

GEDC INDUSTRY FORUM 2022 – CHECKING IN ON SKILLS

Where are we now on the global conversation on skills for engineers of the future?

Already in the 1990s, experts were posing the question: what are the most important skills for engineers to develop in order to meet the needs of a changing world?¹ At that time, this question was provoked by a recognition of increasing globalisation. However, it became clear in the following decades, and especially since the 2010s, that there are other, global trends that would have an equal if not greater impact on required and desired skills in future engineers, including: digitalisation, horizontalisation of the socio-economic world, blending of technical, economic, and societal structures, exponential pace of innovation in technology, and more.²

The first GEDC Industry Forum in 2017 highlighted the issue of growing skills gaps faced by employers, and especially those hiring engineers, as a central challenge to address withing the Industry Forum community. Now five years later, including two in a hugely impactful global pandemic, we would like to take a look at where the conversation on skills and skills gaps is today. What, if anything, has changed concerning required and desired skills for engineers of the future – including cutting-edge technology skills as well as professional skills? What are the skills needed by educators so that they are best able to develop critical skills in their students? How can we work together to stay on top of skills gaps and find a way to anticipate what will be important in the future? To help answer these questions, here you will find a selection of recent global resources on skills, including those focusing on engineering skills specifically, as well as those addressing skills and skills gaps more broadly.

RESOURCES ON SKILLS

- University World News. *Africa: Action plan aims to equip workforce with in-demand skills*. <https://www.universityworldnews.com/post.php?story=20220503091751318>
- World Economic Forum. *Here's how Germany is bridging its growing skills gap*. <https://www.weforum.org/agenda/2022/04/germany-growing-skills-gap/>
- World Economic Forum. *Closing the Skills Gap: Key Insights and Success Metrics*. https://www3.weforum.org/docs/WEF_GSC_NES_White_Paper_2020.pdf
- Times Higher Education. *Industry-focused universities tackle Chinese skills gaps*. <https://www.timeshighereducation.com/news/industry-focused-universities-tackle-chinese-skills-gaps>
- Harvard Business Review. *4 Ways to Bridge the Global Skills Gap*. <https://hbr.org/2022/03/4-ways-to-bridge-the-global-skills-gap>
- ASEE Corporate Member Council. *2020 Survey for Skills Gaps in Recent Engineering Graduates*. <https://workforcesummit.asee.org/wp-content/uploads/2021/10/CMC-ebook.pdf>
- Coursera. *Campus Skills Report 2022*. https://www.coursera.org/skills-reports/campus/get-report/?utm_medium=website&utm_source=c4c-resource-hub&utm_campaign=csr-22&utm_content=resource-tile
- Coursera. *The Job Skills of 2022*. https://coursera.org/campus/resources/ebooks/job-skills-of-2022/?utm_medium=website&utm_source=c4c-resource-hub&utm_campaign=content-curriculum-mapping&utm_content=resource-tile

¹ Arango, I. (1991). From US engineer to world engineer. *Journal of Management in Engineering*, 7(4), 412-427.

² See the [2017 GEDC Industry Forum Concept Paper](#) for a summary of these trends.