



UNIVERSITY of HYDERABAD

HYDERABAD DECLARATION on EMERGING TECHNOLOGIES AND CHANGING DYNAMICS OF INFORMATION (ETCDI)

HYDERABAD - 2021

Adopted by ETCDI Conference

Preamble

The Hyderabad Declaration was adopted by the participants of the three-day online International Conference “*Emerging Technologies and Changing Dynamic of Information [ETCDI]*” 7 – 9, September 2021. The conference, hosted by the University of Hyderabad (India) in the framework of the UNESCO’s Intergovernmental Information for All Program, brought together policymakers, government officials, industry representatives, civil society activists, scientists and international experts from [Argentina](#), [Belgium](#), [Brazil](#), [Chile](#), [Dominican Republic](#), [Egypt](#), [Estonia](#), [France](#), [Ghana](#), [Hong Kong](#), [India](#), [Israel](#), [Italy](#), [Jamaica](#), [The Netherlands](#), [Palestine](#), [Peru](#), [Philippines](#), [Russian Federation](#), [South Africa](#), [Spain](#), [UAE](#), [Uganda](#), [UK](#), [USA](#) and [Zambia](#).

Participants of the conference have extensively deliberated on the themes of the Conference in the context of United Nations (UN) Sustainable Development Goals (SDGs) 4, 16 and 17, UN charter.

Under the Hyderabad Declaration on ETCDI:

We acknowledge the dynamically changing character of information under the influence of use of emerging technologies in an uneven world. We, therefore, commit to a more meaningful and responsible use of technologies in information in line with IFAP objectives.

We, the participants of this conference and the signatories to the HYDERABAD DECLARATION on ETCDI, affirm the following:

I. MULTILINGUALISM

1. All languages, including the Indigenous and numerically weaker ones, have a right to be standardized and modernized with digital localization, speech tools, and interfaces. International treaties protecting regional or minority languages (e.g., the Council of Europe's Charter for Regional or Minority Languages) should be adapted or enhanced to preserve those languages from digital marginalization.
2. All IT systems, including Machine Translation, Speech Recognition, and other Language Technologies (including Corpora and dictionaries), must be multilingually compliant and accessible to all by the national governments, IT companies, and NGOs. Furthermore, they should develop protocols for unacceptable machine translation, and humans should be used instead.
3. Transnational bodies should invest in data collection and surveys to evaluate Multilingualism and bring out accurate and timely statistics relating to internet use with estimates of persons of each country connected to the Internet. It will enable estimation of the digital divide, which tends to transform into a language divide and reduce the technology gap between working languages and home languages.
4. It is necessary to support and intensify the research and development in cognitive science to create Artificial Intelligence systems with cognitive structures that ensure interaction with a person at the level of "understanding each other." It is essential to develop Multilingual Internet resources to enable linguistic technology that are vital tools for the comparative study of languages.
5. Regional, indigenous, or minority languages are not dead or museum languages. On the contrary, a more firm commitment to Multilingualism will dramatically enhance communication between Citizens and the State.
6. All students may be sensitized on the value of intercultural communication - developing critical thinking, the spirit of questioning, and analytical skills in them – to ensure a holistic approach to Multilingualism. In addition, new modes, channels, and platforms are available for indigenous languages to show or make heard their noises, voices, melodies, and visuals – usually unknown to the so-called 'civilized' languages.

II. INFORMATION ACCESSIBILITY

7. Every country or region may establish independent ethics committees with a diverse membership to evaluate cultural, gender, race, and sexual orientation diversity in the datasets used for AI. The dignity of the differently able population of users must also be ensured so that they are not discriminatory. Their access to buildings, libraries, and other services with search tools must be accessible to challenged users.

8. Companies that develop artificial intelligence-based products should appoint an AI officer to ensure that their developers, designers, and consultants are aware of the impact of their work on the digital divide and systemic prejudices. In addition, where the AI systems have humans "in the loop," the AI Officer must train them to avoid racial and gender biases.

9. An Ombudsman may be appointed to investigate complaints regarding biases in AI systems and recommend censuring the companies who develop and operate such algorithms, because like drugs, the unregulated algorithms can harm! In addition, a transparent regulatory framework is designed for the AI developers, and an approval mechanism for AI tools be in place before they operate in the free market.

III. INFORMATION DEVELOPMENT

10. There is a need for Inclusive legislation, policy, and standards, raising awareness, developing appropriate tools, a robust legal framework for privacy and confidentiality, data policy protocols, expanding connectivity, promoting R&D, quality assurance in i4.0 for capacity building & building awareness.

11. Each state should develop its GEOINT system and databases on spatial data and information on the population on its territory. The system will maintain control over one's destiny, sovereignty and avoid all kinds of emergencies with the broadest possible international cooperation in GEOINT technology.

12. All players may invest in digital infrastructure worldwide and ensure broadband access and connectivity that is genuinely affordable and of satisfactory quality in remote, rural, and semi-urban areas and vulnerable neighbourhoods. The alternative connectivity providers such as cooperatives, community networks, rural region operators, and cost-efficient technologies require help.

13. The international agencies and states may strengthen Digital Media and Information Literacy programs worldwide to develop innovative digital, technical, and professional skills and competencies in the educational system, enterprises, and governmental organizations, and provide incentives and opportunities for continuous learning and creation of digital content.

14. The states must reinforce distance education programs as a part of national education systems, bearing in mind the use of digital tools specially designed for low-connectivity situations and to train teachers and others located there accordingly. Towards that goal, the existing regional/local organizations must be strengthened, and new ones created to partner with existing global entities.

IV. INFORMATION ACCESSIBILITY AND INFORMATION ETHICS

15. Member states must favour the creation of multidisciplinary working groups to analyse under the different standpoints, the future impacts of emerging or improved existing technologies on society, economy, and wellness in a mid- and long-term perspective.

16. World Trade Organization must finalize the discussions concerning rules that will govern the digital economy and sharing of resources across countries to level the global playing field.

17. The States must never balance fundamental rights with mere interests, even economic ones. Instead, the system should provide necessary and proportionate laws in a democratic society to deal with any eventuality to deal with misuse of such rights. Therefore, the Member States should find a global agreement on regulations concerning privacy protection and risk analysis and each citizen's right to withdraw personal data or disconnect.

18. Member States may accept the responsibility to ensure the dynamic enhancement of cyber security levels and foster diffusion of the "cyber security culture."

19. The international agencies should conduct an independent evaluation of the risks incurred by individuals and a group of individuals and by our democracy and the rule of law must be ensured. Ideally the States must not overlook the societal and environmental impacts of ICT.

20. All Member States should agree on global regulations on technologies potentiality framing humans like intelligent algorithms, sensors, connection always on, and tracing tools active 24/7 (e.g., to optimize productivity despite human mental and physical health –, to ensure availability online 24/7, to use wearable sensors to track human activities - robotization of workers)

21. The Member States may accept responsibility to ensure several fully independent, inclusive, relevant, and up-to-date social and information platforms, and also should allow critical thinking and freedom of expression.

22. There should also be 'Verification observers Initiatives' that would promote self-regulation and observance of ethics for digital media, and also to identify and stop fake news.

23. The States may stimulate telework and update labour policies to defend adequate social protection, social dialogue, good work, and workers' participation in the digital economy and establish a gender-inclusive perspective in public policies for digital inclusion. These steps will guarantee full access and digital technologies for women, girls, and older persons and promote their online participation and safety.

24. The States may also like to set up an observatory on the impact of improved and emergent technologies on society, economy, wellbeing in a mid- long- term perspective (to foresee where we are going).

V. INFORMATION LITERACY

25. Information Literacy (IL)/Media and Information Literacy (MIL) must be an integral part of all nations' national education and information policies by placing them under the core of continuing education of library and information professionals, educators, economic and government policymakers, and administrators. It should also be a part of advisors' practice to the business, industry, and other critical sectors, such as agriculture, environment, and human development – to be embedded in their lifelong curricula. They should be a part of the curriculum at all levels and across frontiers, so that accreditation is done based on IL/MIL frameworks, models, and standards.

26. Traditional media need to acknowledge the importance of collaboration and partnerships with digital media. Likewise, all stakeholders such as governments, educational institutions, media and youth organizations, libraries, archives, museums, and NGOs, should work together, as the two types complement and complete each other.

27. The States may promote domain-specific information literacies, such as Agricultural Information Literacy, Environment Information Literacy, Financial Information Literacy, Health Information Literacy, and Information Literacy of various kinds. Wikipedia and similar websites may be supported and promoted as valuable multilingual resources for information and knowledge while ensuring that the data is not flawed or biased.

28. IL/MIL must promote intercultural, inter-religious dialogue and sustainable development and cater to differently abled persons, migrants, children, youth, senior citizens, and women.

29. The States must also promote IL/MIL to reinforce human rights and counter-radicalization and extremism. Towards these goals, there is an urgent need to think about a code of ethics to regulate digital media practices. However, they may not allow the critical aspects of MIL as a form of contestation and creation of new epistemic authorities.

30. Increase awareness and understanding of AI technologies and the effects of their implementation both for staff and ordinary users by adopting a more holistic and long-term planning approach towards teacher training and capacity building - from pre-service training to in-service training programs.

31. The Governments must ensure that communication professionals favour MIL in schools without asking already overworked teachers responsible for this role. A blended training style that takes care of content, pedagogy, and technology, along the TPACK (Technological Pedagogical Content Knowledge), represents a logical connection between these three elements required for the success of education technology. The States should regularly review them in the context of the school- i.e., location, student population, PTR (Pupil-Teacher Ratio), and the level of ICT achieved.

32. It is essential to allocate resources befitting the plans, or else it would be a waste or be under-utilized. There is a genuine need for more computer labs, projectors, stable internet connection, multiple devices like K-Yan (Integrated Computer Projector), and a review of teacher workloads. Only then, the policies regarding education technology will succeed.

33. UNESCO's Media & Information Literacy Curriculum for Educators & Learners must be adapted and adopted by all democratic nations. It is available online:

<https://unesdoc.unesco.org/ark:/48223/pf0000377068?posInSet=3&queryId=N-EXPLORE-cc5e5241-3e55-43d4-b33e-41377a8764cf>

VI. INFORMATION PRESERVATION

34. In the context of emerging technologies and changing dynamics of information (ETCDI), more stakeholder effort should focus on using technology to preserve cultural heritage, including indigenous languages represented therein. Wherever possible, translations should be considered and applied for cultural heritage meta-data and descriptions to enable their more comprehensive access, accessibility, and use by all for global research and other purposes.

35. The stakeholders should be proactive in digitizing and migrating preserved cultural heritage from old to new technologies in light of realities associated with obsolescence and the possibilities of losing cultural heritage, including historical sites and rare artifacts through various artificial and natural disasters like wars and hurricanes, respectively.

The signatories of the Hyderabad Declaration on ETCDI will therefore make an effort to promote responsible use of technologies in Information.

This document was drafted and agreed by the participants of the conference.

(For Details Contact: director_iceie@uohyd.ac.in)

This document is translated by:

ANNEXURE

Acknowledgements

Editorial Board:

1. Prof. Udaya Narayana Singh - Chairman
2. Prof. Richard Harvey (Multilingualism)
3. Dr. Galit Wellner (Information Accessibility)
4. Prof. Jagtar Singh & Prof. Samy Tayie (Information Literacy)
5. Ms. Natalja Kitam (Information Development)
6. Prof. Alfredo Ronchi (Information Ethics)
7. Dr. Helen Amunga & Mr. Alexey Tsykarev (Information Preservation)

List of Participants:

1. Alexey Tsykarev, Vicechair, UN Permanent Forum on Indigenous Issues, Russia
2. Alfredo M Ronchi, Cyberlaw University, Italy
3. Amaro Elias La Rosa Pinedo, Unversidad Femenina del Sagrado Corazon, Peru
4. Andrew Philominraj, Universidad Católica del Maule, Chile
5. Anil Rachamalla, End Now Foundation, India
6. Antara Vats, CSST, Observer Research Foundation (ORF), India
7. Coetze Bester, University of Pretoria, South Africa
8. Cordel Green, Chair IFAP Information Accessibility, Jamaica
9. Daniel Pimienta, Observatory of Linguistic and Cultural Diversity on the Internet
10. Daniel Seekersway, Zambian chapter of International PEN, Zambia
11. Dorothy Gordon, UNESCO IFAP Chair, Paris
12. Dzhavdet Suleymanov, Kazan Federal University, Russia

13. Eric Nelson, Law Development Centre (LDC), Uganda
14. Evgeny Kuzmin, Chair IFAP Russia (Russian Federation)
15. Galit Wellner, Tel Aviv University, Israel
16. Gilvan Müller de Oliveira, Federal University of Santa Catarina, Brazil
17. Gilvan Muller De Oliveira, Head, UNESCO Chair on Language Policies for Multilingualism, Brazil
18. Igor Miranda, Universidade Federal da Bahia, Brazil
19. Jagtar Singh, Punjab University, India
20. Jan Willem de Graaf, Saxion University of Applied Sciences, The Netherlands
21. John Shawe-Taylor, University Collage of London, UK
22. Maha Bashri, United Arab Emirates University, UAE
23. Maria Belen Odena, University of Buenos Aires (UBA), Argentina
24. Mark Shuttleworth, Hongkong Baptist University, Hongkong
25. Mrinmayee Mandal, National Institute of Educational Planning and Administration, India
26. Naoemi Bontridder, University of Namur, Belgium
27. Natalja Kitam, Estonia School of Citizen Journalism, Estonia
28. Partha Pratim Das, IIT, Kharagpur, India
29. Pierre Emmanuel Thomann, Universite Paris-8, France
30. Prabhakar Rao Jandhyala, Chairperson, University of Hyderabad
31. Ramon Guillermo R Tuazon, Secretary General of AMIC, Phillipines
32. Ranjeeva Ranjan Universidad Católica del Maule, Chile
33. Richard Harvey, University of Salford, UK
34. Saleh B. Masharqa, Birzeit University, Palestine
35. Samy Tayie, Cairo University, Egypt
36. Sarah Kaddu, Uganda Library & Information Association (ULIA), Uganda, HAUMBA
37. Sergey Davydov, HSE University, Russia
38. Shobhana L Chelliah, University of Texas, USA
39. Siva Prasad R, Honorary Professor, CDLTR, University of Hyderabad
40. Srinivas K, National Institute of Educational Planning and Administration, India
41. Stephen Mutula, University of Kwazalu-Natal, South Africa
42. Susana Finkelievich, University of Buenos Aires (UBA), Argentina
43. Susmita Chakraborty, University of Calcutta, India
44. Thaiane Moreira De Oliveria, Fluminense Federal University (UFF), Brazil
45. Udaya Narayana Singh, Amity University, India
46. Vicent Climent-Ferrando, Pompeu Fabra University, Spain
47. Yves Poulett, University of Namur, Belgium