the past four years the program has transitioned from a charity model to a social justice model of service learning (Marullo & Edwards, 2000). The transition to a social justice model has gradually come about as a result of university resources such as grants, graduate assistant support, and service learning expertise, as well as the deepening of community partnerships and just as often, trial and error across multiple semesters. This presentation provides information about establishing relationships with community partners, introducing the idea of service learning to students, and evaluating its effectiveness. It will also address the many logistics associated with the implementation of service learning in a course such as scheduling, conflicts, and uninterested students. Further, it will identify best practices in maintaining the relationships with community partners and maximizing student impact such as the use of social media, technology, and student initiated projects. These practical and philosophical perspectives can assist those interested in the implementation and development of a service-learning program in college curriculum.

#### Ziaul Abedin Forhad

Lecturer, Assumption University, Thailand

### In-service Teachers' Attitudes toward and Usage of Information Communication Technology (ICT) Tools in Professional Practice; A Study of an International School in Bangkok, Thailand

Information Communication technology (ICT) tools are referred by each and every inventions of the modern society that have been considered as the key strand for teaching and learning process. Using ICT tools in their professional practice, countless in-service teachers are developing their students' learning process effectively in many countries around the world. The purposes of this study are: a) to explore the attitudes toward ICT tools of in-service teachers of an international school in Bangkok. b) to search the usage of ICT tools in their professional practice. The study revealed that, majority of the inservice teachers cherishing positive attitude toward ICT tools but significant number of in-service teachers are not using ICT tools adequately in their professional practice. Plausible reasoning for this discrepancy is discussed.

#### Denver J. Fowler

Assistant Professor, Educational Leadership, The University of Mississippi, USA

# Leading and Implementing Change in Schools: Educational Leadership, Ethics, School Climate, and School Culture

This presentation will focus on the importance of ethical leadership and how all school leaders should prioritize the process of fostering a positive school climate and school culture in a given school building and/or district. Several items as it pertains to these constructs will be clearly presented in this presentation including the differences between school climate and school culture, how the ethical leadership perspectives of school leaders vary according to school district characteristics and school leader demographics, as well as the multidimensional constructs of school climate and school culture (physical, social, academic, and discipline). Furthermore, this presentation will include strategies on how to implement such change in a school building and/or school district. That is, strategies on how to foster a positive school climate and school culture.

#### **Bernie Garrett**

Associate Professor, University of British Columbia, Canada

&

#### **Roger Cutting**

Associate Professor, University of Plymouth, UK

# Magical Science: Discriminating Science and Pseudoscience in Media Messaging with Undergraduate Students

This paper presents results of a study to explore the nature of magical beliefs and influence of media in undergraduate students in two professional disciplines (education and nursing). A number of surveys have reported paranormal beliefs are widespread in the public. A 2016 YouGov UK survey reported that 28% of participants believed in ghosts. Previous work has identified that media messaging, and the types of media can influence such magical beliefs and how people understand reported paranormal events. However, there is a lack of empirical work exploring the nature of these beliefs in students, and what sort of things might influence the ongoing prevalence of such beliefs in those engaged in science-based higher education.

A paranormal belief survey and double-blinded controlled experiment was undertaken to test the effects of three versions of a supernatural news story on undergraduate students (N=70) in terms of students finding them scientific, believable and credible. After undertaking a validated psychometric paranormal beliefs survey, students were assigned into three matched groups. One group received a simple paranormal news story, another the same story with a pseudoscientific rationale, and another one that gave a discrediting scientific critique. Statistical analysis of the results was undertaken using 2-way ANOVA with post-hoc T-tests.

Results confirmed many students held magical beliefs but discriminated between the scientific and pseudoscientific narratives. However, such criticality appeared abstracted, being deployed and suspended at different times dependent upon other belief systems. Pre-existing paranormal beliefs were associated with an increased likelihood of students finding paranormal reports scientific, believable and credible. These findings stand not as a criticism of personal belief systems, or susceptibility to alternative beliefs, but rather the potential failure of degree programmes to effectively address authentic, transformative, criticality and scientific thinking as a primary learning outcomes and essential skills.

#### Laura Gaudet

Professor and Chair, Department of Counseling Psychological Sciences and Social Work, Chadron State College, USA

&

#### Peter Moriasi

Assistant Professor, Chadron State College, USA

# Implementation and Evaluation of Screencast Videos for Graduate Online Counseling Courses

Screencast videos are effective pedagogical tools for graduate online Counseling courses as they can be viewed by students for both initial learning and subsequent review (Northern Illinois University, spring, 2010). A screen cast is a video recording of the actions on an instructor's screen, with an accompanying audio file, while the instructor describes an assignment for students (EDUCAUSE Library, March 15, 2006).

During a screencast video, the instructor can highlight key content in an assignment, provide website tours and highlight professional links, rubrics and archived materials for students. Through the use of both print materials (assignment directions and grading rubrics) and audio/visual files (screen cast), the instructor can assist students as they create curricular folders, case management practice files and/or human development psychological reviews in key graduate Counseling courses.

These presenters have used screencast videos in graduate online Counseling courses to deepen the understanding of School Counseling and Clinical Mental Health Counseling students. Screen cast videos have assisted School Counseling students as they developed competency and indicators curriculum plans for elementary and secondary students in academic development, personal and social development and career development domains in the State of Nebraska.

The use of screen cast videos have deepened the understanding and awareness of graduate Counseling students in a Clinical Mental Health Counseling program as they engaged in two very diverse tasks: (1) For the Multicultural Counseling course, interviewed a person from a diverse cultural group and (2) created a culminating case management practice file for a Drug and Alcohol licensure course.

Following the use of screen cast videos in online graduate Counseling courses for one year, the presenters found the use of screen cast videos increased student's understanding of the assignment and

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grading rubric, decreased the number of confusing questions and requests for help by students to the instructor and dramatically increased by the quality, value and worth of student submissions as indicated by both the students and the instructor. In this presentation, the use of screencast videos in graduate online Counseling courses will be demonstrated; student evaluation of the instructional videos, as they pertain to increased student learning, will be described.

#### Nikhil Ghodke

Assistant Professor, Manhattanville College, USA

# Using Image-Editing Tools as a Fun Activity to add to Pedagogy

Change of pace in context of content delivery in a classroom can enhance student experience with regards to engagement and retention of content. Fun activities present a good candidate for this alteration of pace with a goal of enhancing engagement, retention of content and deliver on learning objectives. The first research question inquires: What are some of the fun activities being utilized in classrooms today and are the claims substantiated. Examining this question was motivated further, by both the perceived potentials and hindrances of such activities; for example, the class size, the availability of technology tools and other factors. The paper specifically looks at a spinning wheel game utilized in a media/communication class. This particular game is also known as winning prize wheel game, available for free online, and customizable as well. In the particular class where this was utilized, the students had prior working knowledge of image editing software's like Photoshop, and this activity can be adapted to any other image editing software. Online resources such as software tutorials for image editing are made available to the class prior to this activity.

This activity serves to ease the monotony of the course, gets the students to interact with each other, have fun, and ideally works well towards the middle/end of the semester. The students are split in to groups of 2 or 3 and given access to a computer/laptop. The prize wheel with its slots contains names of topics covered during the course, e.g.- gender, race issues and could have names of media publications, elements of design, etc. As the wheel is spun and depending on which topic the wheel stops, the groups of students have 3-4 minutes to discuss amongst themselves and edit images. They work as a team developing the artwork and draw out points to discuss at the end of this 30-45 minutes activity.

When this activity had been conducted in the past, the students had produced unique artwork and produced unique narratives around the topics. These observations motivate future research of similar activities in classrooms. This work-in-progress is part of a larger study of prototyping and evaluating activities for aiding pedagogy.

#### Alain Gholam

Assistant Professor, American University in Dubai, UAE

### Visual Thinking Routines: Classroom Snapshots

Visual thinking routines are principles based on several theories, approaches, and strategies. Such routines, which are usually used again and again in the classroom, promote thinking skills, call for collaboration and sharing of ideas, and above all, make thinking and learning visible. Visual thinking routines are carried out in different Graduate Education courses taught at the American University in Dubai: EDEL606: Elementary Science and Mathematics Methods, EDSE607/608: Secondary Science and Math Methods and Assessment, and EDCO601: Curriculum, Instruction, and Assessment.

The following paper presentation explores what visual thinking routines are, their merits, and how they are implemented in the classroom. The visual thinking routines administered in the courses (I see, I think, I wonder routine; Connect, Extend, Challenge routine; The 4C's routine; Headlines routine; Color, Symbol, Image routine; Sentence, Phrase, Word routine; and I used to think...Now I think routine) are described in the paper presentation in reference to the following three components: *Thinking moves:* What thinking moves does the described thinking routine reinforce? *Application:* When and Where can the described routine be used? and *Classroom Example:* How is the described routine used in the Graduate Education courses at the American University in Dubai? The paper presentation also documents snapshots and actual examples from classroom practices at the Graduate School of Education at the American University in Dubai, U.A.E.

As with all original, new, and unique resources, visual thinking routines are not free of challenges. To make the most of this useful and valued resource, educators, need to comprehend, model, and spread awareness of the effective ways of implementing such routines in the classroom. It is crucial that such routines are meaningfully and effectively integrated into the curriculum to reinforce thinking skills, collaboration and creativity, make learning visible, and reach an enduring understanding.

#### Ulrika Gidlund

PhD Student, Mid Sweden University, Sweden

&

#### Lena Boström

Professor, Mid Sweden University, Sweden

# What is Inclusive Didactics? Teachers' Understanding of Inclusive Didactics for Students with EBD in Swedish Mainstream Schools

Including students with emotional and behavioral difficulties (EBD) in general education is one of teachers' greatest challenges and makes the dilemma of inclusion displays its most difficult side. How do teachers understand their task to meet and include children with EBD in their classrooms? This article contributes to the understanding of how teachers in Swedish mainstream schools understand the concept of inclusive didactics for students with EBD. This article employs a directed qualitative content analysis supplemented with descriptive statistics related to the categories of inclusive didactics. Didactic theory was the basis of the predefined categories and codes by which the analysis was completed. Empirical data were collected through 6 focusgroup interviews with 4 to 8 teachers of Grades 4-6 in different mainstream schools, and 37 individual follow-up interviews, all built on stimulus texts. The findings indicate that three didactic aspects were dominant in teachers' understanding of inclusive didactics: Student(s), Methods, and Teacher. Less accentuated were Subject, Rhetoric and Interaction. Learning Environment and the statements named other appeared quite often in the discussions, even though they cannot be traced to the core of the didactics. Thus these teachers' understanding and previous research is not consistent. The overall conclusion is that the concept of inclusive didactics is complex, complicated, and difficult for teachers to relate to. The descriptions are both vague and simplistic and therefore difficult for the teachers to implement. Another conclusion is that the Subject was seldom mentioned, as in previous research on the didactic triangle, because the teachers stated that the knowledge requirements of the Swedish curriculum cannot be altered. This article clearly highlights how teachers want to do more for EBD students, feel frustrated and inadequate, and blame themselves for the students' deficiency and failure, thus concluding that strategies for distinct descriptions and teacher practices are needed.

#### Claudia Giraldo

Professor, Universidad Santo Tomás de Colombia, Colombia

&

#### Angela Nino

Chair, Universidad Santo Tomás de Colombia, Colombia

# Ethical Education: A Philosophical Reflection on Forgiveness from the Peace Processes in Colombia

This paper is the result of the research project "Policies of Forgiveness in Colombia", carried out between 2014 and 2016, by the research group Studies in Philosophical Thought in Colombia and Latin America - Fray Bartolomé de las Casas - of the Faculty of Philosophy and Letters of Santo Tomas University. The objective of the research was to carry out a philosophical analysis of the figure of forgiveness in the context of peace processes in Colombia (South America) as an important alternative of moral reparation and reconstruction of social relations affected by recurrent violence. This article exposes the place of forgiveness in moral reparation in the Colombian context and outlines the proposal of an ethical education capable of including the experience of harm and individual and collective reparation.

The increasing appearance of the forgiveness figure in the political context, accompanied by other reparation strategies, is the result of the implementation of alternatives to put an end to prolonged periods of violence, oppression or extermination. As revealed through a textual analysis of the peace accords, some public pardon requests offered by former guerrillas and former paramilitaries, and by some philosophical theories, it proves to be a social process conducive to exploring the possibilities and limitations of an ethical education, understood as the analysis of the tensions produced by the incorporation and the exigency on the part of the State of certain values and conducts to the different moral communities that constitute a nation.

Our approach is based on the principle that values and morality require a collective and individual construction, but what type of construction is involved. Is forgiveness a valuable alternative for a political community marked by atrocious damage? And if so, under what terms should the responsibilities of the different actors be understood and what is the place of ethical education in the reconstruction of the conditions necessary for the exercise of individual and collective autonomy and the restitution of the dignity of Victims? In this respect, this work joins the academic literature that deals with the policies of forgiveness and philosophical reflections on ethical

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education that analyze the figure of forgiveness as an important moral possibility to restore the dignity and moral esteem of the victims, the aggressor and the community, as well as their place in broader processes of social reconciliation that seek to make effective the rights of material and symbolic reparation that involve the victimizers and the victims, the State, and the whole society.

#### Rebekah Granger Ellis

PhD Candidate, University of New Orleans, USA

&

#### Richard Speaker

Jr., Retired, University of New Orleans, USA

# Teaching the Whole Brain in Performance-Driven School Culture: Immersing Affective-Behavioral-Cognitive Instruction within the Constructs of the Academic Curriculum

The spotlight on violence by bright individuals questions why some gifted minds thrive in life and others fail to fulfill their potential. In performance-driven school culture, the focus has shifted away from whole brain development. However, if schools are to be emotionally, intellectually, and physically safe places, we must reevaluate the overemphasis on the intellectual aspect at the expense of the other components, which inevitability leads to uneven psychological development.

Typically, aspects of the affective domain have been studied separately: cognitive theories focus on judgment, biological and psychoanalytic theories on emotions, and social learning theories on behavior. Today, a growing body of research in neuroscience, neuropsychology, psychology, psychiatry, and education reveals that all three components are interrelated, interconnected, and interdependent.

Numerous frameworks and models teaching various nonintellectual branches of child development have been debated in curriculum development, but research is inconclusive on the effectiveness of these programs. Based on the growing body of research showing that the processes of the brain cannot be separated, educators cannot simply encourage development in only one area; psychological development must be encouraging in all areas simultaneously. The proposed approach combines all theories concurrently: encouraging psychological/cognitive, social/behavioral, and emotional/affective development.

The first phase of this study examines several gifted education programs (creative arts school, urban charter school, rural school, and suburban school) for moral, social, and emotional psychological development and whether a particular program encourages developmental growth. The second phase unifies multiple models in the three theoretical fields in a curriculum research study merging the

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Affective-Behavioral-Cognitive curriculum with national curricula constructs to determine whether a comprehensive curricular approach encourages growth of all psychological developmental areas simultaneously. Both phases of this mixed methods research study incorporate a quantitative component: pre-and post-test for moral-ethical development and social-emotional development and a qualitative component: three rounds of stakeholder interviews.

#### Till Haenisch

Professor, BW State University, Heidenheim, Germany

### **Architecture for Reliable Industry 4.0 Appliances**

Industry 4.0 or the Internet of Industrial Things means interconnected machines and devices in a very heterogeneous environment. These systems have much longer lifecycles than the normal IT ecosystems we are used to in the enterprise. It is difficult to keep these systems secure for an extended period of time. While minor malfunctions may be acceptable, software bugs might lead to security problems, which cannot be ignored, since they will have consequences in the real world.

Today's method of keeping systems (like operating systems) secure is to patch them permanently to close all discovered bugs. The necessity to patch on a regular base combined with the long lifespan of the components creates serious interoperability issues. To handle these problems with acceptable effort while keeping a high level of security they must be addressed on different levels like operating system, network architecture, composition of services etc.

The key to a successful long-term perspective of such a system is a flexible architecture that allows maintenance and extensibility in a controlled environment that preserves the integrity of the system.

In this paper a flexible architecture is described that isolates critical components and allows the substitution of components without compromising the system in case of failure. It consists of clearly separated services with well-defined interfaces that can be enforced by the runtime system.

#### Lindsey Hamlin

Director of Continuing and Distance Education, South Dakota State University, USA

#### Merrill Johnson

Professor, Colorado State University, USA

&

#### Richard Speaker

Retired Professor, University of New Orleans, USA

# From Oculus Rift to Pokémon Go: Is Augmented Reality the Next Wave for Online Learning?

This paper investigates the potential uses of augmented reality in online learning by exploring the lessons learned during the development, use, and dissolution of a virtual island for university teaching. As Generation Z progresses towards college, their expectations of technology are forcing universities to strategize new methods of online learning, but is augmented reality a sustainable option? This paper explores that question by examining a research project involving Second Life (SL). It uses autobiographical, archival, survey, and interview methods to provide a portrait of one implementation of instruction in a virtual world and its eventual conclusion as a viable site. The virtual campus became a functioning instructional site for five semesters with 15 courses in five disciplines (Biology, Business, Education, English, and Spanish), supplementing text-based asynchronous learning in Bb and Moodle with synchronous voice and text-based activity, enhancing the interactions in DE settings.

In addition to regular class meetings, the virtual campus allowed faculty, staff, and students to meet for discussion groups, office hours, committees, and virtual academic conferences. In 2008, the virtual campus allowed for emergency communication among participants while the physical campus of the university was closed. Central components for operating virtual educational sites include training prospective instructors and students, dealing with appropriate presentations of self as avatar, tracking virtual activities and behaviours, choosing modes communication for various purposes, and moving from lecture to discussion to immersive learning in media rich spaces. The challenges included the nature of the epistemological shift for engaging in learning in SL, the learning curve for "newbies", technological issues with the SL browser and connections, platform performance stability, and lessons learned from various instructors. Throughout this paper, the key operation elements of the research project are built upon to form a working model for exploring augmented reality in university teaching.

#### Maria Hantzopoulos

Associate Professor, Vassar College, USA

# Restoring Dignity in Public Schools: Centering Human Rights Education in US School Reform

In the contemporary US educational climate where accountability, punitive action, and the privatization of public schooling dominate educational policy, sound pedagogical methods that promote the development of the whole person are often viewed as supplementary or simply ignored all together. While many of these macro-level reforms have been set in motion to ostensibly improve schools, studies have shown that these initiatives (ranging from high-stakes testing to zerotolerance discipline) have exacerbated existing inequities in schooling, particularly among students of color and low-income students (see Arbunot, 2011; McNeil et. al. 2008, Vazquez Heilig & Darling-Rather than creating safer and more academically Hammond, 2008). rigorous schools, these stringent policies appear only to have created hostile and degrading learning environments that have increased dropout rates (Advancement Project et. al, 2011Lee et al., 2011; New York Civil Liberties Union, 2009; Suh & Suh, 2007; Sullivan, 2008). creating mandates that focus solely on test scores and narrow conceptions of learning and discipline, policy-makers miss other factors, such as overall school culture, that may actually improve schools and address inequities in schooling (Knoestler & Meier, 2012; Matos, et. al, 2009; Nickerson, et. al, 2013).

Given this context, I argue that a comprehensive approach to human rights education (HRE) in public schools might fill this void to both redress this structural violence and reframe schools to be more humanizing and transformative spaces. When HRE is grounded in concepts of agency and transformation, I contend that it inherently creates a culture of humanity and dignity within school. I draw from ethnographic research of at one public high school in NYC to show how a holistic form of HRE transpires in a US context. Ultimately, I posit that HRE in US schools has much potential to transform schools, schooling, and consequently, the lives of those that inhabit these institutions.

#### Adam Hart

PhD Candidate, University of Salford, UK

# **Experiential Learning Technologies in the Modern Music Classroom**

With the growing prevalence of touchscreen technology in the classroom and the emerging trend of bring-your-own-device in some schools, there is a need for new educational resources that reflect our modes of interaction with such technologies. This is especially true in expressive subjects such as music, for the manual actions and representations familiar to us through our use of interactive technology may facilitate creative expression as well as functionality, particularly for the digital residents of the modern classroom.

My research project, which is supported by the Arts & Humanities Research Council UK, aims to examine how interactive technologies can be effectively integrated with independent learning environments for the study of music. The central premise is that music should be an active and engaging subject for students of all ages, abilities and interests, and that interactive technology holds enormous potential for added value in teaching and learning. To investigate this, I am developing prototype software environments incorporating multimedia devices, and working with teachers to design lesson structures that employ these resources within a sequence of creative musical activities. The case study examination of this process focuses not just on the technologies themselves, but on how these function within a wider environment of group work, independent study, and teaching practice.

Currently, the project focuses on primary school children, aged 7-11, to construct audio-visual compositions with local or topical themes. This process involves various applications of media applications and new software tools to meet student-directed outcomes. The outputs of the project, along with a framework for interactive modern learning environments developed from this research, will be demonstrated via a practical activity, in which attendees will be invited to use some of the technologies utilized within the project.

#### Linda Hayden

Professor, Elizabeth City State University, USA

## Mentoring the Next Generation of Science Gateway Developers and Users

The Science Gateway Institute (SGW-I) for the Democratization and Acceleration of Science was a SI2-SSE Collaborative Research conceptualization award funded by NSF in 2012. From 2012 through 2015, we engaged interested members of the science and engineering community in a planning process for a Science Gateway Community Institute (SGCI). Science Gateways provide Web interfaces to some of the most sophisticated cyberinfrastructure resources. They interact with remotely executing science applications on supercomputers, they connect to remote scientific data collections, instruments and sensor streams, and support large collaborations. Gateways allow scientists to concentrate on the most challenging science problems while underlying components such as computing architectures and interfaces to data collection changes. The goal of our institute was to provide coordinating activities across the National Science Foundation, eventually providing services more broadly to projects funded by other agencies.

SGW-I has succeeded in identifying two underrepresented communities of future gateway designers and users. The Association of Computer and Information Science/Engineering Departments at Minority Institutions (ADMI) was identified as a source of future gateway designers. The National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE) was identified as a community of future science gateway users. SGW-I efforts to engage NOBCChE and ADMI faculty and students in SGW-I are now woven into the workforce development component of SGCI. SGCI (ScienceGateways.org ) is a collaboration of six universities, led by San Diego Supercomputer Center. The workforce development component is led by Elizabeth City State University (ECSU). ECSU efforts focus is on: Produce a model of engagement; Integration of research into education; and Mentoring of students while aggressively addressing diversity.

This paper documents the outcome of the SGW-I conceptualization project and describes the extensive Workforce Development effort going forward into the 5-year SGCI project recently funded by NSF.

#### Regina Heidrich

Professor, Universidade Feevale, Brazil

Marsal A. Branco

Universidade Feevale, Brazil

João B. Mossmann

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**Anderson Schuh** 

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**Emely Jensen** 

Universidade Feevale, Brazil

# Games to Assist People with Mobility Limitations in the School Inclusion Process

A Brain-Computer Interface (BCI), allows a person to transfer commands to a computer directly. Instead of using a keyboard, mouse or other input device, the user of this interface simply sends commands via brain waves and the computer responds to them. This paper aims to present a game developed to assist the process of educational inclusion of people with motor coordination problems. The school inclusion process has been widely discussed in all fields and it has been observed that behind the discourse of teachers not feeling prepared, lack of accessibility and training in digital inclusion area is still incipient. One solution is to partner with groups and research projects of universities that can collaborate in this process. This project aims to design Digital Learning Constructs (DLC) as an model implemented by use of BCI. A DLC is any entity or device devised or built in a multidisciplinary way in the form of an educational game, helping players to build their knowledge. To develop this research, we chose the case study, with with qualitative research approach. Development of the Game Neuro, with different forms of scanning speed, the software allows the user through the blink of an eye to choose the subject. In this example we opted for Questing Ruins. In this game, the player takes the figure of an elder, who aims to get to the other side of town to disable a mechanism, and thus, to free his people from machines that brought destruction to his once thriving kingdom. To progress in the game, is used concentration and the eye blinking, allowing the player interact with objects in the scene. Para the study on (BCI) seeks to improve the way of interaction between humans and machines and allows people with motor coordination problems to may be benefited in the inclusive education process.

#### Susantha Herath

Professor and Chair, Department of Information Systems, Saint Cloud State University, USA

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#### Jayantha Herath

Saint Cloud State University, USA

## Transforming Next Generation Minds and Lives: Interdisciplinary Cybersecurity for non-Computing Majors

The St. Cloud State University received two S-STEM grants for its computing and engineering programs in 2011 and 2014, and an SFS grant in 2015. These programs have been meeting the NSF program goals, in recruitment, retention, graduation and enhancing student support structures. Based on the lessons learned, this project proposes to attract non-computing majors to address the national need for cyber security professionals and transforming minds and lives of next generation. This talk presents our experiences and an interdisciplinary curriculum for non-computing majors who are interested in completing a BS degree in cyber security embedded Information Systems, and Information Assurance Master's degree (MSIA), and join the workforce to address the needs of protecting and defending nation's cyber infrastructure. The objectives are to a). Attract non-computing majors into cybersecurity through IS and complete a graduate degree towards cybersecurity (MSIA) b). Encourage 2-year college students to complete a 4-year degree and a master's degree in MSIA. This interdisciplinary collaboration involves six departments at SCSU and ten top feeder community colleges. Our target pool includes students from noncomputing majors, veterans, 2-year transfer students from MN and five neighboring states. They can share the benefits of healthy job growth expected for next ten years with improved lifetime earnings and transform the historically agriculture based economy to an advanced high technology based one.

#### Jose Dario Herrera Gonzalez

Professor, Universidad de los Andes, Colombia

### Think the Pedagogy from the Practical Philosophy

As result of the recent efforts to claim the pedagogy as practical knowledge, the pedagogical experiences are assumed as practices whose sense and meaning are obtained with four dimensions in mind: the intention of who does it, the meaning that it has for those who take part of it, the historicity of sense, and the relationship with the social and political structures which are expressed in it. These four dimensions can only be legitimately understood if they are approached from the proper statute of practical knowledge. In this sense, this project seeks to restore to the pedagogy its knowledge statute and not only of instrumental practice. So it directly related it to the fundamentals of practical philosophy, tradition in which practice constitutes an autonomous field of knowledge without greater relation with the theory that contemplates the world "from the outside". To achieve this it was based on a basic, documentary and philosophical research that aimed to build, from the rigorous selection of text corpus, a hermeneutics of a phenomenon or theoretical aspect of the study. In the same way, from the development of thematic seminars which resulted in a protocol that provides to the configuration of the hermeneutics object of the study. The project answers this way to the need to claim the own space of the pedagogical practice as constitutive and constituent of autonomous knowledge, knowledge that turns out to be the core of the field of education and that it cannot be limited to any scientific theory outside its own logic of production.

#### Luanjiao Hu

PhD Student, University of Maryland at College Park, USA

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#### Jing Lin

Professor, University of Maryland at College Park, USA

# A Confucian Cultural Perspective: Compulsory Education of and Social Attitudes on Students with Disabilities in China

This paper reviews the research literature and looks at the basic statistics on the education for students with disabilities in China, especially in the primary and secondary education level. The enrollment in education for students with disabilities has undoubtedly increased in the past three decades, yet the quality of the education and the sociocultural environment for students with disabilities are not necessarily satisfactory. Despite the increase of enrolled number in compulsory education, few studies examine the huge gap between students with disabilities and their peers without disabilities. Quality of education and lack of necessary accommodations for students with disabilities are also outstanding concerns. A majority of children with disabilities in China not only have to deal with certain disabling conditions, but also encounter deep social discrimination and exclusion from various social activities and services, starting from education. This paper touches on medical and social model that help define disability to better understand the education policies for students with disabilities that are adopted in China. It then covers several major trends in compulsory education for students with disabilities in China. The review on legislation, implementation, and the basic statistics on educating students with disabilities provide a setting to move into another section, which discusses some causes of stigma and discrimination students with disabilities confront from a Confucian cultural perspective. Emphasis on self-cultivation, harmony, and compassion in Confucianism are analyzed to explore the effects on students with disabilities in China.

#### Cristina Huertas-Abril

Assistant Lecturer, University of Córdoba, Spain

#### The Use of Micro-Video within Bilingual Education

The use of on-line audio-visual tools is not new in education. In fact, ICT has allowed that the teaching-learning process becomes more dynamic and relevant, both for teachers and students. In this context, micro-video resources have arisen as a supplementary resource for teachers in bilingual education. Moreover, apart from being another audio-visual asset, micro-videos also entail the self-reflection of teachers' own practice, as well as the involvement of a wider range of students at the global level. This paper aims to highlight the main advantages of teaching micro-videos in the context of bilingual education, considering them as a sort of the so-called teaching pills to foster and integrate bilingualism at schools.

#### Liu Jian

Lecturer, The Chinese University of Hong Kong, Hong Kong

### How Practical Teaching Methods Apply in Chinese Pronunciation Class

As we know that Chinese is tonal language, it is very common that students make mistakes at process of learning, so what kind of teaching methods and theories are applied during class is very crucial for an effective language class. This paper will demonstrate some practical teaching methods and skills during class on the basis of theories of SLA.

#### Sinela Jurkova

PhD Candidate, University of Calgary, Canada

# Transcultural Competence as Transformative Learning that Fosters an Inclusive Society

The paper explores how adults acquire transcultural competence by participating in different learning activities and the extent to which it leads toward integrative and inclusive society. This study adopts a qualitative approach in an effort to answer the following questions: (1) How do immigrants and Canadian-born individuals understand their cultural competence as a learning process? (2) What kind of cultural activities and learning practices motivates such individuals to become more engaged and why? (3) When do transcultural competence learning practices and activities transform participants and foster immigrant integration and inclusion in society, and why?

Recognizing the global perspective, transnational flow and explosion of communication and information technologies open space for re-constructing the concept of intercultural competence. I propose transcultural competence as an educational commitment that will focus on examining and promoting paths for successful interaction and active participation in the global transnational environment. Transcultural competence as a learning activity can facilitate the economic, sociocultural and political adaptation to the society for a vital and purposeful life.

The philosophical concept that informs the theoretical context of this research is transculturalism as a mode of being in 21 century. Transcultural concept as a new way of seeing the world, and thus, of understanding ourselves expands the interdisciplinary field of study as new cultural and ethnic boundaries have emerged in our era of globalization fostering transcultural attitudes, cultural interactions, meaning making, and power. Transculture can be perceived as encompassing and creating space for individual's transformative learning and for developing transculture competence - attitudes and abilities that facilitate open and ethical interaction with people across cultures. Interviewing two groups (immigrants and Canadian born), I explore the process of transcultural competence as a perspective transformation for both the newcomers and the host society. For immigrants, movements across social spaces are moments of intense learning and modifying the structure of meaning, the inherited frames of reference, adapting to new values and another type of social organization. Likewise, for mainstreams, this is a revision of frame of

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reference – learning and developing awareness about unfamiliar cultural contexts, accepting and negotiating different values and behaviours in order to communicate and interact competently creating an inclusive environment.

The results and knowledge generated from this inquiry will contribute to the renewal of adult learning and teaching models of cultural competence as well as policy development that facilitate processes involved in immigrant integration and societal inclusion.

#### Alice Merab Kagoda

Professor, Makerere University, Uganda

# Reflections of Teacher Trainees Experiences of Microteaching: A Case Study Geography Teacher Trainees School of Education, Makerere University, Uganda

Micro-teaching is designed to help student teachers acquire confidence and improve on their teaching skills in specific areas of an instructional process, for example, communicating (speech pattern), questioning, explaining, responding to learners' responses, chalkboard organisation, time management, use of praise and motivational techniques/statements, voice variation, pace (speed), use of learners' ideas, clarifying issues, class control, use of an instructional material, capturing learners' attention in a lesson, use of gestures(body language), lesson introduction, lesson orientation, et Geography teacher trainee were given this exercise in groups of ten each to develop a lesson plan of 20 minutes and teach it to their peers. The main objective of this study was to expose them to the variety of geography teaching methods and activities they are expected to use in their own geography lessons and expose them to new trends in education, i.e. 21st century skills in education. Students reflections on this exercise include among others; they were able to develop confidence, practice writing and drawing maps on the chalkboard, realized importance of research before teaching, getting instant feedback, role model to other teacher trainees, teamwork, critical thinking, being innovative/creative, communication skills. This method of training although very effective in developing deep learning is not frequently used by teacher educators.

#### Yaacov J Katz

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#### Racheli Zaretzky

Lecturer, Michlala - Jerusalem Academic College, Israel

# The Relationship between Teachers' Perceptions of Emotional Labour, Teacher Burnout and Teachers' Educational Level

The teaching profession involves a variety of demands. While in the past teacher training generally addressed pedagogic aspects, the last decades witness the growing trend of addressing the emotional aspects affecting teachers' efficiency and effectiveness. This trend stems from the growing awareness of the teacher's need to cope not only with pedagogic issues, but also with emotional issues.

The current research focuses on the Theory of Emotional Labor, first presented in 1983 by the American sociologist Arlie R. Hochschild who described the emotional demands affecting service sectors employees and focused on the varied techniques for coping with such demands according to the emotional needs of each profession. Hochschild and later researchers identified three techniques: (a) surface acting; displaying an ideal emotion which is incompatible with the authentic emotion; (b) deep acting; turning the ideal emotion into an authentic emotion; (c) natural acting; displaying an authentic emotion when it meets the ideal emotion, with no need to manipulate the authentic emotions.

Teaching is one of the most researched professions regarding emotional labor. One of the main reasons for this is that in the teaching profession, unlike many other professions in the service sector, the emotional display rules are not clear, nor are they explicitly defined and formulated. However, in Israel, little research has been conducted to examine the emotional labor expended by teachers. Thus the present study attempts to explore this issue.

In the study we examined the relationship between three independent variables: a) teacher burnout (including: exhaustion, inefficacy, and depersonalization); b) teacher educational level (teaching diploma, bachelor's degree, master's degree); and c) student age (elementary school, high school), and the dependent variable of teacher perceptions of the use of the three emotional labor techniques available to them.

The research sample included 170 female teachers in elementary and high schools across Israel who had a wide range of academic training (teaching diploma, bachelor's degree, master's degree) as well as professional training as homeroom teachers, cohort supervisors, and experts in different content areas. The research instrument used consisted of three self-report questionnaires: Teacher Emotional Labor Scale - TELTS (Levine-Brown, 2011), Teacher Burnout Questionnaire (Friedman, 1999), and a demographic questionnaire specially compiled for the present study. The research hypotheses were tested by Pearson correlations, ANOVA, MANOVA and Hierarchical Regression Analysis.

The findings of the study indicate significant relationships between the use of the three techniques of emotional labor (surface, deep and natural acting) by teachers and three dimensions of teacher burnout (exhaustion, inefficacy and depersonalization): Positive relationships were found between exhaustion, surface acting and deep acting. Additionally, positive relationships were found between teacher inefficacy and surface acting. On the other hand negative relationships were found to exist between inefficacy, depersonalization and natural acting.

Additional findings indicate significant differences between the level of teachers' academic education regarding the use of the three techniques of emotional labor. Teachers who were in possession of a teaching diploma used either surface or deep acting significantly more than teachers who possessed a master's degree. No significant differences were found between teachers in elementary and high schools regarding the use of any particular emotional labor technique (surface, deep or natural acting). An additional finding, relates to a significant relationship that was found between level of teachers' academic education and burnout. Teachers with a teaching diploma were significantly more susceptible to burnout than teachers with a master's degree.

The following can be concluded from the results of the study: Firstly, teachers' emotional labor has a range of implications on the professional functioning of teachers. Secondly emotional labor should be seen as a focal variable that affects teachers' role efficiency. Thirdly, emotional labor as well as teachers' level of academic education are key variables related to teacher burnout and, and as such, could contribute to the forecasting and prevention of such burnout.

#### Michael Katz

Senior Lecturer, Haifa University, Israel

### **Perceptions of Infinity**

The great mathematician David Hilbert once said: "The infinite! No other question has ever moved so profoundly the spirit of man." At the same time infinity is one of the hardest notions to grasp and understand.

In this paper we present a study exhibiting misconceptions of infinity among high school teachers and students. Examples: 1) Some think that there are more natural numbers than odd or even numbers. 2) Some think that if two line segments are not of equal length than there are more points on the longer segment than on the shorter one. 3) Some hold that in the universe there are infinitely many stars and thousands of billions of sand grains and yet there are more sand grains than stars.

We also consider two distinctions that are crucial to understanding notions of infinity: 1) Potential Infinity (e.g., the never ending progression along the sequence of natural numbers) vs. Actual Infinity (the set of natural numbers as an entity). 2) Mathematical Infinity (that grows bigger and bigger, according to Cantor's Theory) vs. Metaphysical Infinity (which might be what certain philosophers had in mind when they equated Infinity with God).

#### Jackie HeeYoung Kim

Associate Professor, Armstrong State University, USA

## Professional Development Framework to Enhance Teachers' Self-Efficacy

In recent studies, researchers found that 90 percent of teachers reported participating in professional development; however, most teachers reported that it was not effective for improving their practice (Darling-Hammond et al, 2009; Garet, Porter, Desimone, Birman & Yoon, 2001; Desimone, Porter, Garet, Yoon & Birman, 2002; Corcoran & Foley, 2003). These findings indicate that the real issue is not that teachers are lacking in professional development opportunities, but that the typical modes of professional development are ineffective at changing teacher practices and/or student learning. Therefore, there is a need to explore new ways of conducting effective professional development. With a mission of creating a new model of professional development that increases engagement in teachers' learning, this study investigated the Self-Efficacy Enhanced Design (SEED) of Professional Development. Two Teacher Quality State Grant Professional Development initiatives designed to address the diversity and complexity of students' learning needs were investigated to locate the Self-Efficacy Enhanced Design (SEED) that supported four sources of self-efficacy (mastery experience, verbal persuasion, vicarious experience, and physiological/affective states). This was achieved through modeling, reciprocal teaching, coaching, collaborative feedback, and self-directed/need-based instruction, which was found to have a significant effect on self-efficacy beliefs for teachers' development of flipped classroom strategies in literacy and math instruction. The study found that the participants' self-efficacies in designing and implementing the flipped classroom model were significantly improved between pre-and post-tests. Other notable qualitative results and implications for design of a professional development program will be discussed.

#### Richard Kitchen

Professor, University of Denver, USA

# Is Computer-Assisted Instruction (CAI) Reliable to Promote Students' Mathematical Reasoning?

In this paper, five high school mathematics leaders who work in a highly diverse, urban school district in the United States (U.S.) share their views about computer-assisted instruction (CAI) with regards to its role to promote their students' mathematical reasoning. The research participants' views were analyzed to understand how CAI promotes or hinders the mathematics education of students who have historically been denied access to a high quality mathematics education in the U.S., low-income students and culturally and/or linguistically diverse students ("underserved students"). The research findings indicate that CAI was primarily being used in the participants' school district as a means for students to recover mathematics credits needed for graduation. Participants worried that students who used CAI for credit recovery were not learning mathematics for understanding. Teachers reported having limited opportunities to learn how to use CAI programs to promote mathematical reasoning through problem solving and discourse among their students. It is particularly important in schools attended primarily by underserved students that opportunities exist for students to work with others to examine their mathematical thinking and the ideas of others since these schools tend to move toward controlled forms of instruction in which students rarely work collaboratively.

#### Alfred Klampfer

Vice Rector, Private University of Education, Austria

# Virtual/Augmented Reality in Education: An Analysis of the Potential Applications in the Teaching / Learning Process

Mark Zuckerberg, founder and CEO of Facebook and owner of the virtual reality company Oculus, posted the following on Facebook on October 6, 2016:

"Here's the crazy virtual reality demo I did live on stage at Oculus Connect today. The idea is that virtual reality puts people first. It's all about who you're with. Once you're in there, you can do anything you want together -- travel to Mars, play games, fight with swords, watch movies or teleport home to see your family. You have an environment where you can experience anything."

Virtual Reality has become hyped in recent years, thanks especially to new hardware and software packages. But this hype already existed in the 1990s and it was being speculated that Virtual Reality would soon enter the classroom. Aaron Walsh founded the Immersive Education Initiative (http://immersiveeducation.org/) at universities, the possibilities of VR were being investigated (e.g., Virtual Harlem at the University of Arizona). But the technology didn't manage to establish itself in the teaching / learning context. The Internet bandwidths were too low, the technical requirements for schools and university much too high. This has changed in recent years. The development of new, cheaper technologies as well as fast Internet connections have created the prerequisites for the use of virtual and augmented reality in the teaching / learning process.

The aim of this article, following a general description and overview, is to consider Virtual and Augmented Reality in the teaching and learning context of schools and universities.

Starting from the principles of learning and action theory according to Baumgartner / Kalz 20041, possible potential applications of VR / AR in the teaching / learning context are described and linked to the theoretical teaching / learning paradigm.

The article concludes with a short summary.

#### Philipp Kornreich

Professor Emeritus, Syracuse University, USA

# Information Theory Model for the Analysis of Symbol Strings

Large strings of probabilistic data can be characterized by a small number of characteristic parameters. For example, the efficiency parameter of a language text such as English, German and Hebrew has values between about 0.84 and 0.86. The efficiency parameter of an encrypted text independent of the type of encryption has a value of 0.95 to 0.97. The efficiency of a completely random signal is equal to one. The efficiency parameter is the ratio of the information in the text divided by the maximum information that can be carried by the text. Information based models for analyzing a sequence of elements such as in strings of radio telescope data, texts, strings of DNA, strings of musical notes, recordings of dolphin sounds, or other data are discussed in this presentation. For example, Letters, numbers, spaces between words, periods, commas, etc. are symbols forming a text. Signals from space that contain patterns that repeat in the signal can be similarly analyzed. Here the patterns are treated as letters. The text or information string can be analyzed by various levels of Stochastic Information. The various Stochastic levels use conditional probabilities. Conditional probabilities can be the probability of a symbol occurring provided it is followed by a particular symbol, etc. The lowest level of analysis can be used to determine if a string has the form of a language, an encryption of a language or is just a random noise. The lowest level of analysis does not use conditional probabilities.

#### Alexis Koster

Professor, San Diego State University, USA

#### The Transformative Impact of Internet Music Distribution

Internet music distribution has had a huge impact on the recording music industry. It has also affected many aspects of the economy and society: the phenomenal growth of some technological companies (for example Apple); the legal and political framework of music creation and performance in particular (and intellectual property in general); the contribution of the recorded music business to the circular economy model; and the way musical creation takes place.

Internet music distribution was enabled by two technological developments: the mp3 format and the advent of broadband Internet. A third technology, peer-to-peer software, also played a critical role, albeit a negative one.

Between 2000 and 2015, revenues from compact disks (CDs) declined in the USA from about 14 billion dollars to 2 billion, a drop of 85%. Partial figures for 2016 indicate that this trend continues. As a consequence, the retailers of CDs (such as Tower Records and Blockbuster) have gone out of business. The five major labels of 2000 have merged into three major labels.

Initially, digital music revenues compensated partly for the loss of CD revenues. Thanks to the steady growth of digital revenues, the recording music industry overall revenues have stopped decreasing. Digital revenues accounted in 2016 for 77% of all recorded music revenues (47% from streaming and 30% from downloads). Streaming is now days the main engine of growth of the recording music industry.

Several technological companies have benefitted from Internet music distribution. Thanks to a favorable agreement between Apple and the major labels in 2003, Apple made a huge profit from the sales of its iPod devices together with its ITunes service, which started its climb toward the number one company in the world (for a while). Streaming is provided by specialized companies, such as Spotify, Deezer, and Pandora. Although their revenues have been growing steadily, they are not yet making a profit. Apple, Google, and other technology companies are also providing streaming services.

Internet music distribution started without the agreement of copyright holders through the use of peer-to-peer software. The labels took the software providers to court (including the Supreme Court) and usually won. The US Copyright Law was amended several times to clarify its application to the Internet. In France, the Hadopi Law of 2009

created an agency tasked to prevent Internet piracy. The court decisions in the USA and the Hadopi Law in France seem to have had only a small success at enforcing the copyright laws over the Internet. Political pressures and weakening of some existing laws by the courts have prevented a more efficient policing of the Internet.

Traditionally, the economy is based on a "linear" model: use of new raw materials to build a product (for example a car or a CD), purchase and consumption of the product by the customer, discard of the object after a while. The cost of this economic model is often measured by its carbon footprint. The "circular" economy proposes to reuse the object of consumption rather than to discard it. In some sort of sense, Internet music distribution is closer to the circular economic model. The carbon footprint decrease of switching from physical CD to the immaterial music file has been computed by Rachel Botsman, a proponent of collaborative consumption, which is part of the circular economy.

Streaming may be changing the type of music provided by artists. Under the CD model or the download model, the music listeners typically will stay with the type of music they are used to listen to because they have to pay for it and do not want to spend money on something they may not like. Under streaming, there is no cost or the cost is much less. The music listener is more willing to explore new types of music. As clicks on music streamed are easily counted, the musicians are aware of the number of times a specific song is streamed and are willing to produce more original music, based on the feedback they get.

#### **Dennis Kramer**

Assistant Professor and Director of Institute of Higher Education, University of Florida, USA

### Student Responses to the (Dis) Incentives of Postsecondary Fiscal Policies

The growth of the public discourse on college completion and student debt have pushed policymakers and institutional leaders to implement a variety of policies aimed at incentivizing student completion.

First, this study examines state-adopted excess credit hour policies (ECH) on student completion and median debt outcomes. Using a quasi-experimental approach, we find little evidence that ECH policies positively impact student completion. However, we find statistically large estimates that adoption of ECH policies increase median student debt. Students from marginalized backgrounds (i.e. first-generation and low-income) appear to be most adversely impacted by ECH policies. As states face constant pressures for resources, the adoption of tuition-based surcharge policies do not significantly alter student course-taking behaviors, rather shift the cost burdens from the state to the individual student for perceived inefficiencies in students' course-taking behaviors.

Second, we evaluate the federally implemented TEACH Grant program aimed at reducing the cost burdens for students entering highneed teaching areas. Using a combination of a difference-in-differences and difference-in-differences empirical approach, we examine if the presence of loan reduction policy facilitates the selection of an education major in high-need teacher areas. Our results indicate that TEACH Grants do not incentive non-education majors to switch to education, but rather a shift within education majors towards hard-to-staff educational areas.

The results from our two-policy analysis indicate that postsecondary fiscal policies may not produce intended effects. This study further highlight econometric techniques and findings from studies on excess credit hour policies and the federal TEACH grant program. The implications of this research extend to federal and state policymakers as well as institutional leaders who begin work under a new administration with increasing accountability pressures.

#### Petr Kurka

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### **Bimodular Number Systems**

Bimodular number systems were introduced in [1] and [2] as an extension of the binary number system in the context of Moebius number systems. The digits of the system represent Moebius transformations of the form M(x) = (ax+b)/(cx+d). The bimodular number system has alphabet (the set of digits) A=[0,1,2,3,4,5,6,7] and transformations F0(x)=x/(x+2), F1(x)=(x+1)/2, F2(x)=2x/(x+1), F3(x)=2x+1, F4(x)=2x-1, F5(x)=2x/(1-x), F6(x)=(x-1)/2, F7(x)=x/(2-x).

Real numbers are represented by infinite sequences of digits from a subshift. Here we consider the circular subshift C, which consists of infinite sequences of digits not containing forbidden words

D = [02,03,04,05,06, 13,14,15,16,17, 20,24,25,26,27, 30,31,35,36,37,40,41,42,46,47, ..., 71,72,73,74,75]

As shown in [1], some arithmetical algorithms run faster in bimodular number systems than in the standard binary-signed system. Here we show that in the bimodular system with the circular subshift, rational numbers have eventually periodic expansions.

- [1] P.Kurka, M.Delacourt: The unary arithmetical algorithm in bimodular number systems, 2013 IEEE 21st Symposium on Computer Arithmetic ARITH-21, IEEE Computer Society, pp. 127--134, 2013.
- [2] P.Kurka: Dynamics of Number Systems Computation with Arbitrary Precision, Studies in Systems, Decision and Control vol. 59, Springer International Publishing AG, Switzerland 2016.

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&

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# Unaccompanied Migrant Children and Childhood Representations in Contexts of Refugee Emergency. A Qualitative Participative Research

The present research took place from the interaction between scientific interests (academic research group) and professional needs of workers (educators, municipality social workers, National Civil Service's volunteers) in educational and social services for minors at risk.

The research group aimed at investigating the construction of social representation of unaccompanied migrant children in contexts of emergency. The research paid attention to the dimensions of ethics; rights; social and legal protection; education and citizenship.

The objective of the research was to develop skills and functions of social workers in order to: enhance and improve services' quality for childhood care; promote circularity among practices; encourage a reflective approach.

The research questions are:

- Which idea of childhood emerges in those contexts involving unaccompanied migrant children?
- Is the idea of childhood in the unaccompanied migrant children liable to changing in relation to their migration patterns?
- How could the social and educational services guarantee the protection of children and their rights?

These different research fields are going to be analysed according to three different action levels (local, national, Community), using different perspectives that refers to: services' organization (political dimension), services' quality (operative dimension), services' action models (educational dimension), operators' and experts' skills.

In order not to reduce the image of migrant children only to their origins or to their material needs, and since the emergency's interventions need a human based approach, we used a qualitative approach, useful to combine procedural and processual choices with the objective of paying attention also to the experiences and skills of who is involved in the system (users, operators, decision makers).

The contribution is going to present the results and outcomes of individual non-structured interviews conducted with a significant sample of unaccompanied migrant children and is focusing the discussion on the dimensions of a participative research approach.

#### Celeste Lawson

Head of Course, Professional Communication, CQUniversity, Australia

# **Engaging Online and Distance Students in Teamwork Assessment for Higher Education**

Teamwork assessment features prominently in higher education institutions. Pedagogical advantages of team projects are well documented, however teamwork assessment of distance and online students is more challenging, and difficult to implement well. This presentation provides a mixed method longitudinal study of teamwork assessment in a distance and online undergraduate unit in a regional Australian university over a period of four years. Online student engagement was measured through participation with other students during the assessment; the rate of assessment submission; and student retention. A qualitative analysis of formal feedback at the conclusion of the unit was undertaken to gauge student attitudes to the assessment approach. It was found that distance (online) students disliked teamwork assessment for three main reasons: teamwork assessment was not authentic in the manner in which it was applied; students were not given guidance on how to work in teams, especially virtual teams for distance students; and the grading was inequitable to the amount of effort by individual team members.

A further finding was that engagement and participation in teamwork assessment improved when the assessment was adapted specifically for online projects, increasing student retention of distance students. This presentation explains why and how teamwork assessment was adapted and implemented over the four year period, incorporating the pedagogical concerns of teamwork assessment to aid student progression. The teamwork assessment approach is applicable across a number of disciplines, particularly in a virtual environment when students may be geographically and professionally isolated.

#### Carsten Lecon

Professor, Aalen University of Applied Sciences, Germany

### Rapid Learning Object Generating for Blended Learning Scenarios

In order to address the heterogeneity of the student's learning behaviour at universities, it is useful to offer additional electronic material for a better understanding or to deepen the learning content.

However, producing these materials is often a very time-consuming process, since often multiple views to the learning matter have to be considered and different learning trails should be available.

Therefore, we present an approach that allows a considerably 'easy' construction of 'mini courses' with learning objects (texts, figures, animations, videos, quizzes inclusively answers and hints, exercises, ...) and the relation between them: page layout, sequences or learning trails.

We have implemented a tool that allows creating an HTML website ('mini course') based on an XML file (by a graphical user interface). This document defines the structure (sections, subsections, hyperlinks ...), metadata (also pedagogical metadata) and content. In addition, learning trails can be specified for different paths through the learning matter; for example a 'visual trail' (only sites which contains figures), 'exercise trail' (sites which contain exercises or quizzes) or a 'summary-trail' (sites which summarizes the previous subject). The corresponding navigation structure will be generated automatically. Based on the metadata in the XML document, offline search functionality is integrated in the generated HTML course (full text, metadata and structure information). The underlying data structure uses an attributed context free grammar approach, for example in order to inherit XML attributes. A graphical sitemap on every page serves offers an overview and a quick navigation.

The generated of HTML files can be used online (in a learning management system), and offline (desktop PC or mobile devices). In addition, the tool allows generating LaTeX and PDF files, and new content can easily be added to an existing mini course.

#### ChangHa Lee

PhD Student, University of Maryland, USA

# Comparative Perspective on Teacher Shortage Issue in Cuba

September 1st 2014, Cuba began its academic year leaving approximately 10,800 positions (7%) unfilled. Teacher's exodus has been a growing trend in Cuba and low pay, excessive bureaucracy, ever-diminishing social recognition, and lack of family support are the common explanations as to why teachers leave. The level of teacher shortage happens to be unevenly spread out. Havana, for example, hired 3,069 teachers from other provinces in 2013, mostly for secondary education. What has been noted throughout the phenomenon was that, the more teachers are exposed to other sectors that offer a better pay, the more teachers are tempted to abandon the school system and perform in other functions.

Historically speaking however, it is not Cuba's first time encountering teacher shortage issue in the classrooms. With the triumph of revolution in 1959, the new government set education and health as their top priorities and the abrupt expansion of formal schooling called for additional thousands of new teaching personnel. All in all, Cuba, since the triumph of revolution in 1959 - and presumably throughout their history since the Spanish colonization - has never been detached from, nor have they ever been exempt from the teacher shortage issue in the education system.

The purpose of this study is to tease out 1) the factors and their distinctive characteristics that played into causing and creating teacher shortage in the education system and 2) compare and contrast across the timeline, how they differently shaped and if at all, were distinctively mirrored in the teacher policies in Cuba. The elements of policy comparison were drawn from the framework of Tattoo (2008) which partially resembles the notion of the professional life cycle of teachers such as the entry level characteristics (required prior education and perceptions towards teaching career), pre- and in-service education (years of training, overall curriculum, etc.), policy impact (teacher's presence and performance in school, social status of teachers, etc.), and policy purpose and implications.

#### Li Liu

Associate Professor, Shaanxi Normal University, China

# A Study of Teacher Educators' Teaching Competencies by Delphi Method

Teacher educators are teachers of teachers. Teacher educators and teachers learners have intercommunity in teaching profession and teaching competencies in some way, which determines that compared with non-teacher educators, teacher educators' teaching competencies have special structure and properties. This paper uses the Delphi method and seeks to analyze the structure of the teaching competencies. It is established that teacher educators' teaching competencies are a combination of competencies composed of 3 dimensions, 9 categories and 36 subordinate specific items. Of these competencies, "the competencies of carrying out teaching activities" as the group of essential competencies refers to the teacher educators' need for teaching the "learner"; "the competencies of influencing by focusing on teaching" as the teacher educators' exclusive competency and most professional part refers to the need for teaching "teachers" and exhibiting "how to teach"; "the competencies of researching developing teaching" as the foundation and internal support of the former two competencies depends on the teacher educators' needs for practical reflection and development of teaching studies and teaching professionalization. The combination of competencies could reflect the complex traits of teacher educators' teaching competencies in teaching "learning", teaching "teaching" and demonstrating "teaching", and provide basic logic framework for further study.

#### **Donald Livingston**

Professor, LaGrange College, USA &

### **Sharon Livingston**

Assistant Professor, LaGrange College, USA

# Preparing TESOL Instructors to Acquire Cultural Proficiency through Critical Reflective Approaches

This paper explores ways to illuminate the diversity of cultural values and norms and the influence that these factors have on teaching and learning outcomes for students enrolled in a Teaching English to Students of Other Languages (TESOL) program at a liberal arts college in the US. Culture is explored in a comparative and global context using analytical frameworks as a way to help prepare instructors of English to facilitate language acquisition for children and adult learners across multiple subject areas. Strategies for developing cultural proficiency through critical reflective approaches are presented with the goal of creating equitable and rigorous learning experiences for learners of English. The research question asks if critical reflective approaches that are guided with analytical frameworks will encourage future TESOL instructors to reflect in a systematic way about the nexus between culture and language acquisition.

#### Shaoqian Luo

Professor, Beijing Normal University, China **Xiaohui Sun** 

Lecturer, Beijing Normal University, China

&

#### Yumei Zhang

PhD Student, Beijing Normal University, China

# Innovative Theories and Practices in Teaching English Reading: The Effect of Sustained Silent Reading on Students' Reading Ability

Literacy education is one of the main recent endeavors in Chinese schools, and in foreign language teaching, teachers have been exploring multiple ways to cultivate students' L2 reading capability. Sustained silent reading (SSR) is a form of free reading in which students read silently in a designated period of time in classrooms. It aims to help students develop reading habit and interest. This study probes into two English SSR programs conducted in a primary school and a senior high school in Beijing. The presentation focuses on the pre-investigation on the reading status quo, the implementation of the programs and the impact. Questionnaires, interviews and pre/pro-tests are employed in this study, and the results yield positive effect of SSR on fostering students' reading habit, interest as well as reading proficiency. Besides, summaries are made about teachers' concerns and the key guidelines for successful practices in different contexts. The findings may contribute to theoretical construction of SSR and provide insights into the application in broader EFL education contexts.

#### Wen Ma

Associate Professor, Le Moyne College, USA

### Cross-Cultural Teaching Experiences and Perspectives: Chinese Professors at American Universities

This research explored how a group of Chinese professors adjust to the role of full-time faculty members at different American universities. It was informed by research on integrating the curriculum and the learner (Applebee, 1996; Dewey, 1902), the Confucian-heritage learning cultures (Stevenson & Stigler, 2006; Watkins & Biggs, 1996), and comparative research on Eastern-Western education (Li, 2012; Ma, 2014; Zhao, 2009). The study followed an ethnographic case study design (Creswell, 2015). The constant comparison method (Gall, Gall, &Borg, 2010) was used for data analysis. The primary data sources were openended surveys and semi-structured interviews, which cover a variety of topics, ranging from what prior educational and professional experiences the participants have in both countries, what theoretical perspectives they believe in, what pedagogical practices they follow, what unique strengths they bring to the mainstream classrooms, what challenges they face in teaching, research and service, to how their pedagogical practices have been transformed in the process. The findings showcase their cultural and linguistic challenges, instructional strategies, and pedagogical journeys. The results may help other international educators understand non-native professors' crosscultural teaching experiences and perspectives.

#### Linda Mabry

Professor, Washington State University Vancouver, USA

### **Impact of Standardized Testing in Education**

Standardized student achievement testing plays an increasingly dominant role in public education. Research analysists have long recognized the capacity of testing to exert a controlling influence over policy (e.g., Indiana Education Policy Institute, 1994), textbooks (e.g., Apple, 1992), curriculum (e.g., Smith & Rottenberg, 1991), pedagogy (e.g., Meier, 1995), and classroom assessment practices (Mabry, Poole, Redmond, & Schultz, 2003; Swanson & Stevenson, 2002). In the United States, the first federal policy regarding educations was the Elementary and Secondary Education Act (ESEA) in 1965 to provide financial resources (i.e., "entitlements") to impoverished students; ESEA has subsequently been expanded to provide for other students and purposes. The three reauthorizations of ESEA in 1994, 2002, and 2015, however, have focused on the development of standards and standards-based tests as a basis for holding students, educators, and schools accountable (see Sirotnik, 2004). High-stakes accountability has intensified the impact of testing, often with harmful effects on learners (e.g., Booher-Jennings, 2005; Breadon, 2008; Reardon et al., 2010; Sipple et al., 2004; Warren & Edwards, 2005) and their learning opportunities (Amrein & Berliner, 2002; Mabry & Margolis, 2006). In addition, testing requirements have diverted educational funding to testing (Archer, 2005; Hoff, 2003) and created dependence on testing corporations (Cavanaugh, 2013), despite the unsatisfactory performance of these corporations in aligning their tests to standards (Galley, 2003; Polikoff, Porter, & Smithson, 2011; Porter, McMaken, Hwang, & Yang, 2011) and errors in scoring every year. presentation will consider whether the "educational reform" driven by the tests is re-forming education in negative ways.

#### Jeffery Mangram

Associate Professor, Syracuse University, USA

# Peeping Through the Keyhole: Social Studies, Media Literacy and the Construction of the Subject

This paper examines how 15 high school students of color made meaning of media and popular culture within a social studies context after learning to employ a cultural studies framework within a media education course. Using student data collected from a six-week summer college course, this paper also analyzes how the students' language and behavior shifted regarding media after learning a number of theories that challenged their taken-for-granted notions assumptions about the world. Specifically, as the students applied a cultural studies approach to media, they moved to being cultural producers of knowledge rather than just critical observers of the world around them. Lastly, I argue in this paper that media education can complement Social Studies education when a cultural studies approach is employed.

#### **Bernhard Markert**

Professor, Environmental Institute of Scientific Networks, Germany

#### Simone Wuenschmann

Professor, Environmental Institute of Scientific Networks, Germany

# Multilingual Education of Students on a Global Scale and Perspective - Intercultural Networking on the Example of Bioindication and Biomonitoring (B & B Technologies)

Living or formerly living organisms are being used to obtain information on quality of the general (health) status of our environment by bioindication and biomonitoring methods for many decades. Thus different roads towards this common scientific goal were developed by a lot of different international research groups. Especially the global cooperation in between various scientific teams throughout the world has produced common ideas, scientific definitions, and highly innovative results of this extremely attractive working field. The transdisciplinary approach of different and multifaceted scientific areas - starting from biology, (analytical) chemistry, via health physics, up to social and economic issues - have surpassed (in parts existing) mental barriers of individual scientists, so that now "production" of straightforward (common) results related to the influence of material and immaterial (environmental) factors to the wellbeing of organisms and human life is in forefront of international thinking. For further sustainable development of our common scientific "hobby" of bioindication and biomonitoring, highest personal energy has to be given by us, being teachers (in universities and other institutions) to our students and to convince (strategically) decision makers as politicians to invest (financially) into the development of education and research of this innovative technique. Young people have to being intensively convinced on the "meaning" of our scientific doing, f.e. by extended forms of education. One example of multilingual education of students on a global scale and perspective is given here, which we started about three years ago.

#### **Giselle Martinez Negrette**

PhD Student, University of Wisconsin-Madison, USA

# Exploring Bilingual Education: An in Depth Case Study of a Bilingual Classroom in a Public School in the Southwestern United States

For many years the effectiveness of bilingual education programs in the US has been a constant subject of debate. In the midst of so much controversy, dual language instruction represents an alternative that provides a learning system where minority and majority language speakers learn two languages simultaneously and appreciate their differences. This educational approach helps students to develop cultural and social sensitivity that fosters collective growth while promoting inclusion and diversity in school settings. In the US, dual language or two-way bilingual programs differ in the language models implemented in various school districts. Even though each one of these models has been designed to support bilingualism among two different groups of speakers, I argue that ongoing research is needed to explore the key features connected to the models implemented in bilingual education programs and the challenges and opportunities in these learning spaces. Keeping this in mind, this research inquiry focuses on an in depth case study of a bilingual (English/Spanish) classroom in a public school in the Southwestern United States. In particular, this study centers on the assessment of the strengths, weaknesses, challenges, and opportunities of the dual language model implemented in this classroom.

This research is significant because it deepens the knowledge of bilingual education programs function amidst multiple pedagogical, social, economic, and cultural boundaries. The examination of the strengths, weaknesses, challenges, opportunities of the dual language model implemented in this classroom provides an insight into the kind of issues educators and students grapple with in contemporary American dual language settings and how bilingual education programs can be strengthen, within these educational spaces. Finally, I make suggestions for bilingual teachers and school communities to consider how the ongoing assessment of their bilingual programs and the models implemented can support and improve their work when educating diverse populations.

#### Rolla Massri

PhD Student, University of York, UK

# Attitudes of Saudi Foundation Year Students towards Learning English as a Foreign Language: A Qualitative Study

This PhD thesis studies students' attitudes towards learning English and how they influence their progress; it also explores the correlation between attitudes and performance in English courses.

In most studies of English language learning, students' main challenges are identified as relating to the students' and their perceptions. For example, Horowitz (2010) discusses that what students believe about language learning influences how they learn and, more importantly, how well they learn. Recent research traces links between attitudes and performance (Peacock, 1999; Rifkin, 2000) and suggests that good learners are distinguished by their more positive attitude to learning (White 2008).

This study explores if students' attitudes affect motivation and, ultimately, English language acquisition, as the literature suggests. The study's goal is to determine whether this relationship can be observed in foundation year students at King Abdulaziz University. The project focuses on the students' attitudes towards learning English as a foreign language, the factors that shape these attitudes, the correlations between students' attitudes and their well-being, performance and academic achievement in English classes.

The study will concentrate on evaluating theoretical and personal views, by relying on primary and secondary sources of information.

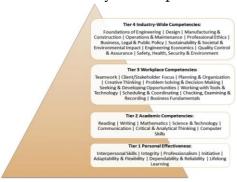
Data collection methods will focus on the information's reliability, accuracy and consistency, to improve the accuracy of research and the ability to analyze the information objectively, to better answer the study's research questions. Methods of data collection will include interviews, narratives, diaries and an examination of student performance records.

#### Sarah McPherson

Retired Associate Professor - Consultant, Recent Chair Instructional Technology, New York Institute of Technology, USA

### Transformative, Competency-based Curricular Changes

The U.S. Department of State recently sponsored a project called Pathways to Cleaner Production in the Americas focused on strengthening Cleaner Production education in universities through increased industry-academia partnerships, and facilitating sustainable manufacturing, human capital development and economic growth in Latin America and the Caribbean. Lead researchers adopted a Competency model called CareerOneStop (sponsored by the US Department of Labor, Employment and Training Administration http:// www.careeronestop.org/CompetencyModel/). The U.S. Department of Labor, Employment and Training Administration and industry partners collaborated to design a dynamic Industry Competency Model for a range of industries. The Model includes competencies essential to educate and train a globally competitive workforce. It has been validated by involving industry associations, labor organizations, educators, and other subject matter experts which has resulted in a tiered hierarchy of competencies as seen in Figure 1.



CareerOneStop (sponsored by the U.S. Department of Labor, Employment and Training Administration <a href="http://www.careeronestop.org/CompetencyModel/">http://www.careeronestop.org/CompetencyModel/</a>)

The US Department of Labor defines competencies as "a cluster of related knowledge, skills, and abilities that affects a major part of one's job (a role or responsibility), that correlates with performance on the job, that can be measured against well-accepted standards, and that can be improved via training and development" (Ennis 2008). In the Career One Stop schema, relevance is clear to the worldwide demand

for decision-making in new contexts and innovative solutions to current and future issues. In order to prepare a new generation of experts students need to be educated in different ways – as active learners rather than knowledge consumers (Figueiro & Raufflet, 2015). In *Pathways* we chose to incorporate the competencies in experiential learning in the format of practicum and internship experiences. Student surveys from each country provided feedback about the efficacy of this

approach and their perspective on how well they were prepared for a career related to Cleaner Production.

In a recent NSF proposal called *Impactful Engineering – Research, Entrepreneurship, and Design for Society (REDS)*, we proposed to apply the same competency model to undergraduate engineering in a small university in northeast US focusing on tiers 1-4 Industry Competencies for Engineering: Personal Effectiveness, Academic, Workplace and Industry-Wide Technical Competencies. The aim of the project is to create an environment that "inspires" and "engages" students through curriculum changes that will transform the teaching and learning inside and outside the classroom.

The plan calls for creation of a *Student Learning Ecosystem* which empowers engineering undergraduate students to gain 21st century competency skills throughout their four-year academic experience. These competencies should reflect appropriate "Tiers" of competencies, as seen through the lens of the personal effectiveness, academic, workplace and industry specific areas (McPherson, Anid, Ashton, Hurtado-Martin, Khalili & Panero, 2016). It is critical that students clearly see the impact of their education for their chosen career paths. Therefore, the curriculum revisions support the acquisition of critical career preparation competencies throughout the existing curricular framework of the program. An additional feature included in the plan is credentialing through an open source badging system as evidence of competencies gained in projects, student professional development experiences, entrepreneurial and community partner projects, and research activities.

#### Ilona Millei

Financial Director, SZILTOP Nonprofit Ltd. and PhD Student, University of Pécs, Hungary

### Roma Identity and Social Mobility

Current problems of the Hungarian society is handling the situation of marginalized social groups. Hungarian public life after the change of regime must face the challenges of deepening poverty trend these days, but this is getting more and more difficult because of the changes in the nature of poverty. Poverty is a phenomenon: poverty is not simply poverty anymore, it's rather a permanent poverty; about the state of unemployment the same can be said: it became permanent in certain social groups; These socially demonstrated significant disadvantages show a strong spatial separation, so these cumulative disadvantages have been passed from generation to generation. What is the difference between poverty nowadays and poverty during the period of socialism? We could see changes in two significant dimensions: there is a change in the duration of poverty because of the way people passing poverty through generations like a heritage, on the other hand, it occurs in several areas (residential exclusion, labor market exclusion, and exclusion from the school system). One aspect of the problem is the low level of education. In one of my previous essays I analysed a book of Korniss Péter and Závada Pál -Egy sor cigány (Huszonnégy mai magyar)-, which was released by Corvina Publishing Company in 2011. The idea of the book came from a US publication, in which the authors draw portraits of their black compatriots who have achieved success through a struggling way. Hungarian authors compiled our own hungarian list. That is what gave me the idea to start my own research in this topic. Another study that gave me inspiration was a study that was based on Kende Anna's research (2004). The study was about the analysis of interviews that were made with 20 students from Romaversitas Program. In my teaching praxis I did the exact same interview with 10 Roma young adults. During the research, my main goal was to find answers for the following questions:

- What specificities can be detected in the lives of the students who participated in the interview,
- What struggles the future intellectual Roma or the ones who did have a matura exam have to face with in an environment with such a racist attitude,
- What their background is like,

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- What typifies Roma identity and whether it has changed during high school /college/university,
- What different group orientation means for them,
- Who made a major effect on their lives,
- What difficulties they have to deal with in labor market,
- What characteristics can we notice when it comes to choosing a partner.

The study is primarily about the social mobility discussed in psychological, socio-psychological aspects. In this study the Roma identity was not part of the investigation, because none of the participants deny their minority-ethnicity.

#### Haruka Miyazawa

PhD Student/Junior Research Associate, Osaka University/RIKEN Quantitative Biology Center, Japan

### Information, Computation and Linguistic Systems

Since the advent of molecular biology, it has been said that cell is a kind of 'machine', which stores its specification inside itself. Although the perspective of systems biology derived from this understanding well prevails, we still do not have a clue to address cellular system deductively, due to the lack of mathematical insights into the system.

Here, I propose a conceptual framework where it is possible to abstract the essential features of the system and project them onto the purely mathematical problem. The framework mainly includes the following three concepts; information, computation, and linguistic system. Each concept can be understood independently with explaining specific features inherent to biological system. Nonetheless, the intersection of these concepts can provide us with the fertile results to understand their relationship and hierarchy. In this framework, 4 bases (A, T, G, C) in biology correspond to symbols in information theory and it enables us to discuss probability of occurrence of each symbols, channel capacity and entropies. The DNA-protein interaction, which is one of the most important chemical reactions within cells, corresponds to computation in automata theory, which leads to the understanding of genome as formal languages. What the molecular interactions (cascades, pathways, protein complexes and so forth) correspond in the framework is linguistic system, which I introduce as a definitely new concept in order to explain the interaction between matured components. The apparent discrepancies among those three concepts can be solved by mathematical explanation. Long-standing questions like whether viruses are to be categorized into life or not will be shed light on by viewing them as a mere set of strings which do not have a function of computation.

In this paper, I aim at explaining biological system from the perspective, which is completely different from the previous ones.

#### Mohamad Saifudin Mohamad Saleh

Lecturer, School of Communication, Universiti Sains Malaysia, Malaysia

#### Rani Ann Balaraman

Lecturer, School of Communication, Universiti Sains Malaysia, Malaysia

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#### Sharifah Nadiah Syed Mukhiar

Lecturer, School of Communication, Universiti Sains Malaysia, Malaysia

# Green Citizens: Environmental Education by the Media and Environmental Non-Governmental Organisations (ENGOs) in Malaysia

Media and environmental non-governmental organisations (ENGOs) have been recognised as two most active and indispensable stakeholders in supporting environmental education in Malaysia. Environmental education by both media and ENGOs is undoubtedly crucial in producing more "green" citizenship that is well equipped with environmental knowledge and has a great attitude and practices on preserving and conserving the environment. This paper sought to discuss on how the Malaysian media, particularly The Star and *Utusan Malaysia* and the Malaysian ENGOs particularly World Wide Fund for Nature (WWF) Malaysia and Malaysia Nature Society (MNS) plays their vital roles in environmental education and the challenges faced by them in educating public about the environment. For the purpose of this study, a total of 24 interviewees encompassing 13 interviewees from *Utusan Malaysia* and The Star and 11 interviewees from WWF Malaysia and MNS were intervieweed.

The findings from interviews confirmed that both the Malaysian media and ENGOs have shared quite a similar role in environmental education, particularly in delivering environmental awareness and knowledge to public. However, the media is more focusing on educating the public about environment through their feature and news articles published on newspapers while the ENGOs' environmental education are not only via their newsletters but also through environmental programs like eco-school and eco-institute conducted by WWF Malaysia and School Nature Club (KPA) and KPA for youth conducted by MNS. In fact, unlike the media, the Malaysian ENGOs have more privileges as they have specific education teams that specifically handle environmental education in a more thorough and

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structured way. Both media and ENGOs interviewees from this study concluded that the main challenges of environmental education in Malaysia are the environmental topic itself that is too technical, dry and boring, despite of other challenges like the Malaysian public's low knowledge on environment.

#### **Christopher Momanyi**

Lecturer, Strathmore University, Kenya

# Freedom of Education: An Aristotelian Interpretation

Aristotle in his educational ideals as presented in his Politics and Nichomachean Ethics, believed that education was necessary for a fulfilled life. For him, the thinking and practice of an educator has to have a clear philosophy of life. Education according to other philosophers such as Plato and Socrates is the reproduction of culture. According to Aristotle Freedom of Education involves both state-run public education and private education.

The question then arises as to who is responsible for determining the training students receive in school and whether there is freedom of education in a given education system. Aristotle In his politics Aristotle states that education should be guided by legislation. This paper aims at explaining what is freedom of education in the light of Aristotle's teaching on the role of parents, teachers, the state and voluntary institutions in the provision of education.

#### Luz Mora D.

Head of the Department of English, Fundación Universitaria Unipanamericana, Colombia

# Literature Analysis for Developing the Intercultural Competence: The Construction of a New Mixed Identity in Álvar Núñez Cabeza de Vaca's The Relation (1528-1536)

To begin with, the account of the 16th century expedition of Alvar Núñez Cabeza de Vaca through the North American territory: The Relation has been the object of several analyses on the impact of conquest and exploration, and the evangelization process in the New World and the sociological outcome of the cultural encounters, among others. To demonstrate, this research provides, on the one hand, a new approach to his account, on the other hand an analysis of the sociological acculturation processes, as well as the progression of goingnative and finally the transformation of De Vaca's identity while being a hostage of the Native-American tribes for several years. In particular, the development of a remarkable awareness of specific sociological understandings of the natives' world which led him to evolve into a tenacious explorer/ethnographer. To clarify, De Vaca appreciated, contested and negotiated his captivity, and finally coped with the challenges of reshaping his own noble Spanish identity. In brief, De Vaca became a hybrid-man, losing sight of his own cultural preconceptions. He acquired precious cultural awareness of his hostile "host" community and developed an ethical perspective of his roots towards the creation of a new hybrid-identity: a cultural mestizo, capable of embracing the challenges of the interactions and of understanding the tangible cultural behaviors of his captors.

#### Nancy Nelson

Professor and Meadows Endowed Chair for Excellence in Education, University of North Texas, USA

# Interculturalism and Multiculturalism in Global Context: Contrasts over Space and Time

Increased and increasing diversity, often called super-diversity, characterizes regions and nations across the globe. Our societies, which are becoming more multi-ethnic, more multi-religious, and more multilinguistic, have experienced this dramatic growth in diversity from diminished boundaries: migration and diaspora across contributions to diversity are also coming from revitalization of indigenous cultures and languages. In this changing world, a major concern of global importance is how to achieve social harmony while honoring differences. For several decades, multiculturalism has dominated discussions of issues surrounding cultural diversity, but attention is now going to interculturalism in efforts to foster harmony, especially in Europe and Latin America. My purposes for this paper are threefold: (1) to review major conceptions of both multiculturalism and interculturalism; (2) to contextualize these conceptions historically, geographically, and politically; and (3) to point out distinctions that can be made between them.

In this analysis, the contexts include North America, where there are major contrasts between Canadian and U.S. conceptions; Europe, where the European Union and the Council of Europe both point to multiculturalism as a failed policy and promote intercultural dialogue; and Latin America, where multiculturalism is used as a descriptive term but *interculturalidad* is encouraged as policy and practice, particularly relative to mestizo-indigenous interactions. Also considered is the position expressed and encouraged by UNESCO in its declarations, conferences, and publications.

This paper is thus a discussion of the complex meanings that are most salient in contrasting uses of similar terminology across the globe. The paper concludes with a brief commentary on variability of meanings for both *multiculturalism* and *interculturalism* across space and time.

#### Alexandra Neves

Assistant Professor, Western New Mexico University, USA

# Intercultural Competence: Who Benefits?

The growing diversity of children across schools in the U.S. has fostered an ongoing debate over effective ways to create inclusive classrooms. Such classrooms would promote cross-cultural exchange and academic success for all children. Communicating across cultures requires practice and patience and a willingness to increase one's knowledge and understanding of different cultures. This requires the ability to see that diverse students' own behaviors and learning styles are oftentimes culturally driven and that while they may not match our own, they are culturally appropriate. But what happens when formal intercultural competence training is not part of schools' professional development for teachers and administrators? Are principles of inclusive learning and concern for diverse students' educational needs taken into consideration? How do cultural expectations impact the academic success of students? These questions are discussed based on the experiences of teachers and students in small communities in the Southwest of the United States. The presenter discusses the concept of culture and appropriate cultural behavior as well as the role of language in cross-cultural exchanges.

#### **Sumate Noklang**

Lecturer, Innovative Learning Center, Srinakharinwirot University, Thailand

# The Development of Self-Directed Learning through Community-Based Recreation on Primary Student

The purpose of experimental research was to examine the effect of community-based recreation program on self-directed learning of primary student and to access the satisfaction of primary student on community-based recreation program. Subjects were 60 students (Grade 5-6). They were selected by multi-stage sampling, divided into 30 students in experimental group and 30 students in control group. Research instruments were: - 1) the community-based recreation program for enhancing self-directed learning of primary student; and 2) questionnaires of self-directed learning and to evaluate primary student's satisfaction to the community-based recreation program. Data were analyzed by using frequencies, mean, standard deviation and t-test.

After the experiment, it was found that: 1) the experimental group improved their scores in each of self-directed learning with the statistical significant level of .05; 2) the experimental group also improved their overall scores with the statistical significant level of .05; and 3) the experimental group improved their scores in each of self-directed learning and overall of self-directed learning higher than that of the control group with the statistical significant level of .05; and 4) the experiment group had most satisfaction level to the community-based recreation program.

### Rollin "R.D." Nordgren

Professor, National University, USA

# Educating Refugees in Sweden: Effect on Two Communities... and Possible Global Impact

In 2015, Sweden accepted nearly 150,000 refugees mostly from wartorn areas in Africa and the Middle East. This study examined refugee education in two Swedish communities struggling to cope with meeting the needs of this diverse group. The impact of asylum seekers on the Swedish schooling system has been great; however, data from this study indicate these two communities are, for now, coping quite well-at least for now. This presentation will be comprised of both qualitative and quantitative data derived from the study as well as a discussion on the possible effects refugees may have on schools in other European nations as well as in the U.S..

#### Leila Nunes

Professor, Universidade do Estado do Rio de Janeiro, Brazil

# Improving the Performance of Multifunctional Resource Rooms Teachers in Using Alternative and Augmentative Communication (AAC) Resources

An in-service training program was implemented to prepare special education teachers who work at Multifunctional Resource Rooms to devise and use AAC resources and to adapt instructional materials and procedures to teach non-vocal students enrolled in regular classrooms. A 30 item - questionnaire was administered to 10 resource room teachers before and after the intervention that lasted nine months. The training program involved reading and discussing texts, lectures on language development and AAC resources, case studies, video presentations, planning adapted activities, constructing adapted instructional materials, demonstrating the use of software, vocalizers. The data showed that after the training, the participants improved their competence in evaluating students' communicational needs and in matching the AAC low and high tech resources to these needs. There was also an increase in: (a) constructing and making available communication boards for helping students to communicate and to perform academic activities, (b) using software, especially the Boardmaker, to elaborate these AAC boards; (c) offering instructional software to the students; (d) proposing adapted instructional procedures and materials in reading, writing and math activities, and (e) elaborating adapted evaluations.

#### Bernardo Panerai Velloso

Executive, Bernardo Panerai Velloso MEI, Brazil Maria de Lourdes de Souza

Professor, Universidade Federal de Santa Catarina, Brazil

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Ovídio Felippe Pereira da Silva Junior

Professor, Universidade do Vale do Itajaí, Brazil

# Analytical Observatory: Management Information System on Psychoactive Substance Dependence

About 240 million people worldwide use illicit drugs, among them, 27 million are classified as addicts. This is conceived as a public health problem considering the impact that it causes to the social, economic and health development. A similar scenario happens in Santa Catarina, Brazil, namely, the large contingent of psychoactive drugs users. There is ease in acquiring illicit substances due to the existence of drugs with low economic value, such as crack, highly addictive and used in all social classes. In this context arise technologies aimed to improve society by supporting the process of overcoming chemical dependency. Such as the Analytical Observatory, a Management Information System which has the function to generate reports out of the records on psychoactive substance dependence. Online Analytical Processing was used, in the manner of a data structure and processes with the capability to manipulate and analyze the available data. The Observatory is accessed through Internet page, in the client-server model where the workload is distributed between the client applications (user application and/or browser) and server (Web site and data servers). MySQL is employed in the data structure, conditional to the technology already in place in the present records. MySQL is free software that allows robust applications with functions and procedures necessary for the Observatory. Python runs on the server, a programming language that allows the creation of web sites with focus on performance and integration of various types of databases at a high level of abstraction between them and the rest of the application. HTML structures the web pages, part of the user interface along with JavaScript, a client-side interpreted programming language. Free JavaScript libraries named Google Charts and Charts JS are adopted for the specific task of generating visual graphics.

#### **Effie Papoutsis Kritikos**

Professor and Interim Chair, Counselor and Special Education, Northeastern Illinois University, USA

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#### Mark Melton

Associate Professor, Northeastern Illinois University, USA

# **Culturally Responsive Teacher Preparation in Special Education**

Children and families who emigrate to the US face many daunting obstacles in realizing successful educational outcomes. Often, these documented and undocumented families live in marginalized neighborhoods that are ill equipped to meet their needs; increasing their vulnerability and the likelihood that school disruptions will occur. Multiple negative outcomes result including: poverty, unemployment, lack of schooling, unsafe neighborhods, dislocation, a cycle of incarceration and a lack of social justice. Students who live in these environments often experience significant trauma that limits their potential and presents challenges to the classroom teacher for integrating them and fully supporting their learning needs.

Chicago represents a microcosm of factors associated with school disruptions. Recently, the city chose to close 50 public schools in predominately underserved, «high-need» neighborhoods that are often populated by immigrants. A result of these closures has been the dislocation of students from their established communities and an increased risk for student safety as they cross «gang lines» that demarcate neighborhoods. Gang violence is known to disrupt communities, often by its unintended consequences of harm through stray bullets and mistaken identify. Student who face these circumstances experience trauma that limits their availability to the educational system and increases their need for resiliency factors to mitigate the complex influences of their impoverished neighborhoods.

Teachers in urban school settings are often unprepared to deal with the trauma their students bring into the classroom. Culturally responsive approaches that build resiliency are necessary for supporting vulnerable students and ensuring their academic success. Research-based strategies are a necessary component of teacher preparation programs to strategically target this population of learners. This presentation will set forth approaches that address dynamics associated with school disruption, which may be applied across multiple settings and cultural circumstances. Case examples will be utilized to illustrate concepts, approaches and strategies for the audience.

#### Victoria Parker

Programme Director, Andrés Bello University, Chile

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#### María Theresa von Furstenberg

Master in Human Resources General Director, Andrés Bello University, Chile

# Inclusion: The Experience of a Socio Labour Training Programme Inserted in a University Environment

This paper presents a socio labour training programme for young people with special educational needs associated with cognitive disabilities and examines its development in the context of the opportunities and requirements imposed by the university education system in a South American country.

The aim is to present the characteristics and experiences of a Programme that emerges as a response to a gap in higher education for young people with permanent educational needs who come from regular High School with inclusion modality or derive from Special Education.

As pointed out by Varela et al. (2015), in Chile, between 1995 and 2012 the observed enrolment of students with intellectual disabilities in the school system, has doubled its number at the end of this period. Besides, the difficulty involved in the inclusion of people with intellectual disabilities in a university environment, has limited so far to attend the needs of this group (Izuzquiza, 2012).

According to Illanes and von Fürstenberg (2012) this barrier derives from the parameters required for admittance to the higher education system based primarily on the development of an abstract and reflective thinking.

Implementation, development and achievements of this socio labour training programme called "Diploma in Labour Skills", attached to the Education Faculty at Andres Bello University (UNAB) in Santiago de Chile, are presented. The student admission profile in terms of etiology, intellectual level and autonomy, as well as the egress profile in terms of skills and abilities are exposed, in addition to the main research results related to the Programme, between 2008 and 2016.

#### Paivi Perkkila

Senior Lecturer, Kokkola University Consortium Chydenius, University of Jyvaskyla, Finland

# A Case of Four Prospective Adult Primaries Teachers' Mathematical Identity Work

Research on the mathematical identity work of adult students has not been explored so much. In this study I try to understand four prospective adult primary teachers' identity works on the basis of their learning diaries during a mathematics education course for prospective adult primary teachers. These four prospective primary teachers' reported having had negative experiences with mathematics during their school years but later in their lives the views towards mathematics had changed to a positive direction. However, the identity work during the mathematics education course revealed that life experiences had not changed the most fundamental views towards mathematics, mathematics learning and teaching. During the mathematics education course, they began a healing re-building process of their mathematical views which gave them a better understanding to what learning and teaching goals to pursue in future.

#### Vladimir Petrov

Associate Professor, Novosibirsk State University, Russia

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#### Vladimir Diev

Professor, Novosibirsk State University, Russia

# University in the "Triple Helix" Innovative Development Conception: Russian Specifics

According to the conception of "Triple Helix" that was created in 1990-s by the professor of Newcastle University Henry Etzkovitz and a professor of Amsterdam University Loet Leydesdorff the University includes three elements of education, scientific activities and entrepreneurship and tight interaction of the power, business and university becomes a basic element of knowledge society innovative development.

The main principles that can provide effective development of the universities are the following: firstly, fundamentalism of the research; secondly, provision of academician freedom; thirdly, financial independence; and fourthly, autonomic management. Besides, the University that can participate in the model of "Triple Helix" should unite four key elements into one. Firstly, interaction: the University tightly interrelates with industry and government; the University is not isolated from the society. Secondly, independence: the University is a relatively independent institution. Thirdly, decreasing tension between principles of interaction and independence is a stimulus to creation of hybrid formats for the one-time achievement of these two aims. Thus, science and academic institutions are represented as equal partners in "Triple Helix", create infrastructure and form society based on knowledge. In the basis of configuration "Triple Helix" is the University that can be considered as a dominated factor that defines innovative development.

As far as historically in Russia fundamentally another scheme of scientific research's organization has been created – a university mainly translates knowledge and the institutions of Academy of Science conduct fundamental research, therefore realization of the conception of innovative development of society is possible only in conditions of tight interaction between the Universities, academic institutions and industry when the power and business, according to "Triple Helix", are directed not to the point "University" but to the triangle "science-education-industry" as to the one unity.

#### Gabriela Z. Pickett

Director, Center for the Study of Child Development, USA

&

#### William A. Mosier

Professor, Wright State University, USA

# Looping in Cuban Classrooms: A Qualitative Analysis of Teacher and School Administrator Perceptions

Looping is the practice of students remaining with the same teacher for multiple school years. Research suggests that educators in looped classrooms are more responsive to individual differences in cognitive development. When teachers spend more than one school year with students, teachers have the opportunity to recognize the individual learning style of each child and make curricular accommodations to fit each child's unique learning needs. This study explored teacher perceptions of looping in Cuba where looping during the first four to six years of schooling is a national practice. According to comparative studies by UNESCO, Cuban children score two standard deviations higher in mathematics and reading proficiency by third grade than all other Latin American countries.

The population of teachers interviewed for this study was randomly selected from schools in rural and urban areas of Cuba. This study measured teacher perceptions through the *Teacher Perceptions of Looping Survey* and data acquired from interviews with teachers and principals. Cuban teachers were asked to describe the educational effectiveness of looping and how scaffolding of learning experiences in the looped classroom contributed to academic achievement. School administrators were asked how they perceived the relationship between looping and academic achievement.

Overall, 94% of the interviewed teachers and principals perceived looped classrooms as effective due to the extended time it provides the teacher to differentiate the curriculum according to the individual needs of each child. One limitation of this study is that data was only collected from Cuban teachers and school administrators. Therefore, there may be limited generalizability of findings to school systems globally. However, policy makers should study these findings to consider looping as a tool to enhance educational delivery to disadvantaged students.

#### Vesna Podgornik

Assistant Professor, University of Ljubljana, Slovenia

&

### Janez Vogrinc

Associate Professor, University of Ljubljana, Slovenia

# Principals', Teachers' and School Counsellors' Views on the Importance of Carrying out self-Evaluation Research

In recent decades, numerous countries have directed their attention toward the notion of quality in education. Recent projects start from the assumption that the notion of quality must be developed at the level of the professional autonomy of each school and the individual educator, if we propose for self-evaluation results to be a basis for a further planning of educational work. Self-evaluation is a comprehensive process of planned and systematic data collection in various areas of the educational institution's work. It also analyzes and interprets information so as to give an insight into the existing situation in the organization or to obtain feedback about its working quality and efficiency. Using self-evaluation, we can highlight the advantages and disadvantages as well as strong and weak areas of how educational institutions are functioning. The essential aim of self-evaluation is assuring quality and caring for development and progress in educational institutions. The empirical part of our study focused on the analysis of principals', teachers' and school counsellors' views on the importance of carrying out self-evaluation research for a good-quality educational process. The research study was based on the quantitative research paradigm. There were 1530 respondents participating in the study. Primary and secondary schools from all Slovenian regions were included in the study. The sample was representative. Our data was collected with the questionnaire. We drew up six similar questionnaires that were adjusted to each group of respondents. The basic research methods were the descriptive and causal non-experimental methods of pedagogical research. From the results we have concluded that the respondents implement self-evaluation relatively often. The majority of professional workers are aware of the importance of implementation of self-evaluation for the profession in which they are engaged. Principals show a more positive attitude toward selfevaluation and are more convinced of its usefulness.

#### Paul Polanco

PhD Student, Southern Methodist University, USA

&

#### Doris Luft de Baker

Associate Professor, Southern Methodist University, USA

### Bilingual Programs in the United States: An Evidence-based Review

Despite English only policies and the reduction of federal funding for bilingual programs in the United States, these types of programs have continued to proliferate and expand. The support for these programs by the public in general, and school administrators and parents in particular, suggest that bilingual programs will continue to thrive. Moreover, empirical evidence in the last two decades indicates that bilingual programs do not have negative effects on student academic outcomes, and that in fact, might have positive cognitive and academic effects that might potentially translate into economic benefits student better acceptance of their sociocultural identity, and a more supportive environment for diversity. In this panel we present findings from two current reviews on the effects of bilingual programs on student outcomes worldwide. We include findings of empirical studies that also examined additional variables within bilingual programs such as quality of bilingual instruction, student risk status, and languages of instruction.

Our review indicates that few studies on the effects of bilingual programs have been conducted outside the U.S., and in other languages besides Spanish and English. Thus, the review focuses on two widely used bilingual programs, the transitional bilingual program and the two-way immersion program within the context of the history of bilingual education in the U.S. including the most recent reauthorization of the Every Student Succeeds Act of 2015. We discuss, however, how our findings can guide future research examining the effects of bilingual programs (or of features of bilingual programs) across different languages, and different student populations worldwide.

#### Keli Pontikos

PhD Student, Cleveland State University, USA

# Retaining Ancestral Language: Are We Barbarians?

Greek-Americans are at a very important juncture of acculturation in the United States: will they continue to reference their rich cultural ancestry, or will they assimilate fully as Americans? The retention of the language for further generations is an important aspect of keeping the culture alive – but what motivates the desire to retain the mother-tongue language?

Utilizing one of the leading theories of motivation in language learning - Robert Gardners' socio-educational model, as well as qualitative research conducted in Cleveland, Ohio, this study will identify factors which are interrelated when learning a second language. What specifically affects the desire to reunite with the mother-tongue language?

Data was collected (2013) through one-on-one in-depth interviews at four Cleveland area churches to give a representation of the Cleveland Greek-American community. In-depth interviews were conducted with four leaders, or priests, of the churches, three members of the Greek Orthodox Church Greek School Program (a director, an adult student, and a child student), and a native of Greece who moved to America. These multiple perspectives will provide useful information regarding changes witnessed over the years, choice of language used in church services, students' motivation for wanting to learn the language, and the viewpoint of someone who has come to this country, as well as lived in the motherland.

The findings of this study are meant to help understand the motivation behind language learning. Although this is a study of Greek-Americans in the Cleveland area, the results may be applied to other ethnic communities. The findings of this research may provide useful information regarding cultural identity to assist in the process of increasing motivation for culturally relevant adult education to support learners desiring personal transformation.

#### **Courtney Preston**

Assistant Professor, Florida State University, USA
Peter Goff

Assistant Professor, University of Wisconsin-Madison, USA

#### Maida Finch

Assistant Professor, Salisbury University, USA

# Hiring Bias or Differential Preferences: An Analysis of Gender and Race in the American School Leadership Labor Market

The evidence for the underrepresentation of women and minorities in leadership roles is compelling and spans the public and private sectors. Twenty-three states have never elected a female governor, and currently only five women are serving in their state's highest office. In the private sector, although women hold 52% of professional-level jobs, fewer than five percent are Fortune 500 CEOs, and only 15 African-Americans have ever served as CEOs of these companies.

Similar trends exist in public school leadership positions. Seven percent of school principals are Hispanic whereas Hispanic students comprise a quarter of the student population. Gender parity among school leaders has increased in recent years, but women's representation in these positions is still disproportional to their representation of classroom teachers: 52% of principals are female compared to 76% of teachers. Given the role of the principal in influencing learning outcomes, understanding the extent to which this disproportionate representation matters seems important and might be linked to research on teacher-student gender and race parity.

Using school leadership application and hiring data from Wisconsin, we ask, are gender and race imbalances in school leadership in Wisconsin a product of bias or differential preferences? We find evidence of gender and racial misrepresentation among current school leaders proportional to teachers and examine whether there is evidence of hiring bias on the part of employers or differential preferences among applicants to explain these imbalances. Previous research that has considered the effects of race and gender congruence in the labor market does so by considering supply and demand factors separately. We extend earlier research in this area by linking application data with hiring outcomes and find that when considering only newly hired school leaders (2014-15), females and African-Americans are more likely to be hired than males and Whites, respectively.

#### Marwa Qaraqe

Assistant Professor, Hamad Bin Khalifa University, Qatar

### Qammer Abbassi

Post-Doc, Texas A&M University at Qatar, Qatar

# Performance Evaluation of Body-Centric Nano Communication at Terahertz Frequencies

There has been a dramatic increase in interest in nano-technology due to its wide range of application in all aspects of life. In particular, nano-technology is establishing itself as a key player in medical diagnostics and treatment and is influencing many research fields including body-centric communication. The development of new materials like graphene, which is capable of working at Terahertz (THz) frequencies, opens up a new area of applicability of nano-devices inside the human body. The THz frequency holds great potential for medical technologies because of its non-ionization nature in biological tissues [1]. In literature, body-centric communication has been studied from meter to millimeter wave frequencies [2]; however the requirement for further size reduction makes nano-scale technologies an attractive choice for future applications of body-centric communication. In the past, much research has been dedicated to the characterization of onbody, in-body, and off-body communication using single and multiple antennas at various frequencies and the benefits of multiple-antenna techniques for body-centric communication for narrow-band systems have been thoroughly investigated [3,4]. This paper presents novel research that has yet to be investigated in the literature. In particular, this paper explores the achievable capacity gain when multiple antennas at the THz frequency level are implemented inside the human body. This scenario is studied under two different power schemes, namely, equal-power and water filling power allocation.

#### **Amy Roberts**

Associate Professor, University of Wyoming, USA

# Internationalization at Home in a Global Perspective: A Niche for World Language Centers

This presentation reports on case study research investigating the multifaceted function of the University of Wyoming (UW) World Language Center (WLC) as a vehicle for culturally relevant pedagogy and the internationalization of higher education. The WLC was conceptualized by a group of UW international graduate students in 2013; they received internal grants to purchase curriculum materials, instructional technology, and to organize international students and faculty, visiting scholars, and international community members as WLC service teachers. The service teachers offered free language and culture classes in their respective native languages for a nearby community and UW staff, students, and faculty. The WLC has expanded rapidly to include 18 different language courses with more than 300 students registered each academic semester. Theoretical perspectives from the fields of intercultural education, intercultural communication studies, cultural anthropology, applied linguistics, and critical pedagogy informed the investigation.

The overarching aim was to examine: (1) global competencies in a local setting to prepare Wyoming students, particularly the 90 percent who have not had an international experience, (2) tapping the interdisciplinary, collaborative, and international expertise of the University community to invigorate faculty and faculty-student interactions and (3) a model of culturally relevant pedagogy linked with global academic expertise for the study and practice of teaching world languages. Among the many lessons and implications shared in this presentation, two stand high above the others. First, the critical importance of a coordinated, integrative process and strategy that together in the conceptualization all members implementation of a strategy to expand internationalization at home. And second, the pivotal role of world language centers in making many of the critical steps in the expansion of internationalization within university communities.

#### Sonia Rodriguez

Assistant Professor, National University, USA

# The White Males Legacy as Women of Colour Access the Gateway to the Professorship

84 percent of full-time professors in the United States are white, 58 percent are White males and 26 percent are White females (U.S. Department of Education, National Center for Educational Statistics, 2015). A majority of educational leadership programs promote diversity and advocate for social justice and cultural competency in school leadership, nonetheless persons of color remain underrepresented in the professorship and women of color continue to be marginalized in educational leadership. This study will desegregate the experiences of distinct professors in educational leadership. This paper will present the personal experiences of White male tenured professors who have contributed to academia and continue to dominate the profession, but are at the tail end of their career with aspirations of retirement and merge the voices of unique professors (Women of Color) who aspire to obtain tenure status. This presentation captures the voices of distinctive women as they began to transform themselves into academia, as well as validate the White Male contribution to educational leadership, as he leaves his legacy and passes the torch of leadership to the new generation of the professorship.

#### Gregorio Rodriguez Gomez

Professor, University of Cadiz, Spain

&

#### Maria Soledad Ibarra Saiz

Professor, University of Cadiz, Spain

# **Enabling Progress towards Assessment as Learning and Empowerment. The Role of Students' Assessment Literacy**

This paper presents the perceptions of students on different university degree courses on their participation in assessment and the development of their own assessment skills after completion of a training course on assessment. This training course is characterized by being designed from the perspective of assessment as learning and empowerment and incorporates the use of various technological tools such as serious games and web-based assessment programmes. Surveys were used to collect the opinions of 227 students who responded to an initial questionnaire on their experience of participating in assessment and of 133 students who responded after undertaking the training course to questions related to their assessment competence. The results show that students believe they achieved a high level of competence to assess their own and their peers' work and to improve their work in response to feedback from teachers and peers and to review their work or outputs using the assessment criteria and instruments. On the other hand, they express a lower level of competence to actually propose assessment activities for the modules they take.

#### Manfred Roessle

Head, Faculty of Business Information Systems, Aalen University of Applied Sciences, Germany

&

#### Rene Kuebler

Research Fellow, Aalen University of Applied Sciences, Germany

### Quality Prediction on Die Cast Sensor Data

Die-casting forms complex metal shapes in a rapid production process. The downside is a not completely controlled process. As a result, the scrap rate is in a range from 10% to 25%. The cast workpieces are usually subject to various additional treatments before a defect is identified. This leads to significant additional costs. A thorough quality control directly after the casting is time and cost intensive. In practice only a quick visual inspection, for obvious flaws on the surface, takes place.

We aquired data from temperature, pressure, metal-contact, vacuum, air-volume, moisture and ffc sensors with a resolution of 4kHz for more than 400 casts. For those casts the density was measured as an objective quality feature.

We trained different machine learning algorithms on the data for three classes. Class 1: high density - high probability of a good part. Class 2: medium density - unconfident in quality/suggestion for measurement. Class 3: low density - high probability of a low quality.

Artificial neural networks have a slightly higher accuracy but need a multiple of the computation time of other machine learning algorithms and don't allow an inference on the impact of the features. Decision trees, as well as their advanced variants with boosting, yield good outcomes and show which features are responsible for the part quality.

On this foundation we developed a system to archive all the sensor data of a live production die-casting machine and a real-time prediction of the part quality. With a prediction accuracy of ca. 80% we can support the decision of the machine operator and help to reduce the cost for scrap.

#### Lydia Rose

Associate Professor, Kent State University, USA

### Rethinking the "Live" Component of Online Courses: Advantages and Disadvantages of the Polished Canned Course

The role of the teacher/professor in the university online classroom can vary substantially. The plethora of online delivery formats available can widely differ subverting the role of teacher. The role of the teacher can be as an extremely passive facilitator of the course that merely keeps score on a limited number of assignments that are not scored automatically. On the a whole other level, the online teacher can be immersed into an online community that can easily overtake ones time in interacting with online students with emails, chats, discussion forums, real-time conferencing, and lecturing. A significant number of online programs provide the "live" component of the course simulating the traditional classroom where students all attend at a synchronized time. The disadvantages of the synchronized, online lecture is typically related to geography, time zones, work schedules, family demands, and technology issues. This paper is an attempt to seek out questions and answers regarding the advantages and disadvantages of placing the "live" component of a course at the forefront of the online class. This is to be contrast with the advantages and disadvantages of the wellpolished, well-rehearsed, well-edited taped video.

#### Michael Rozalski

Associate Professor, Binghamton University, USA

### Children and Adolescent Literature as Intervention Tool for Students with Emotional and Behavioural Difficulties

Books have long been used by teachers to explore issues whose understanding is considered crucial to students' educational experience (e.g., the use of "Anne Frank's Diary of a Young Girl" when teaching about the Holocaust). These books can be used in hopes that a child will make connections between the character's struggles and possible triumphs in the narrative and their own personal situation that may be distracting them from success in their educational pursuit. Research suggests that students with behavior problems are able to talk about the experience of characters in children's and adolescent literature in ways that they cannot express when exploring their own personal feelings.

In collaboration with teachers working with children and adolescents in U.S. schools in both a general education setting in a public school and an alternative school for students with emotional and behavioral problems, we identified literature featuring characters with disabilities, and characters dealing with bullying and anger management issues. These characters experience real-life situations that prevent them from achieving academic and social success.

In the presentation, we will share the children's and adolescent literature, sample lesson plans, and the results of our pilot study, which indicated improvement in students' ability to relate to characters, manage a variety of problems, and identify ways to successfully create a "community-based culture," where students support one another's efforts to succeed.

In our presentation, we hope to help attendees to: 1) Identify specific resources that help students confronted with behavioral challenges, 2) Describe how parents, teachers and other staff can develop a variety of supports for students, and 3) Briefly summarize data collected to measure the efficacy of the intervention efforts. We hope to offer a unique resource to teachers who work with students with emotional and behavioral difficulties.

#### Lou L. Sabina

Visiting Assistant Professor, Stetson University, USA

&

#### **Chris Colwell**

Associate Professor, Stetson University, USA

## Challenges of Principal Succession: Examining the Challenges of Hiring Internal Vs. External Candidates

School districts across the United States are either currently experiencing or facing a shortage of qualified and willing candidates to assume the role of building principal (Russell & Author, 2014; Pianowski, Hewitt, & Brady, 2009; Rosa, 2003; Papa, Lankford, & Wyckoff, 2002; McAdams, 1998; Duke, 1998). Because of this, many school districts have begun to deliberately plan for impending shortages by beginning in-district programs to recruit and train new leaders to lead their schools. These programs, defined as "succession planning programs" operate in many forms, with some programs partnering with university preparation programs or some handling their preparation internally (Augustine, Gonzalez, Ikemoto, Russell, Zellman, & Constant, 2009).

However, what happens when external candidates wish to become administrators in a district that is participating in internal succession planning? Will they face challenges competing for positions that others have been groomed for? Or even more striking, will the district suffer because of failure to integrate out-of-district ideas in their preparation of school leaders? Some (Russell and Author, 2014) have identified this challenge as a major barrier to leadership preparation, which may end up being an "unintended consequence" of a dedicated effort to internally prepare leaders to assume in-district administrative positions.

Data gathered from this study comes from a larger, multi-year student reaching across four different large school districts in Central Florida (named Rougarou, Valravn, Gatekeeper, and Maverick) (Author & Author, 2017). This study focused on the larger, overarching systems planning involved in succession planning; interviewing central administrators, program coordinators, building principals, and aspiring administrators throughout each county. This particular paper is focused on one of the findings from that study, which was identified as a primary tension of succession planning – balancing internal vs. external candidates to recruit and retain talented building leaders for schools. The following research questions guide this study:

- (1)How does central administration balance the need for school administrators through internal and external recruitment?
- (2)How do external building leaders feel in comparison to their internally recruited counterparts?
- (3)Are externally hired administrators more likely to stay in their districts than ones that were internally hired?

Our objective was to answer these research questions through presenting our findings from each district separately, and then through within case and cross case analysis (Miles & Huberman, 1994). Through evaluating four very different programs, which are already showing unique accomplishments, this paper may serve as a guide for future school districts considering the challenges of creating an internal succession-planning program.

#### **Annabell Sahr**

Lecturer, The University of Texas at El Paso, USA

### Language Choices of Multilingual Learners of German in a Texas Border Town

Considering the tensions between dominant language ideology and multilingual identity the language choices of learners in a German as a foreign language classroom situated along the Mexican-United States border were explored in this qualitative study. Data was gathered through participant observations, as well as phenomenological interviews and analyzed using constructivist grounded theory. The findings suggest a strong influence of the dominant language discourses on language choices the learners claim to make. Speaking English is part of performing Americanness for the multilingual study participants. However, through their language praxis a more complex situation surfaced and the claim is made that learning an additional language can reshape the learners identity as confident multilinguals who draw on their full linguistic repertoire for learning German, in an environment that is slowly becoming more progressive towards biliteracy in education. While notions of English-only education still form student's attitudes towards using other languages such as Spanish in the classroom. However, being guided to draw on their multilingual capacities students were reevaluating language ideologies.

#### Lars Samuelsson

Associate Professor/Senior Lecturer, Umea University, Sweden

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#### **Niclas Lindstrom**

Associate Professor/Senior Lecturer, Umea University, Sweden

## **Teaching Ethics to Non-Philosophy Students**

It is not only philosophy students who read ethics in universities and colleges. Nor are they the only ones who have reason to do so. Dealing with ethical issues is a central aspect of many professions, and hence e.g. teacher students, engineering students, police students, medicine students, social worker students and research students are commonly taught ethics within their educational programs, just to mention some.

In this paper we address the question of how ethics is most appropriately taught to such "non-philosophy" student groups – on a general level, that is; of course there may be important differences between these various professions and areas of study, calling for partly different approaches to teaching ethics.

The standard way to introduce ethics to non-philosophy students is doubtlessly to present and briefly explain a number of ethical theories (or kinds of theory), such as utilitarianism, Kantian ethics, virtue ethics and moral pluralism. And indeed, most introductory books to ethics adopt this approach, be it general introductions or introductions specialized towards a specific profession or subject matter.

We refer to this approach as the "smorgasbord approach" to teaching ethics, due to the false impression that it is likely to make on non-philosophy students approaching ethics as an academic discipline for the first time. This approach invites the conception that adopting an ethical position is mainly a matter of simply choosing from this smorgasbord of different theories.

We find this approach problematic for several reasons:

To start with, it tends to misrepresent the field of ethics as well as ethical reasoning. These students generally lack the prerequisites required to critically examine and evaluate these theories, to understand the different motivations behind them, and to put them in context. Indeed, it is even difficult, given the usually quite limited time frame for such courses, to give the students an appropriate understanding of what these theories really are theories about. To get a thorough enough understanding of the field for it to be meaningful to focus on ethical theories in introducing non-philosophy students to

ethics would require a much more comprehensive ethics education than what there is usually room for within the kinds of educational program mentioned above.

Furthermore, the smorgasbord approach is likely to be infeasible. How is such an approach supposed to aid the students in practical decision-making – which, first and foremost, is the rational for having them take ethics courses in the first place? Which of these theories should they apply, and why? The different theories give different verdicts in most tricky cases, and these students lack the background knowledge required to critically choose between them. Nor is it obvious that it is desirable to choose one such theory and then apply it in one's practical reasoning.

In light of these problematic features of a smorgasbord approach to teaching ethics we suggest a methodology-based approach as a more fruitful alternative. Instead of presenting a list of theories this approach focuses on conveying basic methods for ethical reasoning. We argue that there is almost unanimous agreement among moral philosophers (at least within a broadly analytical tradition) as regards certain basic methods for ethical reasoning, even if these methods are rarely explicitly formulated. These methods can be summarized roughly under three main headings: information, vividness and coherence.

The main purpose of this paper is to explain and defend the methodological approach to teaching ethics to non-philosophy students. In doing so we also consider and reply to some possible expected objections to this approach.

Lastly, we consider whether the approach should be complemented in some way. One useful complement, we think – if the time and space in the educational program in question allows it – is to bring up the question of character traits – what kind of person one should be.

#### Lisa Schade Eckert

Professor, Northern Michigan University, USA

### Keeping the Reader in Close Reading: The Importance of Affective Response in Teaching Multimodal Text

This presenter will share research and pedagogical methods for teaching graphic novels and comics with an emphasis on Indigenous art and narrative.

#### Patricia Scherer Bassani

Professor, Feevale University, Brazil Cristina Ennes da Silva

Researcher, Feevale University, Brazil

&

#### Inajara Vargas Ramos

Researcher, Feevale University, Brazil

## Personal Learning Environments as a Strategy to Promote the Use of Digital Technologies in Education

Ongoing studies involving digital technologies in education indicate the possibilities of enhancing educational processes based on the concept of personal learning environments (PLE). The PLE is not a technology but an approach, a way through which we can use the digital technology, especially web tools, to teach and to learn. This study aims to analyse different possibilities of boosting the PLE of undergraduate students who are enrolled in a teacher formation course and to understand how this is reflected in educational practices in the context of basic education. This study, with a qualitative approach, was developed based on the cartographic method. Results point out the importance of promoting experiences that enable the students to use new technologies in order to expand their PLE, as well as to create opportunities for reflection on the possibilities and limitations of web tools in the educational context. Furthermore, we understand that the student involvement in educational practices during the teacher formation process can enhance pedagogical practice with the use of digital technologies.

Eliane Schlemmer
Researcher, Unisinos, Brazil
Wagner dos Santos Chagas
Unisinos, Brazil
&
Cleber Portal
Unisinos, Brazil

In Vino Veritas: The Game

The paper describes the design, organization and development of the application In Vino Veritas (IVV). The main objective is to understand the potential of the hybridity, multimodality, pervasiveness and the ubiquity, combined with the games and gamification as enablers of knowledge experiences. The proposal includes historical heritage of the city and countryside of Bento Gonçalves in Southern Brazil, as integrators of learning spaces, defined as elements for the development of culture and citizenship. In this context, the following problem arises: How this perspective may help to think of the new educational designs?

This exploratory research used a combined qualitative-quantitative approach," including the intervention-research cartographic method. Other instruments used were participant observation, photo, audio, text and video records, and interviews. The data was analyzed and interpreted within the theoretical framework. We used this reframing to address learning gap and educational design in the context of a learning environment composed of hybrid, multimodal, pervasive and ubiquitous coexisting spaces. The IVV is a game that can be collaborative, when the players socializing the knowledge built in the own game, in the Facebook group - "In Vino Veritas - The Game." Then this knowledge is assessed for expert and has the possibility of integrate the game, in this case the players becoming authors. The game uses mobile devices, mixed and an augmented reality and works to enlarge the learning spaces for the city and the countryside of Bento Gonçalves.

The IVV include areas like: History, Enology, Gastronomy and Chemistry, and is developed from a narrative in three acts: Mythology; Italian Immigration and Immigrants in Bento Gonçalves, represented by three 3D characters: God Bacchus, grandmother Francesca and Italian Giuseppe. These characters could encourage players to accomplish missions, interacting with the local community and the city and countryside spaces in building a web of knowledge, where informational layers are related to personal and collective memories

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about immigration, aroused by the senses, engaging the subjects in the world of sensations and cultural discovery.

#### **Franz-Josef Schmitt**

Scientist, Technische Universität Berlin, Germany

#### **Christian Schroeder**

Researcher, Technische Universität Berlin, Germany

#### Marcus Moldenhauer

Researcher, Technische Universität Berlin, Germany

&

#### **Thomas Friedrich**

Professor, Technische Universität Berlin, Germany

## Student Centred Teaching in Laboratories Supported by Online Components in the Orientation Program MINTgruen

Students centered teaching and research-based learning motivate students to identify with their subjects. The orientation program MINTgrün at Technische Universität Berlin offers two study semesters for open choices of subjects and a series of specially designed laboratories covering topics like robotics, construction, environmental research, programming, mathematics, gender studies and chemistry. The online project laboratory in chemistry (OPLChem) follows the concept of learning by research and allows for a free choice of an experiment drafted by the students themselves after participating impulse talks that report on former experiments conducted by the students of the preceding semester. In the OPLChem the students were highly motivated and chose experiments often related to sustainability.

However such student centered and research based teaching concepts are often time consuming. Therefore we developed a series of online components to support the teaching process in the practical courses. Videos show basic experiments in chemistry and they explain how to handle the experimental setups correctly. Such videos were identified as helpful tools to reduce the effort for supervision during the internships while the quality of the experimental work of the students was clearly rising. The online materials explain important aspects of the theory, chemicals, the preparation of samples, the configuration of complex setups, safety instructions and handling of computer programs for the correct data evaluation. All materials are provided on the moodle based content management system of Technische Universität Berlin that allows for monitoring student skills, spreading tasks to the students, exchange documents, work collaboratively on documents, communicate in the forum or solve short online tests.

The concept of the OPLChem motivated the students to produce own videos publishing their experimental results to support their written protocols. In that way a growing pool of new videos of various experiments was established and some students published these videos, their protocols and additional materials on own blogs for the public. This approach opened the laboratory for the public and turned out to be an interesting concept to support collaborations. For example the project of oil spill detoxification was in focus of the government of Berlin and finally lead to a cooperation with the office for urban development. The whole teaching concept of the OPLChem and the development of selected teaching videos for a targeted inversion of the practical courses were awarded by the Joachim Herz foundation with two Fellowships for excellent teaching for Thomas Friedrich and Franz-Josef Schmitt, respectively.

#### Sonja Schwarze

Research Assistant, Westfaelische Wilhelms University Muenster, Germany

### Content and Language Integrated Learning: How Bilingual Geography Classes Serve as a Fertile Resource to make Lessons more Sensitive towards Students' Language Challenges in Monolingual Settings

For the past years language as a medium of learning has gained a higher relevance in Germany within educational discourses due to patterns of migration and a large variety of students with different native tongues. Awareness has arisen to address issues of language acquisition all over the curriculum, as language is the key to education. This led to an intense rethinking of traditional content-based lessons. To enable students to develop German language competencies regarding processes of text reception and production needed to solve academic questions, general challenges and potentials of language acquisition and development are addressed and assessed more thoroughly (cf. Beese et al. 2015).

Unlike its German monolingual equivalent, bilingual Geography lessons have always provided dedication and afford to facilitate students' second language acquisition. By systematically linking principles of content knowledge and foreign language teaching, these lessons focus on second language processes and Geographic objectives, contents and competencies likewise (cf. Wildhage & Otten 2008). Thus, looking into bilingual Geography lessons offers fertile principles, concepts and strategies based on elaborated theory and proven in practice, which can be transferred into monolingual German Geography classes to sensitively close the discrepancy of cognitive and linguistic skills (cf. Meyer 2011, p. 33). Hence, particularly students with a history of migration are led from basic interpersonal communicative skills into acquiring cognitive academic language proficiency, which draws on a conceptually written language communication (cf. Jeuk 2013, p. 51ff.).

This contribution emphasizes the synergetic linkage of bilingually carried out CLIL and monolingual conducted lessons by exemplifying the subject of Geography. Transferring specific concepts, strategies and ideas from bilingual classes to monolingual classroom settings fosters students to acquire cognitive academic language proficiency required to succeed in the educational system and to gain access into society. Thus, this reinforced awareness of language in education strengthens

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the endangered positions of both bilingual and monolingual Geography classes in the German curriculum.

#### Lena Shaqareq

Instructor, University of North Florida, USA

#### Versed In English: Using Poetry to Tackle Common ESL Errors

Growing up, English was a second language to me. Speaking Arabic as my first language, and with Arabic being quite different from the English language, I can relate to some of the struggles that English Language Learners go through in learning a language. Learning the structure of a new language is a very intricate, complicated process especially when the linguistic distance between the two languages is wide. Grammar is difficult for native speakers to learn nevertheless an English language learner. This presentation targets the use of using poetry to help English Language Learners grasp certain grammar points in the English Language. This presentation is based on a book a colleague and I have written and are currently waiting on a publisher's response to it. The poems in the book are original that I have written myself so that each one targets a specific grammatical point that English Language Learners tend to struggle with or need to learn as a basis for comprehending English. Along with each poem, we have created several activities on how teachers can use those poems to teach and emphasize those grammatical points. In essence, this book is a resource for teachers who deal with English Language Learners at any capacity. The presentation will draw from this book to discuss why some of those language mistakes are common among English Language Learners by providing a quick comparative analysis of some of the languages with the English language. The presentation will also discuss the many benefits of using poetry with English Language Learners and how using poetry to reinforce grammar points can make learning more meaningful, fun, and relevant. I will pull out examples of poems and activities from the book to demonstrate and model how they can be used effectively to make the grammar points comprehensible to English Language Learners, and to aid them in remembering their proper use.

#### **James Smiley**

Instructor, Online Course Developer, UC Berkeley/Associate Professor, San Jose State University/Professor, Diablo Valley College, USA

#### **Education Reimagined**

Higher education must be reimagined, unencumbered by the educational model set-down in times past, poised to prepare our students to not only thrive in the workplace but in their personal lives with regard to growth and fulfillment.

Educators should no longer feel compelled to deliver broad swathes of content knowledge. Learning can now be focused on the process of learning. Class time is reserved for discussions, student collaboration, workshops, group projects, presentations, peer reviews and individual consultations, among other strategies that are far more valuable in a face-to-face context than even the most carefully crafted lecture and/or PowerPoint presentation. Student-centered education, whereby we tap into all that is unique about their experience and perspective, modeling critical-thinking skills and guiding each student from their idiosyncratic starting-point toward developing those skills and perspectives necessary to be successful in the medical profession; all the while, keeping in mind that we strive to retain their particular approach, understanding that there is more than one path to the same end and that the very last thing that we want to do is bleach students into some sort of homogenous, group-thinking congregation.

Educators deepen students' awareness of their role in their educational experience by moving from the explicit structuring of learning tasks toward engaging with students, providing feedback, thus activating next-level learning challenges. The benefits: motivation is enhanced, cognition and social outcomes are improved, a sense of responsibility for one's own learning is increased, and cognitive skills are focused as students develop a longing to work in contexts within which they contribute their own ideas, experiences and expertise to the learning process, moving well-beyond the pre-packaged, depersonalized learning experience of days past toward becoming self-directed, autonomous learners.

This method not only assures an understanding of the material otherwise unobtainable, but improves retention of the course content while developing subject fluency, critical thinking skills, self-assessment, inter-professional communication and an ability to embrace ambiguity, understanding that the more complex, the more interesting of issues blur the lines between right and wrong, that

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answers to the most challenging questions often lie in the gray region between black and white. And that, most importantly, the struggle toward understanding is the foundation of learning; without the struggle, and the resultant discovery, knowledge is fleeting. It is within this space, between the students' interests and aspirations that are driving them toward their life-goals and the educators ability to bring to bear the experience of what it takes to reach that end, within which a team-mentality emerges, one that emphasizes process over product.

The goal is to create a system within which students will gain the competencies and dispositions that will prepare them to be creative, connected, and collaborative life-long problem-solvers.

#### **Emanuel Johannes Spamer**

Executive Director, Unit for Open Distance Learning, North-West University, South Africa

#### Johanna Maria Van Zyl

Director, Unit for Open Distance Learning, North-West University, South Africa

&

#### **Martin Combrinck**

Manager, Unit for Open Distance Learning, North-West University, South Africa

## **Exploring Open Distance Learning at a South African dual Mode University: A Case Study**

Due to the need for higher education in South Africa, the country experiences a rapid growth in open distance learning, especially in rural areas. The Unit for Open Distance Learning (UODL) at the North-West University (NWU), South Africa was established in 2013 with its main function to deliver open distance learning programmes to approximately 30 000 students enrolled in the Faculties of Education Sciences, Health Sciences, Theology and Arts and Culture. The UODL is responsible for the operational and administrative side of the offered ODL programmes at the NWU. Using interactive whiteboards, the NWU and the UODL are now able to deliver lectures to students concurrently at 65 regional open learning centres across South Africa, as well to an unlimited number of individuals with Internet access worldwide. This paper will explore the implementation of open distance learning in terms of its successes and challenges over the last couple of years at the institution. An important reason for the successful implementation of ODL at the NWU was the ongoing support for students and use of technology. The successes of ODL at the university will further be illustrated by the throughput rate and graduation numbers over the last 4 years. The paper will also look at the challenges that the institution face with regard to the migration to online learning in a developing country.

#### Richard Speaker

Retired Chair, Department of Curriculum and Instruction, University of New Orleans, USA

&

#### Stephen J. Grubaugh

Professor, University of Nevada Las Vegas, USA

## Higher Education in the Aftermath of Policy, Economic, and Natural Disasters: New Orleans Ten Years After

After Hurricane Katrina destroyed and damaged more than 200,000 homes, schools, and many other types of buildings in New Orleans during August 2005, the people of the region knew that the reconstruction would take years. What few realized was that the massive storm was only one disaster that they were to encounter. A collection of local, national, and international public political policies and financial structures created a world-wide set of disasters on magnitude greater than the physical hurricane, and these problems produced a wide range of additional difficulties for the Greater New Orleans area. These disasters have shocked students, schools, and systems with traumas from policies and consequences of the Clinton-Bush-Obama and state administrations, where a plethora of regulations evolved with unintended consequences. Policies promulgated under positive-sounding names (like "improving education," "scientifically-based approaches," "data-driven instruction," "no child left behind," and "race to the top") and have produced misrecognition (Bourdieu & Passeron, 1977), especially as a fabrication of the effectiveness of schools and teachers while budgets have constricted constantly due to low tax revenues.

This paper examines the historical, political, financial, and natural context that have been part of the recovery process in New Orleans for the purpose of exposing to the world a variety of issues that may occur surrounding the natural disaster in other places. It extends previous work (Speaker, Willis & Speaker, 2013) on the issues that form central concerns related to the impacts of policy, economic and natural phenomena on educational systems. This paper focuses on the concerns of higher education in the milieu of disasters, using case study methods and oral histories to document the flight of faculty and their students and their issues as budget crises, costs, and policies have impacted the students recruited and attending one university.

#### **David Ssekamate**

PhD Student, University of Oldenburg, Germany

### The Opportunities and Challenges for Universities in Africa in Addressing Climate Change: A Qualitative Comparative Case Study of Makerere University (Uganda) and University of Dar es Salaam (Tanzania)

This study, which is a work in progress, examines the opportunities and challenges for universities in Africa in addressing climate change issues in their programmes. Specifically, the study attempts to examine the current academic, research and community engagement programmes on climate change implemented by the Universities; the key challenges faced by the implementing units in carrying out these programmes and; the success factors that would support universities to adequately address climate change issues in their programmes. The researcher adopted a qualitative comparative case study design with Makerere University (Uganda) and University of Dar es Salaam (Tanzania) as comparative cases. Data will be collected using semi-structured indepth interviews, Focus Group Discussions (FDGs) and Document review. A total of 12 semi-structured in-depth interviews and 4 Focus Group Discussions will be undertaken, collecting data from 36 respondents in both Uganda and Tanzania. The data will be analyzed using content and thematic analysis methods with the help of Nvivo software. The findings are envisaged to make a significant contribution to scholarly literature on climate change education and the role of higher education in addressing climate change issues, inform policy making in the sector and development planning to strengthen the academic, research and community engagement programmes on climate change by universities in Africa. The implications of the findings may go beyond the focus on climate change but also other related sustainable development issues incorporated in academic and research programmes of universities in Africa. The results may enable universities to re-think their approaches and practices and also deal with challenges effectively in addressing climate change related issues in their programmes.

#### **Barbie Stanford**

PhD Student, Sam Houston State University, USA Lori Haas

Assistant Professor, Sam Houston State University, USA

#### Marcela Montenegro

PhD Student, Sam Houston State University, USA

### Blogging and Online Book Clubs: Pre-service Teachers' Experiences and Perceptions

Though technological advances are rapidly creating new educational opportunities, research on blogging and participation in online book clubs is virtually nonexistent. In this study, researchers explored pre-service teachers' experiences with blogging combined with participation in online book clubs. The purpose of this research was to identify participants' reading habits and online practices, examine their perceptions of blogging as a pedagogical tool when coupled with online book clubs, and ascertain how they intend to incorporate this digital pairing into their future educational practice. Participants in the study were 18 pre-service teachers enrolled in required literacy methods courses for teacher education certification. Initially, a 15-question, Likert-scale survey was administered to participants to determine their experiences with blogging and participation in online book clubs. Results of the survey revealed that the majority of students had no prior experience with either blogging or online book clubs. Participants were then presented with a selection of texts from which they could choose to read and participate in an online book club experience. Six-member book clubs were formed based on pre-service teachers' text selections. Next, participants created individual blogs, which they used to engage in online dialogue over the course of four weeks. Participants had complete autonomy within book clubs to organize a schedule and protocol for members' online discussions. Upon completion of the blogging and online book club experience, participants provided reflective responses relating their perceptions of their engagement in the process as well as how they viewed blogging as a pedagogical tool. Though this study was narrow in scope and results were limited, it provides a foundation and rationale for future research in an area that is still emerging.

#### Xiaohui Sun

Lecturer, Beijing Normal University, China

&

#### **Shaoqian Luo**

Professor, Beijing Normal University, China

## A Narrative Inquiry into EFL Teacher Change in Chinese Primary Schools

Narrative inquiry has been used for teacher education and development. This paper presents a narrative approach to teacher change by using one EFL teacher's stories in a teaching English reading project in Chinese primary schools. This change is built on the teacher's teaching philosophy and attitude for what she teaches. The paper concludes that the possibilities for real teacher change depend not only on the teacher's beliefs and understanding of EFL teaching, but also on authority's support, observing other teachers' classes, reflecting on what she has read, heard and seen.

#### **Christie Sweeney**

Associate Professor, Plymouth State University, USA

### Paradigms, Principles, and Perception: Building Leadership Competencies from the Inside Out

A paradigm is a personal map, model, theory, or frame of reference which influences the way we "see" and understand our world (Covey, 1989). We view the world through our own lens, and that worldview is, in great part, an inherited paradigm. Since childhood we've been carefully taught how to see the world "correctly."

We learned how to behave in society: what to believe and what not to believe; what is acceptable and what is not acceptable; what is good and what is bad; what is beautiful and what is ugly; what is right and what is wrong. (Ruiz, 1997, p. 3)

Family dynamics, religious affiliation, ethnicity, social class, living accommodations, and economic status are just a few of the factors that influenced our perception. We were impacted by our parents' point of view, the neighborhood we lived in, the friends we hung out with, the schools we attended, and the experiences we lived. All the while, these paradigms were reinforced within the context of our personal gender and cultural environment.

Over time paradigms become the deeply held beliefs that shape our worldview, and they strongly influence our behavior. As educators we must be conscious of our own paradigms and mindful of others; we must help others, especially our students, become aware of their own paradigms. "Being mindful means switching from automatic communication routines to paying attention simultaneously to the internal assumptions, cognitions, and emotions of both oneself and the other person" (Mendenhall, et al., 2013, p. 22).

Though all humans carry personal paradigms which influence their behaviors, this paper is focused on work I have done with educational leaders. "What a leader believes about people, his organization, or herself affects what he or she does" (Bacal & Associates, 2017, par. 2). Effective leaders are aware of their paradigms and their behaviors. They have a deep understanding of their strengths, limitations, values and motives.

Knowing where you come from is the first step to understanding others. If you know where you stand, you can stand for what you know. To successfully serve in a leadership capacity, and guide others through this process, you must be cognizant of your own individual beliefs, values, and ideals. That is why effective leadership

development requires building leadership competencies from the inside-out.

The purpose of this paper is to share instructional strategies I have used with graduate education students (teachers & educational leaders) to successfully encourage the growth of: emotional intelligence competencies (self-awareness; self-management; social awareness; relationship management [Goleman, Boyatzis, & McKee, 2013]); intra and interpersonal awareness; communication skills; contextual mindfulness (cultural influence, system thinking); and reflective consciousness.

#### Reyhan Tekin Sitrava

Assistant Professor, Kirikkale University, Turkey

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#### Mine Isiksal Bostan

Associate Professor, Middle East Technical University, Turkey

# A Study on Investigating Middle School Teachers' Knowledge on Instructional Strategy: The Case of Volume of 3D Solids

The aim of this research study was to investigate teachers' knowledge of instructional strategies, which refers to the teachers' knowledge of subject specific strategies and topic-specific strategies on the volume of 3D solids. The data were collected from four middle school teachers through classroom observations. All teachers were observed while they were teaching the topic and observations were videotaped. The data were analyzed via constant comparative method. Teachers' knowledge of topic-specific instructional strategies was extracted from the data, which involved appropriate strategies to teach particular mathematics topics. Based on the analysis of the data, topicspecific strategies implemented by teachers were coded as teachercentered and student-centered. All teachers mostly applied teachercentered strategy to teach the volume of 3D solids. The teachers provided clear explanations and examples concerning the topic followed by questioning students in order to understand how much they had learned. Moreover, they used manipulative to help their students envisage and visualize 3D solids. During the instruction, the students were the passive listeners. The analysis of the data showed that although two teachers never used students-centered strategy to teach the volume of 3D solids, two teachers rarely implemented it. The basis of this strategy is that teacher is not the only source of the knowledge. Teachers shared the responsibility of explaining topic with their students; thus, there was a good amount of dialog between students and teacher. As a result of the study, it could be concluded that teachers tended to use teacher-centered instructional strategy, which was parallel to the results of other studies. The reasons for applying teacher-centered instructional strategies might be teachers' lack of experiences related to using different instructional strategies in their teaching, having inadequate subject matter knowledge and number of concepts that need to be taught such as the volume of a pyramid, prism, and cone.

#### Sonia Tiwari

Guest Lecturer, Educational Multimedia Research Center, India

## Design and Evaluation of Character-Driven Applications for Elementary Education

This paper discusses development and evaluation of interactive web and mobile applications that use character-driven storytelling for Elementary Education. From educational apps using popular Television characters such as 'Dora the Explorer', 'Curious George' and 'Cat in the Hat' to mascots of educational websites such as 'ABCmouse.com' and popular educational games like 'Carmen San Diego' – Characters have been strong anchors of educational stories regarding environment, science, math, technology, language and many more subjects!

This paper is presented in four sections

- 1. Brief history of popular characters in educational applications
- 2. Evaluation of the role 'characters' play in a child's learning experience while interacting with educational apps, through subjective interviews and objective questionnaires answered by 150 teachers, parents and students across India and US
- 3. Draw a recommended list of features for future educational apps based on feedback and suggestions from elementary school teachers and students, aimed at educational app developers
- 4. Present the prototype of an original Game designed based on the feedback from this research

In a complicated world of education where a lot is expected from children at an early age, and the increasing amount of products, services and research into "How to make education more fun?" – strong character design and storytelling through visuals remain an important factor to establish a sense of familiarity and warmth for children, as they delve into new and challenging study material. From the early days of educational technology for children where Seymour Papert co-designed the 'turtle' in Logo Programming Language (1956) to the 'Dash & Dot' robots that help kids learn programming (2013), characters have proven to play an essential role in simplifying even some of the most (perceived as) complicated topics like programming.

#### Michele Domenico Todino

PhD Student, University of Salerno, Italy **Stefano Di Tore** 

Researcher, University of Salerno, Italy
Giuseppe De Simone

Researcher, University of Salerno, Italy

&

#### Maurizio Sibilio

Professor, University of Salerno, Italy

## Virtual Reality Head-Mounted Display Used in Online & Distance Education

In recent years, online education has become an enhancement to traditional methods, allowing people to learn at a distance. Internet web applications, 3D digital environments and virtual reality devices give new opportunities in teaching-learning processes. Starting from this consideration, the Department of Humanities, Philosophy and Education of the University of Salerno and The Virtual Archaeological Museum of Herculaneum signed a scientific cooperation agreement oriented to develop and implement methods, tools and inclusive educational technologies. In particular, virtual reality spaces have been designed to create educational settings in line with the Universal Design for Learning approach. Using the Unity3D game development platform and state-of-the-art graphics, which are comparable to contemporary video games, a 3D model of Villa of the Papyri in Herculaneum was recreated. The next phases of the project include the development of an edugame in this 3D model, which can be used in online and distance modes. Through virtual reality and head-mounted display (Oculus<sup>®</sup>) device, students will be able to learn history, philosophy and architecture of ancient Romans. In addition, having the ability to download or play this online edugame, students have the opportunity to learn at a distance, visit places far away in space and in history, which may now have disappeared. Besides, students can use these virtual reality media anytime anywhere, with the convenience and cost effectiveness of distance learning.

#### **Janice Tsang**

English Teaching Assistant, The University of Hong Kong, Hong Kong

### Struggles of Independent Intellectuals in Hong Kong: A Case of Hong Kong Reader Bookstore and the Intercommon Institute

This presentation shares experience and struggles of a group of 'independent' intellectuals in Hong Kong, who are not affiliated to Universities or the authorities: from one of the city's most important independent bookstores, HK Reader, to its extended community-based academic collective, the Intercommon Institute, a network of public intellectuals in Hong Kong that offer short courses, with a focus on political and socio-cultural, aiming to promote public knowledge and to bring academic rigour to the public learning sphere. As the editor of a forthcoming journal initiated by members of the Intercommon Institute, I hope to share in this paper what it means to work as an "independent" academic in Hong Kong.

I begin with HK Reader, a small bookstore located at an old building in the middle of the hectic city centre Mongkok, which was established by a group of young Philosophy majors ten years ago. Initially the owners were inspired by their learning experience through book clubs and discussion forums in university, and they hoped to demystify 'scholarly books' and, in longer terms, to help cultivate a more informed and committed civic society. They believe that academic discussions, scholarly research and tertiary-level teaching should take place not only within the ivory tower, but also among the general public - being both for and by the people. Unlike chain bookstores, operating HK Reader is very different in terms of its goal and target readership. Apart from its predominant Humanities book choices, it also serves as a platform for emerging writers and academics. Business aside, the owners and the staff of HK Reader pay closer attention to potential customers' book taste and interests, and they believe that building a community of visitors and readers is more important. This passion in encouraging conversations, as well as the urge to provide an 'intellectual' exit from the growing political instability, becomes the motivation to set up an non-institutional research collective: the Intercommon Institute.

In the past decade, there is an overall rise of civic consciousness in Hongkongers, also because of the emergence of the Liberal Studies as a compulsory subject at high school and Hong Kong Studies as a field of research in scholarship and publication. From as early as the Article 23

controversy in 2003 to the Umbrella Revolution in 2014, Hong Kong's increasingly precarious political environment and the city's struggle with its "post-colonial" identity have motivated more locals to seek out books on Hong Kong history and politics, as well as to 'foster' Hong Kong's cultural roots by way of supporting 'home-grown' literary writing. With the help of social media and these independent avenues where artists and writers can come together, there is actually a renaissance of literary interests among the public. The Intercommon Institute offers courses, spanning from Leftist Thoughts to Social Design to "special topic" study groups introducing and discussion a particular book or thinker. These courses are charged, so as to pay the teachers, who have postgraduate qualifications but are not tied to any government-funded institution.

This commitment to 'make knowledge public' relies heavily on the passion of those who run the these independent bookstalls and research centres, and a steady and dedicated community to uphold its existence and to believe that this goal actually matters. It is very difficult without a strong source of funding, especially when some of these researches that critique and criticise existing policies, which makes the undertaking even more challenging, and at times frustrating, to actually see 'results'. From the very beginning, the Cantonese name of HK Reader, 'Jui-yin' (序言), literally means Preface, but it is also a pun that means 'gathering people of virtues'. I will conclude by the rise of these non-institutionalised forms of education and its role in participating in, and real-ising the transformative change in the Hong Kong community.

#### **Carlos Turner Cortez**

President, San Diego Continuing Education, USA

### The Past, Present and Future of Non-credit in California Community Colleges

San Diego Continuing Education's Office of Institutional Effectiveness has conducted the first exhaustive survey of current and near future programming of adult noncredit education in California community colleges as well as well as a historical analysis of these programs since California became a state in 1850. With increased emphasis on workforce development, this study will provide valuable information on recent trends in America's largest state. Research methods include quantitative survey data, qualitative interview data, and historical research.

The State of California reinstated equalized funding for noncredit adult education programming in community colleges in 2015 for certificate programs supporting career development and college preparation. To address declining enrollments, dozens of community colleges are developing noncredit programming to meet their targets. Long-term job placement and transition to credit programs have become the primary focus of noncredit adult education in the 116 institutions authorized by the California Community College Chancellor's Office (CCCCO).

In collaboration with CCCCO, San Diego Continuing Education (SDCE), one of four divisions of the San Diego Community College District, administered a statewide survey of existing and near future noncredit programs across the state community college system. All 116 institutions responded. Using this data, a report has been generated to assist our sister institutions with their noncredit program development and expansion. This report opens with an abbreviated history of adult and vocational education in California since the state's founding in 1850. The data, analysis, and recommendations included in this report focus on current trends in adult and career technical education. SDCE's Office of Institutional Effectiveness will administer this survey annually to track noncredit program develop longitudinally.

#### Maria Uribe

Senior Instructor, University of Colorado Denver, USA Ron Tzur

Professor, University of Colorado Denver, USA Sally Nathenson-Mjia

Professor, University of Colorado Denver, USA

&

#### Nicola Hadkowski

PhD Student, University of Colorado Denver, USA

## Teacher Learning to Promote Bilingual Learners' Mathematical Reasoning

We address the problem of how upper-elementary teachers may transform their teaching practices to foster language and mathematics in bilingual students. To this end, we present a case study of a teacher involved in our Student-Adaptive Pedagogy (AdPed) project. Using AdPed, a teacher promotes students' construction of mathematics by tailoring instructional moves to their available conceptions. Our project focuses on teachers' own multiplicative and fractional reasoning and their use of AdPed to foster such reasoning in students. We examine how a teacher's development of AdPed practices, including attention to language and mathematics, might enhance the intended learning in bilingual learners.

#### Rafael Vescovi Bassani

Teacher, Unisinos, Brazil

### Playing with Lego and Building Knowledge: Gamification in the Discipline of Logistic Distribution

Playing with Lego and building knowledge: gamification in the discipline of logistic distribution.

Different gamification strategies are being developed in the field of higher education with the objective of innovating and inspiring academic community. For this purpose, a laboratory was created inside Unisinos, under the name of of LEEX. In Portuguese, Laboratório de Ensino e Experimentação (teaching and testing laboratory).

With a different layout from a regular classroom, this laboratory comprises five (05) tubular structures that simulate stands of a production line and assembly line. It was created in order to assist professors in conducting their classes. It helps deepening knowledge and brings a new dynamic to the classroom.

Applying the game in the LEEX, enables the professor and his students to use the concepts studied in academic activities such as management, logistics, gastronomy, management processes, photography, economics, accounting, psychology, human resource management, foreign trade, business management and the area of engineering. This summary presents the first activity developed in the LEEX.

This first activity occurred during a class of logistic distribution and had the purpose of identifying logistic bottlenecks and of showing the steps for assembling the operating costs in international trade. It also aimed to identify the role of purchasing areas, distribution centers, logistics, production, costs and quality.

The discipline integrates the syllabus of the foreign trade course and logistics. In this dynamic, 20 students were involved and worked alone, in pairs or in groups, each of them having a specific role. The game simulated the production line of a toy, with the objective of, at the end, delivering one final product by using LEGO bricks.

Each of the five structures is occupied by a student and simulates an assembly line. This student is responsible for the construction of a part of the toy, with the help of an instruction booklet which gives one by one the steps of the assembling process. Along with the five structures, were created support areas such as purchasing, federal taxes, distribution centers, logistics, and quality control. These support areas supervise the steps following an ideal logical organization.

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Buying the parts and calculating the taxes (II, IPI, PIS, COFINS e ICMS) were initial difficulties the students had in the game. Nevertheless they showed great interest and this remained thoughout the proposed time of the activity. The importance of integrating theory and practice in a pleasurable activity was their most relevant feedback.

#### Daphne Vidanec

Senior Lecturer, Balthazar University of Applied Sciences, Croatia

### Narratively Designed Human Agency: On Narrative Approach to Selected Ethical Issues within Higher Education Context

Charles Taylor, worldwide known contemporary Canadian philosopher holds a stand that people "grasp their life in a narrative". Following Taylor's conception of narrative explicated within identity context in his remarkable *Sources of the Self* (1989) we might think of narrative as of moral space that shapes our communicative life sphere. Education itself is strictly narrative. Since technological progress touched its highlights in the area of human and natural sciences development (late '50s up to now-a-days) education is undergone by multifaced influences produced by public media (e. g. TV, Internet, radio, smart phones, iPads etc.) as well as through other forms related to whole range of high-techs involved with everyday life and business, too.

In order to understand 'good' and 'bad' side of technological progress we are called upon to approach such and similar questions following rather inclusive than exclusive way of thinking, because the late one can do nothing but makes things more complicated than they really are in their nature, and nature isn't so bad, as might look like at the first side. Can we actually reconcile the two things opposites in their particular unique nature: thought and action? Education belongs to the first one and technologies to the second one.

So, narrative concept within higher education issue might be taken as a way that gives us whole picture of how we came where we are standing now: triple post-modern age designated by artificial virtual world created by pioneers of digital science and technologies. The question that should spring out to our mind is: "How narrative concept might be helpful in finding a way to reconcile the two-different nature of the same thing: real and virtual within the context of life as a main motif that pushes us in direction of Aristotelian "desire of knowledge" (Metaph. I., 980a 1)?

In order to find the answer to the given question we are obliged to investigate the nature of narrative itself as well as its meaning and purpose within the context of human agency *via* communicative narrative. Theorists (mainly from Anglo Saxon speaking world) claim that "in the world dominated by print and electronic media, our sense of reality is increasingly structured by narrative." In other words,

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feature films and series tell us story about ourselves. So, the whole saga of narrative can be seen through the prism of communicative phenomenon, within communicative space produced by these communication sciences. In this elaboration author offers comparative approach to the narrative issue.

#### Frances Vitali

Lecturer III, The University of New Mexico, USA

&

#### **Deborah Roberts-Harris**

Assistant Professor, The University of New Mexico, USA

#### Stories from a Voiceless Profession

Teacher practitioner research becomes the process and product whereby teachers tell their teaching and learning stories about their students and their own transformation. Teacher inquiry also becomes a social justice methodology in taking a stand, taking risks, and questioning the status quo in becoming more culturally responsive educators. In sharing their teacher stories in this presentation, we advocate for these teachers as they have advocated for their own students. Teacher practitioners of varying levels and years of teaching experience, as graduate students, in the University of New Mexico's Teacher Education master's program, are the focus of this research.

Themes of teacher practitioner classroom stories will be shared along with teacher reflections and transformations. Since teacher practitioner research is considered storytelling art of research, the significance of story will also be discussed.

#### Volodymyr Voytenko

Professor, Sheridan Institute of Technology and Advanced Learning, Canada

## Context-Aware Mobile Applications and Their Integration with Decision Support Systems

Context-aware applications have evolved significantly during the last decade. They assist users' everyday activities by adapting their behavior based on context information obtained from dynamic environment. A context-aware mobile applications can be beneficial in the time-critical situations where complex decisions are made under pressure, or the environment is dynamic or uncertain. A lot of examples exist in health-care sector (medical assistant, mobile medical expert, real-time emergency management), business applications (mobile banking and commerce), and location-based services (GPS-enabled applications).

This paper contributes to gaining a better understanding of the nature and requirements of context-aware mobile application, together with the roles of decision support systems. We analysed how a variety of contextual information, including device censors (motion, environmental, position, etc.), communication preferences (including users' interaction, individual identification and personalization) and decision support system power help us to obtain, analyse and understand the user's context. All those components work in unison to continuously acquire and collect data, and eventually notify mobile users using decision support systems. Reliable automotive access to the most relevant information and efficiently processed dynamic data can significantly enhance decision support systems productivity and mobility of decision-makers on the move or where and when it is needed the most.

Approach presented in the study shows how context-aware applications has been used to collect data and analyze them with integration of decision making systems. In order to demonstrate this approach, a system prototype has been developed and tested, and a number of case studies are considered. Building and using this system has enabled us to identify the main challenges and limitations that need to be addressed for realizing the current objectives of new era of a mobile decision support systems.

#### Catia Walter

Adjunct Professor and Researcher, State University of Rio de Janeiro, Brazil

## How to Promote New Practices using Alternative and Augmentative Communication with Especial Students

The study's aim was to promote the initial training of pedagogy students in the knowledge and use of alternative and augmentative communication (AAC) in regular and special context of teaching and also offer specialized services to students with disabilities and severe communication difficulties. The study was conducted in a classroom equipped with computers, communication devices, tablets, switches, app and software, communication boards and activity supports to adaptation of teaching materials. This purpose was conducted during four semesters, where the graduate students received theoretical and practical training in the specialized teaching of people with disabilities, included the use of AAC and the pedagogical activity adaptations. At the end of the study it was possible to check out a range of AAC features and strategies appropriateness of teaching materials and AAC resources that were created by the graduation students. They could learn that, for the development of a job with AAC, it is necessary that the teacher start through a well formulated evaluation. It is from the evaluation they obtained information about their students (their potential, skills and interests), also about on the communication and learning needs to use in a functional routine of a life. In practice, they might understand that the evaluation and the procedures must be planned and continuous for many weeks. In addition, it was developed the ability to report observations of students with disabilities, using the case studies and elaborate the specialized intervention plans, which enabled the development of appropriate strategies used with the special student in regular schools.

#### Qi Wang

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## Target Training on Chinese as a Tonal Language for Better Communication

Accurate pronunciation is the first condition of communication. Compared with the alphabetic languages, Chinese is more difficult for the foreigners to study as a second language, due to the tonal language with the meaningful characters as the written system, especially speaking. This research first presents the statistics of the typical errors of the pronunciations, based on the data of our two- year program of graduate students, which shown 90% of their speaking with strong foreign accents and no obvious change of the pitches, even if they could speak Chinese fluently. Second part, analyzed the caused reasons in the learning and teaching processes. Third part, this result of this research, based the theory of Chinese prosodic words, shown that the earlier the students get trained on prosodics at the beginning and suprasegmentals at intermediate and advanced levels, the better effects for them to communicate in Chinese as a second language.

#### Qiyun Wang

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#### **Choon Lang Quek**

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## Designing a Blended Synchronous Learning Environment for Graduate Students

In this study, a blended synchronous learning environment (BSLE) was designed for a group of master students who were taking an elective course at a teacher education institute at an Asian university. Twenty-four students were enrolled to the course in the semester when the study was carried out. They were all full-time school teachers, and could only attend the course in the evening.

In this study, the majority of the students attended the course faceto-face in the classroom and at the same time allowed the rest to join the class using video conferencing from different locations such as at homes. The purpose of the study was to find out how such a BSLE could be designed and implemented, and what learning experiences and perceptions the students had with regard to the design and implementation of the BSLE. Results showed that the BSLE could extend some features of the face-to-face classroom instruction to the online students and the students liked the flexibility and convenience of attending lessons via the two-way video conferencing. However, there were also many challenges in the process. This study found out that smooth communication between online students and the instructor and between the online students and the students in the classroom, the engagement of online students and redesign of instructional activities, a balanced attention to face-to-face and online students, and the quality of audio were crucial for the BSLE to be effective. Suggestions were recommended and future research was proposed.

#### **Christopher Weagle**

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### Mapping Motivations and Perceptions of Professional Development in University Teaching and Non-Teaching Staff

Faculty Development (FD) programs are primarily intended to improve teaching and learning in higher education, but they benefit the professional development needs of both faculty and non-teaching staff. Successful completion sometimes requires a long-term commitment that can stretch over an entire academic year. This investment adds a heavy burden on the employee participants, who usually enroll voluntarily (Hoyt & Howard, 1978). Since the participants of FD teaching programs are made up of both teachers and non-teaching staff, research should address how the training is interpreted by each group. This presentation is a qualitative analysis of two pilot interviews that were held with recent graduates of a two-semester FD teaching certificate program at a university in the UAE. One interviewee is faculty and the other is a librarian. The goals of the study were to create a map of criteria related to perceived effectiveness shared by both the teaching and non-teaching participants. Kirkpatrick's (1959) Four-Level Training Evaluation Model was used to correlate the responses with a taxonomy of perceptions of skills development and training effectiveness. The semi-structured interviews contain a set of openended questions used to assess the interviewee's responses to the training. These pilot interviews will be used to prepare for a future qualitative interview-based phenomenography to map common categories of description and to interpret the training experiences shared by both teachers and non-teaching staff.

#### Qing Xiao

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## Challenges in Teaching the News in Chinese as a Foreign Language

In teaching Chinese as a foreign language, a course that teaches students how to read and understand the news is an important part of an advanced curriculum. The news, by its very definition, makes it difficult for a class about the news to have permanent teaching materials, thus creating higher demands on the teacher. This article discusses methods for combining teaching materials with classroom teaching to help students improve their comprehensive understanding of Chinese, expand their vocabulary, and understand and use Chinese to discuss the news. This article also discusses how to use audio-visual materials to teach the news in Chinese.

#### **Chunling Xie**

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### Feasibility and Possible Outcomes of Introducing Ancient Chinese Characters into the Curriculum of Teaching Chinese as a Foreign Language

The Chinese writing system is one of the four origins of writing systems in the world that is still "alive" today. We now acknowledge that Oracle Bone Script is the oldest systematic form of ancient Chinese characters that has been discovered and it is the closest to the origin of the Chinese writing system. The focus of our discussion is whether introducing these ancient Chinese characters in the curriculum will make teaching Chinese as a foreign language more effective. Our answer is definitely a "yes." Bringing ancient Chinese characters into the curriculum will induce the following positive effects:

- 1) It increases our students' interest and motivates them to study this subject further.
- 2) By learning the logographic representations of objects in the ancient pictograms, the understanding of the form of modern Chinese characters can be improved.
- 3) Teaching the early Chinese writing system can logically show students the evolution of the meanings and the form of the modern Chinese characters.
- 4) Basing on the basic form of these ancient characters, we can easily introduce the "radicals" of the modern Chinese characters and help students recognize modern Chinese characters more effectively.

#### Ying Xie

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# Anchoring Group Discussions on Pre-service Teachers' Self-Generated Tagclouds: How does it affect their Learning?

Group discussions are critical for students constructing new understanding and knowledge in both classroom and distance education. Tagclouds, an add-on tool in weblogs (in this study), are visual presentations of words tagged to blogs. The attributes of the text are used to represent important features of the associated terms (Rivadeneira, Gruen, Muller, & Millen, 2007; Sinclair & Cardew-Hall, 2008). Tagclouds can provide an intuitive overview about the group's collective knowledge and could potentially be used as an anchor for group discussions. The effect of using tagclouds as anchors for group discussions was examined.

Thirty-two preservice teachers were randomly assigned into six groups and blogged for five weeks. For the blog activity, participants conducted literature research on parental involvement in school for five weeks and posted their findings each week on their respective teamblog. They also attached at least five tags to each post. A tagcloud plug-in collected all tags and automatically generated a tagcloud for each team in real time based on the frequency of the tags attached to the team blogs. At the end of the blogging activity, three groups were randomly selected for a two-hour tagcloud-anchored discussion. The main task was to identify important concepts each participant or the whole group missed. A discussion guide was provided based on the collaborative knowledge-building model (Schellens & Valcke, 2005).

Evidence of knowledge construction was collected from participants' concept maps, individual blog tags, and group tagclouds. Four measures were created to compare if participation in the tagcloud-anchored discussions helped participants incorporate more concepts (as exhibited in their individual concept maps) that were different from what they had already acquired (as manifested in their own tags). A one-way MANOVA revealed three statistically significant differences, indicating tagcloud-anchored group discussions facilitated and enhanced the quantity and quality of concept acquisition.