Questions & Answers from the WFEO Webinar on Diversity & Inclusion

Name	Country	Organisation	Question or comment	Answer (please specify who is the responder)
Rufina	Senegal	AFSTech-INWES	For next time can you think about French people for translation	MK: Thank you.
Sarah Peers	United Kingdom	INWES	[illegible] world" of industry and even leadership in academia. In the meantime, we know that industry and academics are often highly biased and of course not necessarily D&I aware. Is there any move (maybe elsewhere in WFEO) to affect change in attitudes of current academics and training professionals to ensure these changes are embedded fully?	Cassandra Polyzou (Engineers Canada): many institutions who are part of the 30 by 30 initiative are doing EDI training for faculty. Some institutions are creating diversity and inclusion courses in engineering. https://engineerscanada.ca/diversity/women-in-engineering/30-by-30
Rufina	Senegal	AFSTech - INWES	For next time can you think about African women to be speakers. You have lot of scientists and engineers women who are many experiences to share will all of you	MK: We had Yetunde Holloway, Chair of the WFEO Committee for Women in Engg. Speak at the webinar. As a global project, we had representation from the Americas, Europe, Asia-Pacific and Africa.
Alice Cunha da Silva	Brazil	WIE-WFEO	How will be the implementation of these changes? once the framework is finalized, how the local implementation in each country will be carried out?	A. B. Ozguler: If a country already has an engineering accreditation body that is doing "outcome based accrediatation" or a professional body that regiter engineers, then the evaluation criteria of that body may first be revised to cover the GA or PC. The hiher education institutions also may orient their engineering program curricula taking GA into account. How each attribute is implemented in a curriculum without inflating that one with many additional credit hours takes a innovative and creative desiign, as we have discussed during the webinar. MK: This is a benchmark for substantial equivalence for engineering education and will be used by the national accreditation institutions that are signatories to the IEA Accords to implement changes in each of the their national engineering education systems. Similarly the institutions that are involved in the registration of engineers, and are signatories to the IEA Accords, will implement the changes for the requirement for on-going training and learning after graduation to maintain registration. This will be monitored by the IEA. Brazil is not yet a signatory to the IEA but we hope to provide support to ensure that this also occurs in the next few years. CONFEA is the national member for Brazil at WFEIO.
Alice Cunha da Silva	Brazil	WIE-WFEO	In the 5 tables that ate being implemented for gender gap, are local culture being taken into consideration? because although Both Europe and Latin America have gender gap in science and engineering, the reasons are not always the same.	A. B. Özgüler: We are doing our best to ensure that each attribute is a qualification one expects an engineer ot technologist or technician to have, irrespectve of the geographical location of that individual or the cultural environment. If there is an attribute (or an implication in the proposed GAPC) that contradicts this, you will help us a great deal by bringing that to our attention. MK: The tables are benchmarks for substantial equivalence. They are not prescriptive and can be implemented taking into account local cultures. However there are some clear principles that are now stated explicitly regarding ethics, diversity and inclusion, sustainable development etc. which cannot be ignored to ensure compliance with the requirements for all signatories of IEA.
Tariq Durrani		IEEE	We have tried our best t recruit women into engineering programmes at universities in Uki for over 20 years, however the number have never increased beyond 12-15%. We have come to the conclusion that perhaps girls are smarter than boys in that why study a subject that is difficult, perhaps not very exciting, and there are other avenues open to women that are more attractive and engaging.	Sarah Peers (UK / INWES) You may wish to look at what Scotland are doing with their STEM strategy and the Gender Balance actions. The latter is based on IOP work on the issues of society, and biases in primary and secondary education. They are tackling teacher biases. You should also talk to colleges that have successfully increased numbers of women in technical areas only to find they can't get them jobs. UK employers, particularly SMEs, are not great at EDI. For the UK and Europe: the Hypatia project looked very closely at cultural and societal reasons for lack of take up of STEM by girls and women. Also the IOP (Inst of Physics) Opening Doors and later reports are eye-opening. MK: This project is not about attracting women to engineering but retention - by addressing not only what is taught but how it is taught and how students and teachers interact. Changing the culture for greater inclusion is critical to retaining women not only after graduation but also in the work force. Dr Peggy Oti-Biateng showed the leaky pipeline for women in science, we have a similarly very leaky pipeline for women in engineering. We cannot afford such losses.
Tariq Durrani			Is there an issue of parental guidance and peer pressure that keeps girls from taking up engineering as a university course or as a profession?	Sarah Peers again: Not just parents. Also teachers! (see Hypatia project EU also IOP Opening Doors and later reports). If you wish to discuss local UK/EU issues, I would be happy to chat. sarah.peers@inwes.net. MK: As stated above, this project is not about attraction but retention. We can spend and are spending a great of time and effort attracting girls to engineering but we cannot afford a lifelong sustainable career because of the very poor cultures at both university and in the work force that are encountered in many countries around the world. Countries that have addressed these issues have done very well with attracting and retaining women in engineering, especially in countries in Asia, for example, where engineering is a highly regarded and respected profession. We have more than 30 percent women engineers in Malaysia, Myanmar etc. This is a great example of the percentages that can be achieved.
JAMES AKANMU	NIGERIA	NSE	There is the need for the national engineering professional body and regulatory to be included in the needed changes for a sustainable and adaptive program	A. B. Ozguler: If a national accreditation body is somewhat currently associated with IEA (as a signatory, member, whether provisional or not, or as an associate of IEA), then they have been invited to provide inputs through a questionnaire distributed around January 2020. Many have provided valuable inputs. I think COREN, for instance, being a candidate for provisional status at Washington Accord, may have received the survey as well. Those who have not received the survey can still give inputs through the survey monkey set at the WFEO website. There is ample time yet. MK: Yes in Nigeria, COREN is working towards signatory status at the IEA and will then be implementing the proposed revised GAPC Framework through its accreditation of engineering universities in Nigeria. Similarly Nigerian Society of Engineers, if it becomes a signatory to the professional engineering Agreement at the IEA, would be implementing the requirements for professional engineers' ongoing training and development to maintain their registration.
Jonas Redwood-Sawyer	Sierra Leo	Institution of Enginee	Matching Student learning outcomes to Diversity and inclusions as a Programme Learning Outcome from the technical nature of our discipline can be a challenge. Any suggestions please?	A. B. Ozguler: If the curriculum allows a dedicated course on ethics, then components of diversity and inclusion attribute can be covered by "case studies" with cases appropriate to that discipline. If not, then studies can be scattered into a number of various apprpriate engineering courses. The measurement must be done via student work (answers to exam questions, done term projects, capstone design or any other that may have team work etc.) of every graduate of the program.. MK: It is important that Diversity and Inclusion is included within the curriculum to change the culture an attitudes of students and teachers. It will not achieve the required change if it is added on a s a new subject.
Rufina	Senegal	AFSTech - INWES	You wish to have formal partnership with UNESCO-BREDA because since several year that support us. What can we do ?	MK: The project is supported by the UNESCO Capacity Building Section, Natural Sciences Sector. It is an initiative that is looking at the benchmarks for accreditation.