

# REPORT

Co-Organizers:



**RIO, BRAZIL | NOVEMBER 12-14, 2018**

# Report on the 3<sup>rd</sup> International Conference on FUTURE EDUCATION - *Latin America Perspective*

January 2019

## A Watershed Moment for Future Education and WAAS



*From Left to Right: Garry Jacobs, Paulo Alcantara Gomes, Saadia Beatriz Sanchez Vegas, Felipe Sartori Sigollo, Carlos Alberto Serpa de Oliveira & Heitor Gurgulino de Souza*

We have reached a definitive turning point in our path towards the education of the future. The 3<sup>rd</sup> International Conference on Future Education—Latin American Perspectives held in Rio de Janeiro on November 12-14, 2018 marked a definitive stage in WUC's efforts to promote a new paradigm in education. It clearly defined the path for educational reforms and delineated best practices in teaching and learning to prepare youth for the challenges and opportunities of the 21<sup>st</sup> century.

The conference built on the earlier conference at the University of California at Berkeley in October 2013 on the potentials of online learning, which led to the founding of WUC and a second at Roma Tre University, Italy in November 2017, which identified key elements of a paradigm shift in pedagogy and content emphasizing active, collaborative, contextual, person-centered learning.

The Rio conference brought together leading educators and leaders from Latin America to showcase innovative approaches and success stories in education around the world. It attracted 272 registered participants from Latin America, North America, Europe and Asia, including 47 speakers, chairpersons and panelists.

Participants concurred that the challenges confronting humanity today necessitate radical transformation in our way of thinking and acting. Such a transformation is only possible when it begins with the way we educate our youth. The evolution, development and promotion of accessible, affordable, contextual, relevant, value-based, quality higher education worldwide is a critical and urgent need. The case studies cited reflect a growing recognition that this change is possible and is already beginning to take place. That shift will provide essential support for achievement of the UN's Sustainable Development Goals.

### Organizers, Partners and Sponsors



The Conference was co-organized by the World Academy of Art & Science and World University Consortium in collaboration with the Ministry of Education of Brazil, UNESCO-Brazil, the Brazilian Academy of Education, Fundação Cesgranrio, and

International Association of University Presidents. The organizing committee consisted of **Carlos Alberto Serpa de Oliveira**, President of Fundação Cesgranrio, WAAS Fellow **Paulo Alcantara Gomes**, Academic Director of Faculdade Cesgranrio and former Rector of the Federal University of Rio de Janeiro, and **Heitor Gurgulino de Souza**, President of WAAS & WUC and former Rector of the United Nations University, Japan. WUC extends its deep appreciation to Carlos Alberto Serpa de Oliveira for the great institutional and financial support provided before and during the Conference.



## KEYNOTES



*From Left to Right: Felipe Sartori Sigollo, Maria Helena Guimarães de Castro, Saadia Beatriz Sanchez Vegas, José Francisco Pacheco & Paulo Barone*

The Conference was inaugurated by **Felipe Sartori Sigollo**, Executive Secretary Adjoint of the Ministry of Education, Brasilia, Brazil and **Saadia Beatriz Sanchez Vegas**, the Representative of UNESCO in Quito, Ecuador. The opening address on “Education and the 4<sup>th</sup> Industrial Revolution” was given by **Paulo Alcantara Gomes**. This was followed by three days of presentations and panel discussions on topics critical to the future of education in Latin America and the world.

The 4<sup>th</sup> Industrial Revolution, Contextuality, Interdisciplinarity, Online & Hybrid Learning, Student Evaluation, Teachers Training, Entrepreneurship, and

Employment were the major issues covered in the conference. The presentations and discussions pointed to a convergence of ideas and a general agreement on the next steps to be taken. Presentations were simultaneously translated into English, Spanish and Portuguese and videos were recorded.

Notable contributions were made by **Maria Helena Guimarães de Castro**, Councillor, National Council of Education, Brazil; **José Francisco Pacheco**, founder of “Escola da Ponte” in Portugal, who is now living and teaching in Brasilia, Brazil; and **Paulo Barone**, Secretary of Higher Education, Ministry of Education, Brazil.

## Thought must lead to Action!



Education must be transformed to meet the challenges posed by a rapidly expanding global society which is generating unprecedented

opportunities and challenges in its wake.

Education is humanity’s most effective instrument for consciously steering social evolution.

We need a system that equips youth to adapt to future innovations and challenges that cannot be fully anticipated or taught in the present.

It is vital to develop strategies and action plans for the whole transformation of the educational system to rise and meet the future head on.

– **Marcel Van de Voorde**

**Professor, Delft University of Technology, Netherlands; Executive Advisor to Minister for Education and Research, Serbia; WAAS Fellow**

## Transforming Pedagogy



On average, only about 5% of lecture content is retained by students for the long term. The highest retention rates are achieved when one teaches others. It is ironic that our educational system

is designed in a manner that maximizes the learning of the instructors! The primary role of the university instructor is still perceived as transferring information, rather than awakening and opening minds and stimulating creative thinking.

Making learning active and collaborative can exponentially multiply the speed, quality and effectiveness of learning outcomes. Developing the mind is more important than information and understanding. Developing the person is more important than test scores, skills, degrees and even knowledge.

– **Garry Jacobs**

**CEO, WAAS and WUC; Vice President, The Mother’s Service Society, India**

[Click here](#) for the list of Rio Conference videos and presentations

## Rethinking Education for SDG 4



UNESCO establishes the link between educational crisis and the crisis of the traditional way of thinking about education.

In the face of radical changes today, we cannot expect different results

when we do more of the same thing in our attempt to spread education.

### What is needed is an educational rethink.

UNESCO reminds us that education is needed to address a number of critical objectives: learning

to be, learning to do, learning to know, learning to live together, learning to transform and learning to live in harmony with nature.

The SDGs are our shared path towards sustainable development that places responsibility on every citizen of the world as an agent of transformation.

Every one of us has a share in this ethical and political responsibility. **Indifference is not an option.**

**“No one will be left behind”** is the ethical imperative of the SDGs.

– Saadia Beatriz Sanchez Vegas

Director, UNESCO, Quito Office, Ecuador



## Implementing SDG 4 and Going Beyond



The Post-industrial era represents a new paradigm in education. We need to prepare people to operate in the new, unrecognizable world. This requires the implementation of SDG 4, and two approaches are critical to this:

**Bottom-up Approach:** We need to urgently elevate the level of human discourse, in order to quickly enable the world population to become a more trusting and co-operative society.

**Top-down Approach:** Top management everywhere must be prepared for the task of achieving the SDGs by 2030. This will require huge investments and the completion of multiple mini-missions such as design, decision making, licensing and hiring staff.

Both these approaches require a well-coordinated global educational effort.



– Yehuda Kahane

Prof. Emeritus, Porter School of Environmental Studies,  
Tel Aviv University, Israel; WAAS Trustee



## Transdisciplinarity in the Natural Sciences

The real need is for young scientists to know how to move forward when faced with a real world problem on a technical topic they have never faced before, on a real time scale and a real world budget. This will not be possible without collaborative links between sciences. Much of the most exciting and useful research is occurring at the boundaries between traditional disciplines.

Current university departmental structures impede rather than facilitate multidisciplinary research. **We need to create 'departments without walls' in our universities.** Universities must prepare students to work, think and communicate in interdisciplinary teams with an interdisciplinary perspective. Institutional barriers must be removed so students can change from one faculty to another, one university to another, one field to another.

– **Marcel Van de Voorde**  
Professor, Delft University of Technology,  
Netherlands; WAAS Fellow

## Person-Centered Education: Education as it should be

We need a paradigm change in education in order to enable people to deal effectively with the mounting challenges facing humanity. Can we afford to mismanage the 4<sup>th</sup> Industrial Revolution with the same myopic, reductionist and mechanistic ways responsible for the blunders of the past?



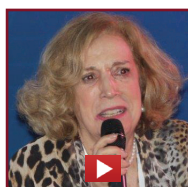
Education is a learning experience promoting our capacities to live a significant existence and develop our potentialities to become creative, resilient and peaceful citizens.

Person-centered education accomplishes this by developing in everyone resilient and sustainable ways of knowing, doing and being.

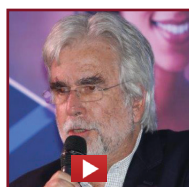
– **Alberto Zuconi**  
President, Person-Centered Approach Institute  
(IACP), Italy; Secretary General, WUC;  
Treasurer, WAAS



L. G. Elliot



F. Cunha



M. Guedes



G. Reisinger



E. Korenman



D. Sandi



A. C. Letichevski

## Reinventing Education for the Future



# 42

Basing itself on the truth that one learns more when one teaches others, **Ecole 42** is a private, nonprofit, tuition-free school that enables students to learn computer programming through a project-based, peer-to-peer, active collaborative pedagogy.

**The school has no faculty, does not issue any certification, and is open 24/7.** Students' projects are self-paced without any fixed time limits, and are graded and validated by peers. Curriculum is gamified. It offers everyone an education, a community and real-life skills.

– **Olivier Crouzet**  
Pedagogical Director, **École 42, France**

## Education 4.0 for the 4<sup>th</sup> Industrial Revolution



The emerging 4<sup>th</sup> Industrial Revolution is characterized by accelerated growth and a fusion of technologies, blurring the lines between the physical, biological and digital

worlds. **Integration will be a key element of Education 4.0 in such circumstances.** Its other features will be:

- Intensive use of new information technologies
- Interdisciplinary, transdisciplinary and multidisciplinary practices
- Participatory collaborative teaching and learning
- Development of critical reasoning and problem solving skills



- More and effective social participation from universities
- Independent research and lifelong education
- Nurturing of innovation and an entrepreneurial culture
- Social responsibility, strong interpersonal relations and a commitment to ethics.

– **Paulo Alcantara Gomes**  
Academic Director of Faculdade  
Cesgranrio, Brazil; WAAS Fellow

## Making Every Dollar Count



Improving quality of education and ensuring access to necessary knowledge is the 4<sup>th</sup> UN Sustainable Development Goal. It holds a master key to many of our problems!

One of the major challenges is to increase the learning outcomes achieved for every dollar spent on education, particularly in developing states.

Interpretation of data should become a more important part of the curricula of the future.

Students will become more and more involved in shaping the curricula. With increasing independent study, mentoring will become more important for student success, and teachers will need to mainly guide students through the superabundance of information available.

– **Kakha Shengelia, President,**  
International Association of University  
Presidents (IAUP); WUC Board Member

## Education in an Age of Job Uncertainty



The future will see most occupations performed more economically and efficiently by non-human entities. Only those jobs that rely heavily on human creativity will still be held by humans, and those will

include some occupations that do not yet exist.

How do we prepare our youth for such an extremely challenging job market? How will we employ the abundant free time we will have on our hands?

Future education must foster creativity from early childhood, a key to preserving human control in future world.

Future generations must be taught to value all human activities, not only economically productive ones but also those which emphasize self-discovery and artistic endeavors.

– **Neantro Saavedra-Rivano**  
Prof. Emeritus, University of Tsukuba, Japan;  
WAAS Fellow

## Breaking the Boundaries with Transdisciplinary Education



Education has been one of the most important drivers of the remarkable developmental achievements of humanity over the past century. But more of the same is not enough to meet the challenges and tap the opportunities that are emerging. All our current problems—political, economic, legal, social, psychological, cultural and ecological—are interrelated, interdependent and complex. They extend from the individual and firms to nation-states and the global community. They are all the result of the inadequacy of current institutions, public policies and social organization. They all reflect the inadequacy of existing knowledge and theory and defy resolution based on the prevailing principles and premises of social science. A radical change in educational content and pedagogy is required to address real-world issues.

In anticipation of this need, in 1960 the founders of WAAS envisioned creation of a World University that functions at the highest scientific and ethical level to bridge the gap between academia and society and to overcome the limitations of disciplinary perspectives by integrating perspectives from all fields of the arts and sciences. Over the past sixty years since its inception, WAAS has established partnerships and regional centers of excellence, and conducted conferences aimed at the furtherance of this vision. The founding of the World University Consortium in 2013 is a major initiative toward fulfilling this goal.

Over the past five years WAAS partners and WUC charter members have collaborated to conduct more than a dozen roundtable discussions at the Inter-University Center, Croatia as part of a participative action research program to develop new perspectives, syllabus and content for integrated, human-centered, contextual, multi-disciplinary, multi-sectoral, multi-level, trans-disciplinary courses for individual accomplishment, organizational development and social evolution in the 21<sup>st</sup> century. These meetings have brought together more than 100 experts from different fields of knowledge to explore the interrelationships and interdependencies between political, legal, economic, organizational, technological, social, cultural, psychological, demographic and ecological dimensions and factors and to identify common principles that may form the basis for evolving a transdisciplinary science of society.

The next step in the project is to offer multi-sectoral, multi-level, transdisciplinary courses and an integrated post-graduate program in collaboration with leading

universities in different countries. The project is intended to enhance the knowledge and capacity of individuals and organizations in public service, business and civil society at the global, national, organizational and individual level. Courses will be designed for those preparing to enter or already engaged in work related to global diplomacy, international governmental organizations, foreign affairs, business, civil society and global citizenship.

The project is being carried out under the direction of **Garry Jacobs, Alberto Zucconi, Zbigniew Bochniarz, Rodolfo Fiorini** and **Tibor Tóth** with the collaboration of Fellows of WAAS and partner institutions.

The three main streams of the program focus on

1. Mobilizing society to achieve Agenda 2030: Sustainable Development Goals
2. Corporate Creativity, Learning Networks and Social Innovation
3. Leadership and Individual Accomplishment

The courses will explore common principles applicable to addressing challenges and tapping opportunities to promote accomplishment at the level of society, business and the individual. They examine implicit premises, mental constructions and perceptual boundaries that limit our capacity to diagnose problems, develop innovative solutions and discover untapped opportunities. They are designed to help students develop more synthetic and integrated ways of viewing and thinking about business and society. They look at similarities and differences between the natural and social sciences to overcome the limitations of a naturalistic, mechanistic, reductionist and quantitative approach to social and business issues. They also highlight the catalytic role of the individual and small groups as creators, conceivers, initiators, pioneers and leaders of social change within and outside organizations; the central role of values in decision-making, social organization and culture; the need for an expanded concept of causality that takes into account the role of future anticipation as an attractor; and the applicability and limitations of systems, network and complexity theory when applied to society and business.

The learning pedagogy for the program will be highly interactive, peer-to-peer, and question-driven. It is based on the creation of a learning community designed



to foster independent thinking and individuality combined with more effective social learning from our collective experience. The focus is on developing the capacity for understanding, organization, creativity and accomplishment in any chosen field of individual, business or social achievement.

Both the foundation and elective courses will share the following common characteristics:

- **People-centered:** Focus on protecting and promoting human capital in person-centered, sustainable ways.
- **Multi-level:** Applicable to all levels from the individual and firm to the nation-state and global community.
- **Multi-sectoral:** Applicable to accomplishment in public, business, civil society.
- **Multi-disciplinary:** Based on knowledge drawn from Anthropology, Economics, Education, Law, Management, Political Science, Psychology, Philosophy, Sociology, Technology and Cognitive Science.

- **Goal-oriented:** Focus on practical applications related to the process of human accomplishment.
- **Transdisciplinary:** Founded on principles and processes that underlie and unify disciplinary perspectives.
- **Integrative:** Synthesizing multiple perspectives and dimensions—individual-institutional-societal-global-political-legal-economic-social-psychological, past-present-future, organizational-technological, subjective-objective, and mental-social-physical.
- **Participatory Action Research:** Classes and case studies designed to generate new knowledge

The programs are intended as a creative endeavor to look beyond the boundaries fixed by present concepts, theories and disciplines in an effort to make more explicit the linkages and interdependencies between different fields of social activity, develop common terminology, identify common underlying social processes applicable to all fields and levels of society, and assess the prospects and requirements for evolving a truly transdisciplinary science of society.

## Course on Role of Organization in Social Evolution and Business



The first pilot post-graduate course of the project on Theory of Organization was launched in November 2018 at the School of Business, Caucasus University, Tbilisi, Georgia on the invitation of WAAS Fellow **Kakha Shengelia**, President of CU and President of the International Association of University Presidents, a charter member of WUC, in collaboration with the Global Institute of Integral Management Studies (GIIMS) and the Mother's Service Society, India. **Garry Jacobs** directed the course.

The course examined the central role of organization as the principal driver of human accomplishment, development and evolution. It traced the historical contribution of organization to the development of language, agriculture, sedentary communities, law, markets, commerce, urbanization, specialization of production, transportation, communication, the creation of money and banking, publishing, media, education, science, technology, democracy, the industrial revolutions, and the outstanding achievements in information technology during the last half century.

The course examined the fundamental building blocks of organization to understand its remarkable power to multiply the power of human relationships in space and time by increasing efficiency, effectiveness, quality, innovation, creativity and self-multiplication.



This knowledge provides fresh insights into momentous achievements such as America's New Deal, India's Green Revolution, the computer revolution, the birth of the internet and World Wide Web, modern education, global telecommunications and transportation systems, multinational corporations, the international financial system, international law and international organizations, global rule of law and global civil society.

The course is based on a contextual pedagogy that derives theoretical insights from real world examples rather than teaching theory and illustrating it by example. Project assignments and examinations emphasize practical application of the principles to current situations drawn from the students' own work and life experience to bridge the gap between theory and practice. WUC is now working on plans to create a complete MBA program on this basis.



## Tackling the challenge of AI & Robotics



- Currently, most AI systems act as a complement to humans instead of replacing them. We are still decades away from full automation.
- Eventually robots will perform most tasks and the role of humans in the production cycle will be marginal.
- Introducing a robot tax when robots replace humans is an option. The revenue thus generated can finance jobs to which humans are particularly well suited.
- Universal Basic Income, or handing out unconditional money to all citizens, is an experiment that is gaining traction.

### Managing Complexity with Creativity

It is impossible to separate a system from its context, a living being from its environment, an object from its measuring instrument.



Complex systems treated as if they were simple tend to generate problems.

Our education system currently employs a reductionist method of learning.

We must switch to evolutionary learning which can create the right interactions with a complex universe.

**Solutions to all our challenges are possible when the unutilized creative human potential that exists in abundance is developed and released.**

- While we cannot predict the future, we can prepare for its potential outcome as best as we can. Education is the key facilitator.

– **Rodolfo Fiorini**

**Professor, Politecnico di Milano, Italy;  
WAAS Fellow**

### Person-centered Evaluation



Teachers and institutions mainly use tests to evaluate student learning. These mainly test students on their memory and ability to reproduce facts. This is not a true evaluation of student learning.

The challenge today is to create an evaluation system that will be able to identify competencies and skills.

The main objective is to evaluate the integral formation of the student in his/her physical cognitive and socio-emotional aspects.

The teacher should organize the contents, methodologies and forms of evaluation through technical and practical activities, oral and written tests, seminars, online projects and activities, problem solving and innovative learning projects.

– **Nilma Santos Fontaniven**

**Coordinator, Cesgranrio Foundation;  
Member, National Council of Education, Brazil**

### The Value of an Integral Teachers' Training

Division of subjects was an integral feature of our past. But the future is integrated education.

We need a corresponding integration of disciplines and learning contexts.



Teachers need to be properly equipped in order to help students develop resilience, acquire the capacity for teamwork and problem solving, learn new skills and think outside conceptual frameworks.

Teacher training must reflect the growing complexity and multidimensionality of the teaching profession.

National teacher training policies should encourage interdisciplinarity, interculturality, innovation and integral training for teachers.

– **Maria Helena Guimarães de Castro**

**Counselor of the National Council of  
Education, Brazil**

## Development of the 'WHOLE' Person



When learning is contextual and derived from the real life experience of oneself and others, education becomes a live, dynamic, exciting and natural experience. Such a change has been brought about at the Global Institute of Integral Management Studies (GIIMS), India.

The transformation applied the WUC model for new paradigm education guided by two WUC charter members—the Person-Centered Approach Institute (IACP), Italy and The Mother's Service Society (MSS), India.



The institution has created a learning environment that focuses on development of the whole person. A change in pedagogy to an active, student-centered, contextual, interactive approach has generated dramatic results in a short time—



absenteeism declined to near zero and new student enrollment rose 33% in a single semester.

Classroom learning has become enjoyable, as well as more effective. The interest and commitment of both young and older faculty members have soared.

**Janani Ramanathan**  
Senior Research Analyst, The Mother's Service Society, India; WAAS Associate Fellow

### Towards an Ethical & Social Commitment to Educational Innovation



**We need an education system that is qualitatively different. More of the old is not new!**

New social constructions of learning should be evolved, which guarantee the right to education for all.

An ethical commitment to a new paradigm in education is the need of the hour.

**– José Francisco Pacheco**  
Founder, Escola da Ponte, Portugal



## Collaborative Education to Facilitate Innovation



**Collaboration needs to replace competition in every sphere of life.**

All major challenges we face today can be eradicated when we no longer want to get ahead of the rest but work for the common good.

Virtual Educa is an educational organization that provides a collaborative space for educators and administrators, with the aim of promoting improvement and innovation in education.

It operates through an alliance of international institutions, bringing together the public, business, academic and civil society sectors.

It collaborates with international agencies like UN, World Bank, and various national governments in studying best practices, implementing educational innovation, using emerging technologies and addressing the needs of the 4<sup>th</sup> Industrial Revolution.



**– José María Antón**  
Secretary General, Virtual Educa Foundation, Spain



## Education itself must Learn, Collaborate and Innovate



Education should itself become a learning organization which responds to its stakeholders' current needs and emerging challenges.

Universities need to get all stakeholders involved in the design and delivery of curricula.

Stakeholders must adopt a person-centered approach in which everybody is equal, an environment that encourages learning from each other and contributing to common problem solving.

An ecosystem of educational innovation should be created.

## Global Open Educational Resources



All productive sectors of the economy will soon adopt innovations and radical change, necessitating lifelong education and continuous relearning.

Educators, institutions, corporates and independent individuals are producing digital content for online learning adaptable to any theory of learning.

These Open Educational Resources (OER) represent the new "bricks" with which learners can construct the "edifices" of their own individual knowledge-bases.

Maintaining repositories of OER, expanding, updating and monitoring their quality are essential for our future.

OER promises us a personalized, reliable, readily available information and training center of strategic importance to the productive sector.

– **Fredric M. Litto**  
Emeritus Professor, University of São Paulo;  
President, Brazilian Association of Distance  
Education (ABED)

## Education for Sustainable Entrepreneurship

The education system should have sustainable entrepreneurship as one of its missions.

We urgently need to prepare a cadre of entrepreneurs to lead their organizations toward a sustainable future.

The most critical challenge is to utilize private sector resources and convert business as usual into a sustainable business.

Change can be accomplished either by external forces of governmental regulations, market-based incentives or by internal forces of companies, bringing the necessary change from within themselves.

– **Zbigniew Bochniarz, Professor,**  
Kozminski University, Poland & Evans School,  
University of Washington, USA; WAAS Trustee



## Metacognitive Model of Education



We need to move from the current simple, fragmented model of education to a complex digital metacognitive model. The emphasis has to shift from:

- Long term subject-specific courses to multidisciplinary, nano courses;
- Theoretical and abstract approaches to modeling, simulation and problem solving;
- Individual tests and targets to teamwork, projects and a collective mission;
- Bilateral teacher-student relationship to co-operation and collaboration, and
- Learning how to learn.

– **Ronaldo Mota**  
Chancellor of Universidade Estácio de Sá  
(UNESA), Brazil

## The Use of Arts in Legal Education



The Arts can make any subject come alive. Literature, biography, history and even cinema can make learning contextual and relevant.

When interlinks between different subjects are shown in the context of a story, or theory is illustrated with examples from fiction, learning becomes more effective.

We have to transform legal education with its Positivist and Cartesian bias, which establishes little dialogue with other fields of knowledge.

Art, including cinema, can change the way we teach, providing multi-dimensional and interdisciplinary training for the student.

– **Saulo José Casali Bahia**  
**Professor, Federal University of Bahia;**  
**WAAS Trustee**

## Re-educating the way we think and act



Future education needs to shift the emphasis from transmission of information to learning how to think and respond consciously to the world around us.

The type and quality of our thinking shapes our perceptions and responses to the world and the consequences of our actions.

Multidisciplinary and multi-cultural scientific research is urgently needed regarding the conscious and subconscious modes of thinking and the ways we can shift from one to the other.

Becoming more conscious of ourselves and our thinking processes can convert confusion into understanding, conflict into peace and harmony at the level of the individual and the society.

– **Liora Weinbach**  
**Head, Unit for Ethics in Thought, Language and Action, Interdisciplinary Center for Health, Law and Ethics, Haifa University, Israel**

## Educating for Agility

Traditional education based on verified patterns of rational behavior in the past becomes obsolete and irrelevant in the present. There is an urgent need to embrace the agile approach to education based on interdisciplinary research, teamwork and creative thinking.



Agility is one of the most needed universal skills and competences for individuals, teams and organizations. Its strongest value is universalism and the ability to understand and act in any discipline of science, area of practice and environment. It is based on a new inclusive culture of collaboration and requires freedom for creativity in developing solutions, support and stability in implementation.

– **Grażyna Leśniak-Łebkowska**  
**Professor, Warsaw School of Economics,**  
**European Academy of Business in Society (EABiS); WAAS Associate Fellow**

## Transforming Education in Ukraine



Since 2014 Ukraine has initiated a program of rapid social transformation. The aspiration of the population has awakened. The greatest challenges facing the country are formulating effective strategies and teams of resourceful people to develop platforms to promote radical change in education. WAAS and WUC played an active and important role in this process through conferences, parliamentary committee meetings and networking during the second half of October 2018. **Garry Jacobs**, CEO of WAAS and WUC, delivered a keynote address to more than 500 alumni of National University of Kyiv-Mohyla Academy, Ukraine's oldest and most respected university, on the importance

of a new paradigm in education. This was followed by a number of meetings with Ukrainian youth. A roundtable "New education for the New Economy" was also organized in the Parliament of Ukraine, under the umbrella of WAAS and Club of Rome, with Garry Jacobs and **Natalia Pogozeva** as the main speakers. A meeting of heads of leading think tanks and educational institutions was also conducted by the Aspen Institute in Kyiv, which featured a presentation on "What, Why and How of Democracy".



– **Natalia Pogozeva**  
**CEO, Green Education Ukraine Foundation;**  
**WAAS Associate Fellow**



## Interdisciplinarity for Effective Learning



Universidade Presbiteriana  
**Mackenzie**

The ideal learning environment:

- Is interdisciplinary and facilitates the integration of knowledge
- Encourages collaboration and project-based experiential learning
- Considers human subjectivity along with objective knowledge
- Develops entrepreneurship, creativity and generation of new knowledge
- Uses languages, tools and technologies for a globally connected society
- Employs diverse learning experiences and stays flexible.

Learning is effective not when it is disciplinary, but when the interconnection between different areas of knowledge are seen. Such a holistic view creates



Mackenzie University of Brazil employs various pedagogical innovations in order to create knowledgeable, discerning and responsible citizenry in the country.

not just academic professionals but develops the right attitude and vision in students. It teaches them to think and develops critical awareness and decision-making abilities.



– **Benedito Guimarães Aguiar Neto**  
**Rector, Mackenzie University,**  
**São Paulo, Brazil**

## Unleashing Global Human Potential

Social changes and advancing technology have combined to transform society in countless ways. The world is beset with problems that appear insoluble largely because we are unconscious of the true extent of the social capacity that has been created and the social potential still waiting to be developed. A new paradigm in thought can provide the intellectual foundations for achieving a fuller and richer social life for humanity than anything now imaginable, if only we are willing to discard the self-imposed limitations of outmoded conceptions, vested interests and dead conventions.

We need an education that is able to explore the socially-construed conception of resources and social potential to discern their source, nature, boundaries, limits and the means to more consciously and effectively harness them to promote human welfare and wellbeing.

Modern economies are conscious living systems increasingly fueled by human and social resources that are not subject to inherent material limits. Material resources are consumed in the process of utilization. Non-material resources such as information, knowledge, technology, skill and organization multiply in the very process of being utilized. Human capital and social capital grow in quality, utility and value through usage and experience. They are inexhaustible resources that can support endless growth and development for human beings in their evolutionary progress from survival to welfare and beyond to wellbeing.

Society is an integrated living organism, not merely an assembly of machinery. It is the source of all human accomplishment, individual and collective. It is the source of all the knowledge, values, skills, technological, social, organizational, institutional, psychological and cultural instruments devised by human beings to further their development.

Education must enhance our knowledge of all forms of mental awareness—physical, technological, scientific, experiential, artistic, philosophical and spiritual—to provide effective insight and guidance for all forms of human accomplishment. All great thinkers, scientists and artists have declared that their accomplishments have been the result of intuitive mental processes, rather than traditional, linear rational modes of thinking emphasized in conventional education.

We need an education that develops more synthetic and integrated modes of thinking which alone can comprehend and creatively respond to the increasing complexity of the world we live in. This is possible through a system of evolutionary education that is active, value-based, contextual, relevant and student-centered, that leads to personal growth and social evolution, and creates well-developed individuals capable of creativity and original thought. WAAS and WUC can play a pivotal role in this process.

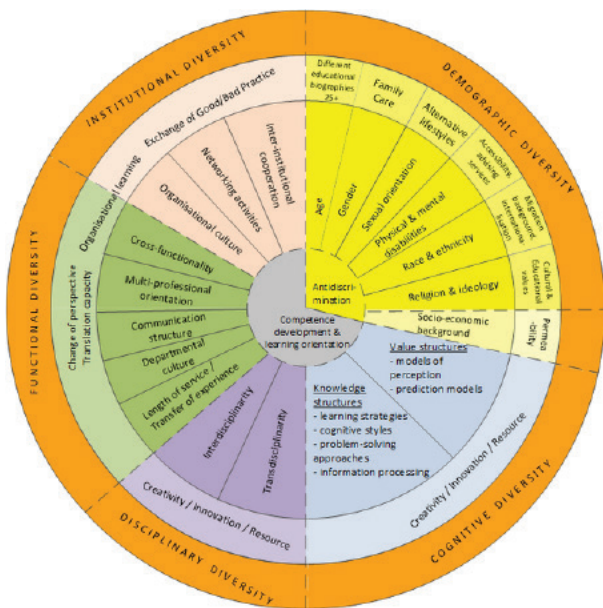
– **Rodolfo Fiorini**  
**Professor, Politecnico di Milano, Italy;**  
**WAAS Fellow**

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## Diversity Management in Higher Education Institutions



University leaders need to constantly identify potential institutional challenges and adapt their agendas and earmark and invest resources in innovative and timely structures. One pressing need for institutions today is that of managing diversity. Diversity can be of many types —**demographic, cognitive, disciplinary, functional and institutional.**



Higher Education Awareness for Diversity (HEAD) Wheel is a managerial instrument for diversity management. It is a visual organizer that defines appropriate Diversity Management actions. It allows the mapping of measures implemented in the institution. Persons studying and working at an institution of higher learning draw on a variety of backgrounds that flow into one another. This frame does not deplete personality as a black box in the center but rather seeks to integrate it as a

cognitive dimension encompassing different learning strategies, problem-solving approaches and prediction and perception models. A paradigm shift from a deficit approach to a more resource-based approach that considers the diversity of students and staff as an asset will make an institution more inclusive and sustainable. HEAD Wheel is used by the University of Applied Sciences Upper Austria to facilitate an integrated, inclusive, person-centered learning environment.

– **Martina Gaisch**  
**Head of Diversity Management, University of Applied Sciences, Upper Austria, Austria**

### Requirements a University must meet: UNIFRANZ



A university must offer a variety of up-to-date academic courses. It

needs excellent teaching staff with experience, not just in imparting education but in developing the whole personality of the student. A good infrastructure for professional development must be matched with extra curricular development in sports and the arts. A semester in a foreign university gives students global exposure and outlook. Students must be taught how to learn, so they are equipped with the capacity for lifelong learning.

UNIFRANZ is a National System in Bolivia which, with proven teachers, international associations, and an emphasis on life long learning, equips students to become confident, well-developed individuals prepared for any kind of future.



– **Rita Veronica A. Agreda de Pazos**  
**Rector, Franz Tamayo University – UNIFRANZ, Santa Cruz, Bolivia**

### Culture of Collaborative Learning

The series of WAAS-WUC conferences have identified new models, methods, approaches, attitudes and values that will shape education into an effective driving force for social evolution in the 21<sup>st</sup> century.



The teachers of Primrose school, India are turning these ideas into actions by collaborative learning and teaching methods. Working with their peers, teachers are able to acquire technical skills required for the digital classroom in a short duration. This approach has energized them to take new challenges like learning a new language.

Teachers can easily implement interdisciplinary strategies as they co-teach with specialised subject teachers. As teachers develop the culture of learning by working together, students reap the positive benefits of collaboration rather than competition.

– **Vani Senthil**  
**Research Analyst, The Mother's Service Society, India**



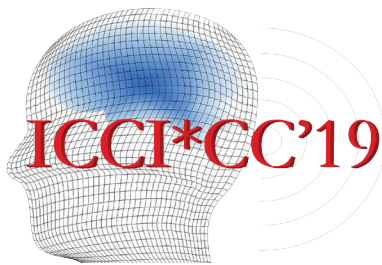
# Upcoming Events

## INTERNATIONAL CONFERENCE ON COGNITION, SOCIETY & WELL-BEING



**POLITECNICO**  
MILANO 1863

DIPARTIMENTO DI ELETTRONICA  
INFORMAZIONE E BIOINGEGNERIA



### CALL FOR PAPERS

### COGNITIVE INFORMATICS & COGNITIVE COMPUTING

*July 23-25, 2019 – Milano, Italy*

**WAAS** is collaborating with the **Institute of Electrical and Electronics Engineers (IEEE)**, the world's largest technical professional organization, to conduct a conference exploring the **technological and social implications of emerging developments in cognitive computing and informatics** at Politecnico di Milano University, Milano, Italy.

**WAAS** is responsible for the track **COGNITION-SOCIETY-WELL-BEING (CSW)**, which will examine the Economic, Social, Political, Educational, Cultural, Psychological and Philosophical implications of rapid advances in cognitive computing, artificial intelligence and machine learning from the transdisciplinary perspective of Art & Science.

**IEEE** is responsible for the **CYBER-PHYSICAL-TECHNICAL (CPT)** track covering technical papers on cognitive informatics, cognitive computing, computational intelligence and brain informatics.

This conference provides an opportunity for **WAAS** to focus on issues regarding the social consequences and policy implications of science and technology, a paramount concern to the Academy's founders.

*The ever accelerating pace of technological development in fields related to cognition and artificial intelligence has momentous implications for the future of global society and human wellbeing. It raises fundamental transdisciplinary questions about the relationship between human beings and the technologies they develop, the process and direction of social evolution, and the social responsibilities of science. The quest to discover the right relation between humanity, the creator, and the technologies it develops is one of the greatest challenges of the 21<sup>st</sup> century. Clashing visions of the future project images of unparalleled technological marvels beset by unanticipated and uncontrollable consequences for democracy, social stability, employment, human identity, culture, ecological security and human wellbeing.*

*The Cognition, Society and Well-Being track will run in parallel with the technical track with common plenary sessions. It will explore opportunities and challenges posed by rapid advances in cognitive science to assess alternative pathways to develop its potentials for promoting human well-being, while mitigating unanticipated threats to human security. Speakers are invited to explore topics such as the similarities and differences between human and machine consciousness and learning, the impact of AI on employment and human security, emerging forms of global social organization, the nature of creativity and wisdom, the integration of objective and subjective dimensions of knowledge, the need for radical changes in education, and other issues. See the full list of topics on the next page.*

**Main Themes include Thinking, Creativity, Mind & Brain, Education, Symbiotic Art & Science, Technological and Social Evolution**

The deadline for submission of full papers to selection committee: **March 31, 2019**

For more information, please visit the **WAAS** website or contact [cognition@worldacademy.org](mailto:cognition@worldacademy.org).

## 4<sup>TH</sup> INTERNATIONAL CONFERENCE ON FUTURE EDUCATION

November 2019 – Belgrade, Serbia



### THE CHALLENGE

We live in an amazingly interconnected world full of new normalities which bring a profound level of complexity and uncertainty into all aspect of our lives. It is increasingly difficult to understand relations between cause and effect when causes are so complex and interrelated. The global character of information, economy, governance and ecology presents tremendous challenges to modern education. Education has had a profound impact on society in each new period of its development.

Today, the volume of information generated in recent years is greater in volume than all the knowledge accumulated since the dawn of civilization. This information is available online and accessible to all, even by mobile phone. At the same time, the increasing speed of technological breakthroughs, particularly the disruptive innovations of Industrial Revolution 4.0, are widening the gap between education and employment. Formulation of a new paradigm in education is urgently needed to address these challenges, capitalize on the emerging potentials, and transform possible threats into opportunities. The World Academy of Art & Science (WAAS) and the World University Consortium (WUC) are working in partnership with universities and other organizations around the world with this objective.

### PROPOSED SOLUTIONS

Education is the key driver for social progress. The educational system today too closely resembles the model introduced at the University of Bologna at the end of XI century, centuries before the invention of the print press when all knowledge was in the possession of a very small number of scholars with limited means to share and disseminate it, mentorship could only be done through oral lectures, books were hand-written and so rare that they were kept chained to library shelves.

Radical changes are needed to keep pace with the societal evolution. There are growing signs of a shift from subject-centered to student-centered education, from silo-based to interdisciplinary perspectives, from top down to peer-to-peer learning models, from imparting information to developing the whole person. Educators are coming to recognize the central importance of creative thinking skills—the capacity to think beyond the limits of the existing conceptual framework, to synthesize multiple perspectives and see the whole. We now know these processes can be learned.

A new type of education—a new paradigm—is urgently needed to address the challenges and paradoxes of the coming age. Today's youth need to acquire “evolutionary competence” based on knowledge and skills for jobs that do not even exist today. In order to become responsible citizens, they need also to acquire the values and awareness of the challenges confronting global society and every nation.

### FOCUS OF THE 4<sup>TH</sup> INTERNATIONAL CONFERENCE OF FUTURE EDUCATION

In earlier education conferences at Berkeley in 2013, Rome in 2017 and Rio de Janeiro in 2018, **WAAS & WUC have repeatedly posed a challenging question: How can we create an affordable, accessible, world-class system of education open to the growing millions of youth seeking it?** Insightful thinkers from different fields have already recognized the need for a radical paradigm change in teaching and learning, in order to meet the new normalities confronting modern society. The challenge now is the convert our new understanding into effective strategies and practical methods. The 4<sup>th</sup> International Conference on Future Education is being organized in Belgrade, Serbia in November 2019 in order to accomplish this goal.

The following are some areas the conference will explore:

- Effective, relevant, contextual learning
- ICT and hybrid education
- Person-centered education
- Active, collaborative learning
- Creativity and leadership skills
- Sustainability and inclusivity
- Socially relevant research
- Value-based education
- Education for entrepreneurship
- Full employment