#### A path analysis of social-environment factors, appraisals, anxiety, and perceived success among teachers during the pandemic

Pahljina-Reinić, Rosanda; Bažon, Martina; Rončević Zubković, Barbara; Kolić-Vehovec, Svjetlana

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17th International Technology, Education and Development Conference

6-8 March, 2023 Valencia (Spain)

## CONFERENCE PROCEEDINGS



### Sharing the Passion for Learning

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Sharing the Passion for Learning

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#### **INTED2023 Proceedings**

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#### Edited by

Luis Gómez Chova, University of Valencia, Spain Chelo González Martínez, Polytechnic University of Valencia, Spain Joanna Lees, CEU Cardinal Herrera University, Spain

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#### Preface

The INTED2023 Conference Proceedings contain selected and revised papers from the 17th International Conference of Technology, Education and Development. INTED2023 was held in Valencia, Spain from the 6<sup>th</sup> to the 8<sup>th</sup> of March 2023. INTED is an event that takes place annually and provides a platform for lecturers and researchers from more than 75 different countries to meet and share important research and information about education, pedagogical technologies, and development.

The scope of INTED covers the fields of Education and Educational research. INTED2023 provided different keynote speeches, parallel thematic sessions, networking activities, workshops and interactive sessions. Since many international educational experts attended the conference, participants were provided an opportunity to network and collaborate with other experts from around the world. The keynote speeches are available at IATED Talks (iated.org/talks/).

The INTED2023 Proceedings, which are exclusively in English, include the accepted contributions presented at the INTED Conference, which will be included in the IATED Digital Library (library.iated.org). The INTED2023 International Program Committee is composed of lecturers and researchers from many different countries. A blind peer review process was followed in order to guarantee the quality of the final publication, and during this process the following points were evaluated: information content, relevance to the educational field, general structure, clarity of contents, originality, and relation to the conference topics and disciplines.

INTED endeavours to meet the expected ethical standards when publishing conference proceedings that contain high-quality original research articles. All authors that published their papers in the INTED2023 Proceedings signed the IATED copyright transfer form. IATED guarantees the high technical and professional quality of the publications, and that good practice and ethical standards are maintained. More information about the publication ethics of IATED is available at: https://iated.org/publication\_ethics.

Finally, we wish to wholeheartedly thank all members and delegates who have contributed to these INTED2023 Proceedings. We also wish to express our gratitude to all participants and attendees for their engagement, dedication and passion for education.

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#### **Organizing Committee**

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#### **INTED2023 Keynote Speakers**

#### **Keynote Speakers**

José Antonio Bowen – *Association of American Colleges and Universities, United States* Michael Wesch – *Kansas State University, United States* Tracey Tokuhama-Espinosa – *Harvard University Extension School, United States* 

#### José Antonio Bowen – Association of American Colleges and Universities (USA)



Keynote speech: Blended and Included

Blended learning provides us with more options and modalities for what we do and when we do it. This creates opportunities, but also challenges, to ensure that everyone is learning. All good teaching is inclusive teaching and blended environments have the potential to create both better and more inclusive learning. Realizing this potential, however, requires a deeper consideration of transparency, belonging, engagement and scaffolding: good

blended learning can maximize all of these, but only if we design it intentionally. This presentation will provide both a framework for thinking about inclusive teaching in blended learning and specific suggestions for designing assignments, activities, and structures that will support the success of all of your students.

#### Biography:

José Antonio Bowen, Senior Fellow at Association of American Colleges and Universities (AAC&U), has won teaching awards at Stanford and Georgetown, was Dean at Miami and Southern Methodist University and President of Goucher College. Bowen has worked as a musician with Stan Getz, Dave Brubeck, and many others and his symphony was nominated for the Pulitzer Prize in Music (1985). Bowen holds four degrees from Stanford University and has written over 100 scholarly articles and books, including the Cambridge Companion to Conducting (2003), Teaching Naked (2012 and the winner of the Ness Award for Best Book on Higher Education), Teaching Naked Techniques with G. Edward Watson (2017) and Teaching Change: How to Develop Independent Thinkers using Relationships, Resilience and Reflection (Johns Hopkins University Press, 2021). Stanford honored him as a Distinguished Alumni Scholar (2010) and he was awarded the Ernest L. Boyer Award (for significant contributions to American higher education) in 2018. He is now a senior fellow for the American Association of Colleges and Universities.

#### Michael Wesch - Kansas State University (USA)



Keynote speech: Teaching is really hard right now, and it's a "Great Thing"

For many of us, these past two years have presented us with the most difficult challenges we have ever faced as teachers. The pandemic has forced us to adopt new and unfamiliar technologies, adapt to ever-changing student needs, chipped away at our physical and mental health, and exacerbated political and ideological divides that now find their way into virtually every subject matter. Teaching has always been hard. Properly

understood for all that it is - the instilling of knowledge, curiosity, discernment, character, wisdom, and skill in the next generation - the art of teaching is what the poet Rilke would call "a Great Thing." It is impossible to get exactly right, unconscionable not to try. But as Rilke notes, "growth is in being profoundly conquered again and again by greater and greater things." In this talk, we will explore how this mindset of seeing teaching as the impossible task that it truly is can actually energize us, center us, humble us, and most importantly, help us feel connected to our students and fellow teachers as we confront this mysterious great thing together.

#### **Biography:**

Michael Wesch is Professor of Anthropology and University Distinguished Teaching Scholar at Kansas State University. He is the creator of the Teaching Without Walls video series which includes the top-ranked YouTube video for college online teaching. The New York Times listed him as one of 10 professors in the nation whose courses "mess with old models" and added that "they give students an experience that might change how they think, what they care about or even how they live their lives." His videos have been viewed over 25 million times, translated in over 20 languages, and are frequently featured at international film festivals and major academic conferences worldwide. Wesch has won several major awards for his work, including the US Professor of the Year Award from the Carnegie Foundation, the Wired Magazine Rave Award, and he was named an Emerging Explorer by National Geographic. He is also co-creator of anth101.com and author of The Art of Being Human, a free and open textbook alternative for Introduction to Cultural Anthropology.

#### Tracey Tokuhama-Espinosa – Harvard University Extension School (USA)



Interactive Workshop: Pedagogical Knowledge and the Changing Nature of the Teaching Profession - How Neuroscience is Changing Education

Despite great advances, there are still a great number of myths around the brain and how it learns. Misconceptions, overgeneralizations and a lack of information can do harm in the classroom, slow student learning, and reduce the likelihood of successful learning in our schools. The main objective of this workshop is to dispel these myths and replace them with high quality, evidence-based practice.

Do people really have learning styles? Is it impossible for an adult to learn a foreign language as fast as a child? Are there critical periods when a child should learn specific skills in school? Are some subjects harder to learn than others? Are girls' and boys' brains suited for different types of learning? Can a person really multi-task? The teaching-learning dynamic is surrounded by many myths, which will be discussed in a lively interactive session.

#### **Biography:**

Tracey Tokuhama-Espinosa, Ph.D. is from Berkeley, California, is an alumna of the Harvard Graduate School of Education, and currently teaches a course at the Harvard University Extension School entitled The Neuroscience of Learning: An Introduction to Mind, Brain, Health, and Education Science. She is currently an educational researcher and serves as an Associate Editor of Nature Partner Journal Science of Learning and co-founder of Connections: The Learning Sciences Platform.

Tracey researches indicators to measure educational quality; learning in the digital age; transdisciplinary thinking; bilingualism and multilingualism; and the general improvement of teacher practices. Her most recent books are the Bringing the Neuroscience of Learning to Online Teaching: An Educator's Handbook (2021); Neuromyths: Debunking False Ideas About the Brain (2019); and The Five Pillars of the Mind: Redesigning Education to Fit the Brain (2019). She has authored articles for UNESCO and was a member of the Organisation for Economic Co-Operation and Development (OECD) expert panel to redefine teachers' new pedagogical knowledge in modern times.

Tracey's current focus is on understanding What Kids Want to Know About Their Own Brains, a book coming out with Columbia University's Teachers College Press next year. She is also writing a book called ThinkWrite: The Neuroscience of Writing, which explains why writing is the highest form of thinking. Finally, she is co-editing a new Handbook on Brain, Neuroscience and Education, which is a collection of work looking at the future of educational practice.

Tracey has lived and worked professionally in Tokyo, Geneva, Lima, and Boston, and is currently in New York and works with teachers, schools, governments, and NGOs in 40 different countries.

#### **Conference Tracks & Sessions**

The INTED2023 conference program is available online at https://iated.org/inted2023

#### ORAL SESSIONS MONDAY

MOOCs & Open Educational Resources AI for Learning Flipped Learning Soft & 21st Century Skills New Experiences in Health Sciences Education Challenges in Curriculum Design Emotions and Anxiety in Math Education Early Childhood Education Personalized Learning Environments Chatbots & Robots in Education Teacher Support during the Pandemic Creativity & Critical Thinking New Experiences in Engineering Education Cultural Redesign of Curricula From ESP to CLIL Keeping Students Engaged during COVID-19 Challenge-Based Learning Pedagogical Innovations Challenges & Practices during COVID-19 Learning Assessment Teaching STEM Social Entrepreneurship and Service Learning Language Learning Experiences and Research Digital Literacy Gamification & Game-Based Learning Collaborative & Team-Based Learning Blended Learning Online Learning Assessment Data Science & AI in Education **Entrepreneurship Education** Technology-Enhanced Language Learning Information & Media Literacy

#### POSTER SESSIONS MONDAY

Quality in Education and Distance Learning Pedagogical Experiences in Teaching and Learning

#### ORAL SESSIONS TUESDAY

Educational Technologies Hybrid & Flexible Learning Barriers to Learning Student Support New Technologies in STEM Education Internships and Workplace Learning Competences and Skills in Engineering Education Gender and Equality in Education Technology-Enhanced Learning Active & Experiential Learning Educational Leadership and Management Learning Analytics Coding & Computational Thinking Links between Education & Research A Lesson in 360 Video Production: Creating Authentic Immersive Education Inclusion of Learners with Disabilities LMS & VLEs Problem & Project-Based Learning Professional Development of Teachers Tutoring & Coaching Towards a New Educational Model of Sustainability (NEMOS) Workplace & Lifelong Learning Medical Education New Technologies in Special Education Virtual & Augmented Reality Internationalization in Education **Pre-service Teacher Experiences** e-Portfolios & Competence Assessment Education for Sustainability University-Industry Collaboration New Technologies in Health Sciences Education Inclusion & Support of Minorities Videos for Learning Education in Post-pandemic Times ICT Skills among Teachers Student Wellbeing Robotics & Mechatronics Education Quality in Education Experiences in STEM Education Student Motivation

#### POSTER SESSIONS TUESDAY

Emerging Technologies in Education New Trends and Challenges in Education

#### VIRTUAL SESSIONS

#### **DIGITAL & DISTANCE LEARNING**

MOOCs & Open Educational Resources Blended & Mobile Learning LMS & VLEs e-Learning Experiences Distance Education in COVID-19 Times Students & Teachers Wellbeing in COVID-19 Times

#### DIGITAL TRANSFORMATION OF EDUCATION

Data Science & AI in Education Learning Analytics & Educational Data Mining Educational Programming & Robotics Digital Transformation Digital Technologies and Resources for Learning under Lockdown 21st Century Skills

#### INNOVATIVE EDUCATIONAL TECHNOLOGIES

Virtual & Augmented Reality Social Media in Education Videos for Learning Technology Enhanced Learning

#### **ASSESSMENT, MENTORING & STUDENT SUPPORT**

Assessment & Evaluation Rethinking Assessment in COVID-19 Times Mentoring & Tutoring Student Support & Motivation

#### **ACTIVE & STUDENT-CENTERED LEARNING**

Gamification & Game-based Learning Flipped Learning Problem & Project-Based Learning Pedagogical Innovations Developing Soft and Transversal Skills

#### **TEACHER TRAINING & ED. MANAGEMENT**

ICT & Digital Skills Teacher Training and Support Professional Development of Teachers Educational Management

#### **EDUCATIONAL STAGES & LIFE-LONG LEARNING**

From Pre-school to Secondary Education Vocational Training Higher Education Transition to the Job Market Developing Entrepreneurship in Education Life-Long & Workplace Learning

#### **QUALITY & IMPACT OF EDUCATION**

Quality in Education Curriculum Design and Post-pandemic Scenarios Service Learning & Community Engagement Social Impact of Education University-Industry Collaboration Globalization & Internationalization

#### **INCLUSION & MULTICULTURALITY**

Inclusive Education Diversity Issues Special Educational Needs Multicultural Education

#### LANGUAGE LEARNING AND TEACHING

Foreign Languages Language Learning & Translation Studies New Technologies in Language Learning Intercultural & Sociocultural Competences

#### DISCIPLINE-ORIENTED SESSIONS

Architecture & Interior Design Health Sciences Education Sustainable Development Goals in Education Business & Tourism Education

#### STEM EDUCATION

Mathematics & Statistics Engineering Education Computer Science Education STEM Experiences