



Royal Academy
of Engineering



Creating
graduates
with the
skills local
industry
needs

“I applied knowledge from my university courses such as engineering management, control engineering and machine design in my internship. I also developed communication skills, which I wasn’t taught in school.”

Ben Mwaba, mechanical engineering student,
University of Zambia

Youth unemployment remains one of the largest societal challenges for the Zambian government. In urban areas, 15.4% of young people are unemployed according to the Zambia Governance Foundation's *Youth Unemployment in Zambia* report. The report explains that a large proportion of young people entering the labour market are unemployable because of a lack of relevant skills. There is a need to incentivise companies to increase opportunities for young people to gain experience and excel in the work environment.



To tackle this issue the Royal Academy of Engineering funded the University of Zambia as a Higher Education Partnerships in sub-Saharan Africa (HEP SSA) programme hub between 2017 and 2019, under the theme adaptive education for quality and employable engineering graduates.

The University of Zambia aimed to increase student industrial placements, develop partnerships with industry through industry-academia secondments, and align the curriculum with the skills industry needs.

Mwandila Kutemwa, a final year electrical engineering student at the University of Zambia, completed her internship with IHS Towers, a company specialising in building mobile operating towers and managing sites for mobile network operators. Mwandila shadowed the field quality auditors responsible for the maintenance and repair of the mobile operating towers. The internship allowed her to develop a practical understanding of the theoretical knowledge gained through her degree, as well as giving her an opportunity to develop her final year project in line with the needs of industry.

The HEP SSA programme provides vital exposure to industry that many students and staff may not have experienced otherwise.

Ben Mwaba, a final year mechanical engineering student at the University of Zambia, completed his internship with Toyota Zambia. During his internship, Ben was rotated through the business, gaining experience and applying knowledge gained from his degree. He also developed new skills and acquired contacts.

As a result of the University of Zambia's HEP SSA project, the university has increased student industry internships from 40% to 90% of students, providing graduates with the skills and experience needed for employment. In addition, the project strengthened industry-academia partnerships, undertaking 10 bilateral secondments between industry representatives and academic staff. The university's engineering curriculum was successfully reviewed to be aligned with the needs of industry.

The HEP SSA programme is funded through the Global Challenges Research Fund (GCRF). By forming and

strengthening relationships between academia and industry, the HEP SSA programme aims to ensure that the higher education system in sub-Saharan Africa produces engineers with the skills and knowledge required to meet the needs of industry, tackle local challenges, address the engineering skills shortage in sub-Saharan Africa, and showcase engineering's role in driving economic development in the region.

For more information, please visit:
www.raeng.org.uk/hepssa

"Prior to my internship I did not have any experience of the engineering business world. It gave me an opportunity to see how companies work hand in hand with each other to achieve their aims."

Mwandila Kutemwa, final year electrical engineering student, University of Zambia.