

15th Session**Agenda item: B: Improving the Quality of STEM Education**

The United Nations Educational, Scientific and Cultural Organization,

Recalling the commitment to promoting education, innovation, and sustainable development, we are also convinced that a well-coordinated and funded initiative will enhance STEM educators' capabilities and significantly contribute to economic growth and social progress,

Considering the benefits of collaboration among educational institutions, businesses, scientific communities, governments, and UNESCO bodies,

Encouraging non-profit organizations and international governments to provide funding education to less developed countries and rural areas,

Supporting the collaboration of United Nations Women in promoting STEM education to increase female participation in science and mathematics programs,

Recognizing the necessity for career guidance regarding further education, the capability to gain knowledge and experience through internships, and obtain assistance for future job opportunities through the use of technology,

Emphasizing the rate of women who learn STEM fields is only 35% and less than 30% of all researchers are women by UNESCO,

Recognizing the success of The 2014 Global STEM Alliance summit promoting young people to be employed in STEM fields through STEM education, innovation is needed we urge member states to promote the future summits

Recommending establishing a central platform for sharing teaching materials in multiple languages [the United Nations Curricula Improvement and Education Material Distribution Platform (UNCIED)], to ensure accessible and inclusive educational resources globally,

Acknowledging the importance of sustainable funding and technical support to maintain and expand educational platforms, and recognizing the necessity of continuous improvement through effective feedback mechanisms to ensure high-quality and accessible educational materials,

Noting that student performance in STEM education is shaped by a diverse array of factors, including curriculum design, teaching methodologies, resource accessibility, and individual aptitude, alongside the critical role of motivation in enhancing educational outcomes,

Acknowledging educational institutions currently lack an understanding of the composition and role of AI in the STEM education system, necessitating the formulation and dissemination of comprehensive guidelines and recommendations for its use,

1. *Suggests* all Member States allocate funds for the development and implementation of comprehensive professional programs for current and prospective STEM educators in the world by:
 - a. Encouraging educational institutions to provide opportunities for advanced degrees, and specialized training workshops to enhance teaching skills and subject knowledge in STEM fields;
 - b. Recommending the establishment of mentorship programs where experienced STEM educators can guide and support new teachers in the field by 2035;
 - c. Recommending the establishment of the United Nations Education Resource Management Committee (UNERMC) as a committee that will include representatives from academia, business, science, and government organizations to manage and organize the program and funds mentioned above;
2. *Calls attention* to expanding the existing forums such as the Regional Educators Symposium 2024 organized by the UNESCO Regional Bureau for Science and Culture in Europe to a global level to serve as a model for exchange and collaborative efforts by:
 - a. Encouraging the inclusion of a broader range of participants from diverse educational and cultural backgrounds;
 - b. Sharing the documentation and successful practices and outcomes from these forums with other regions;
 - c. Inviting STEM educators worldwide to contribute their knowledge and resources to this initiative for the collective benefit of the global education community;
 - d. Considers contributing to the development of a centralized website by UNESCO where educators can upload educational materials for public access;
3. *Endorses* United Nations Volunteers (UNV) in the expansion and accessibility of education resources for rural areas:
 - a. Reaffirms the partnership between UNV and UNESCO regarding Global Citizenship Education (GCED) to foster skills and knowledge in and out of school;
 - b. Notes the international collaboration with UNESCO's Associated Schools Network in connecting educational institutions worldwide;
4. *Reminds* Member States of the Sustainable Development Goals to further promote accessibility of STEM education to all students by:
 - a. Reiterating SDG 4 of Education to accelerate the goal to expand education on a global scale;
 - b. Utilizing SDG 5 of Gender Equality to increase participation of women in STEM and STEAM-based careers through female-centered programs and vocational training;

- c. *Moving* towards the target from SDG 17 of Technology to provide equipment and facilities to further the STEM program in line with recent technological advances;
- 5. *Encourages* initiatives and fellowship programs as support measures to decrease the exclusion of women through:
 - a. EducaSTEM2030 to mitigate individual, familial, social, and educational issues that influence female participation in STEM;
 - b. Expanding the Technology Bank for less developed countries to provide technological assistance and support for rural areas;
 - c. Supporting The World Academy of Sciences (TWAS) to provide fellowship programs and research and project grants to advance science and engineering opportunities in developed and least developed countries;
 - d. To adhere to the Global Accountability Dashboard to monitor progress regarding gender-transformative education and gender parity at all education levels;
- 6. *Proposes* the establishment of an inclusive career guidance program, staffed with counselors affiliated with The International Career Counsellors' Club (ICCC), renowned for their expertise in global career counseling standards and practices, which aims to provide personalized support and resources tailored to individuals of all ages interested in pursuing rewarding careers in STEM fields by:
 - a. Recommending organizing online programs in collaboration with The International Career Counsellor's Club (ICCC), featuring workshops, webinars, and interactive sessions to leverage ICCC's global expertise in career counseling to provide valuable guidance and resources for individuals of all ages exploring STEM career paths;
 - b. Recommending the use of technology to implement online seminars to provide information about scholarships and programs;
 - c. Encouraging the integration of digital platforms and tools to facilitate virtual career counseling sessions and workshops, to offer individuals convenient opportunities to explore and advance in STEM and related career paths;
- 7. *Requests* Member States to establish internship opportunities in STEM to enable students to gain practical knowledge and experience in their chosen fields by:
 - a. Recommending the establishment of tailored internship opportunities to provide students with practical knowledge and hands-on experience in their chosen fields of study;
 - b. Recommending the development and implementation of clear international and national guidelines for internships, especially for university students in STEM fields;
- 8. *Suggests* Member States to improve existing education facilities for all students for research and practical training;

9. *Recommends* Member States supply technical and financial support for infrastructure in elementary schools and provide materials for STEM education in both formal and informal education settings that lead STEM students to STEM careers by:
 - a. Requesting Developed Member States to use Information and Communication Technology (ICT) in education;
 - b. Suggesting Developed Member States provide used ICT devices to students learning STEM in developing Member States by collaborating with government and non-government organizations (NGOs) in each Member State;
 - c. Requesting UNESCO to make new funds to build education facilities for developing Member States in collaboration with Developed Member States and business enterprises;
 - d. Holding a conference hosted by UNESCO to share the best practices for the use of donated materials among Member States;
10. *Recommends* Member States to include an expansive range of languages for physical and audio learning materials to ensure broader accessibility, starting with, but not limited to, English, Spanish, and Mandarin by:
 - a. Establishing a prioritized list of additional languages based on the needs and demographics of the target states;
 - b. Collaborating with linguistic experts and native STEM experts to ensure accurate and culturally sensitive translations:
 - i. Engages volunteers and educational institutions to assist in the translation process;
 - ii. Implements a quality control system to review and approve translations before they are published;
 - iii. Explores the use of automated translation tools to expedite the process, while maintaining human oversight to ensure quality;
11. *Calls upon* willing member states to provide necessary funding and technical support to maintain and expand the platform which is the United Nations Curricula Improvement and Education Material Distribution Platform (UNCIED) by:
 - a. Encouraging public-private partnerships to pool resources and expertise for the UNCIED's development;
 - b. Suggesting exploring grant opportunities from UNESCO bodies or the World Bank, to support long-term sustainability;
12. *Requests* Member States to establish a feedback mechanism to continuously improve the quality and accessibility of the materials provided, ensuring that stakeholder contributions are effectively utilized and that the platform evolves to meet the needs of its users by:

- a. Recommending regular surveys and feedback forms to gather input from users on the UNCIED's effectiveness;
 - b. Supporting the creation of a dedicated board to analyze feedback and implement necessary improvements;
 - c. Recommending the board be run by experienced NGOs such as the Education Development Center (EDC) who have a history of successfully working on the development of curricula and teaching all over the world;
 - d. Encouraging transparency by sharing feedback summaries and action plans with stakeholders;
13. *Encourages* national educational institutions, to create partnerships with local industries to provide real-world experiences, to implement strategies and programs that foster student motivation, recognizing its critical role in improving educational outcomes by supporting the sharing of best practices and success stories related to student motivation among educational institutions, both locally and internationally;
14. *Suggests* educational institutions in member states should form an academic alliance by sharing academic achievements and educational resources and helping developing Member States improve their STEM education systems.