

INTED **2023**

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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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 6th to the 8th 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.

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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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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