



Digitalization in higher education

Advisory service

The challenge

Digital change is not only transforming the world of work but also changing the educational landscape. As catalysts for socio-economic development and innovations, universities need to adapt their qualification profiles to the needs of the future labor market. Currently, many universities in developing countries cannot keep up with the fast pace of this change. Production processes are being shifted back to industrial countries since processes are automated and robots are replacing workers. Moreover, highly qualified professionals who steer these complex processes are often lacking in developing countries. In order to keep with the pace of digitalization, developing countries must build capacities for qualified jobs in the digitized labor market. However, universities in these countries are not sufficiently prepared for this task. Study offers for digital competencies are often lacking. Teachers have to need to strengthen their information and communication technology (ICT) skills. E-learning programs need to be designed to fit to the national or local context and requirements. In addition, the infrastructure can often be a challenge: low internet access, poor technical equipment and low data speed are among the deficits. Legal requirements are lacking. For example, there is a need for action on data protection, internet security and the recognition of online courses.

Our approach

GIZ supports universities in developing countries in regard to all aspects of digitalization with the focus on sustainability. The goal: By increasing the quality in teaching and research, universities will become competitive and will be able to prepare students for the future of work. Moreover, digital offers in higher education allow more

people to study and to obtain the possibility of lifelong learning. We are focusing on five fundamental aspects in the digitalization of higher education:

- » Higher education policy, strategies and governance,
- » Modernizing teaching, learning and research,
- » International cooperation and communication,
- » Information and communication technologies (ICT) and IT infrastructure,
- » Modern higher education management, information and administration systems.

Our services

Background information: We provide information on different topics of digitalization in higher education and science. We focus on the context of development cooperation, including displacement and migration. We provide information on new developments and trends, guidelines, strategies, standards, flagship projects, actors, networks, events and information sources. Technical consulting service: We support our partners in finding suitable solutions for a wide range of areas:

- » Design of higher education institutions projects with ICT focus,
- » Digitization of teaching and learning (e.g. development of ICT-related degree programs, e-learning and mobile learning, digitized learning elements and formats, online-based event formats, learning platforms),
- » Digital competence development (e.g. digital key competences, integration of digital competences in degree programs, didactics for ICT-supported teaching, media education of teachers, digital inclusion),
- » Digital communication and cooperation as well as virtual knowledge exchange (for example virtual communication and cooperation platforms)
- » Digitalization in higher education policy and higher



education systems (e.g. development of national digitalization strategies and guidelines, ICT infrastructure, establishment of information platforms, networking with knowledge portals, development of virtual universities),

- » Internet security, data protection, intellectual property protection, ethics,
- » Development of databases (for example research or scholarship databases, higher education management and information systems),
- » Digital university administration systems and the establishment of ICT units,
- » Digital tools to support the transition from higher education to the labor market (for example, tools to help with career guidance or self-assessment of competences, or to match labor supply and demand).

The benefits

GIZ advisory services on digitalization entail many opportunities for universities in our partner countries: Digital services improve access to higher education and facilitate lifelong learning, they advance teaching and research and equip young people with the skills they need for the future of work. Students will have good prospects of finding qualified employment after graduating or are equipped with the needed skills to start an own business.

An example from the field

The ICT Centre of Excellence for East Africa prepares students for the digital economy. Capacities for innovative technical solutions in the region are built in a practice-oriented master programme. In the first academic year 2019/20, 27 students have been enrolled in the new master's program "Embedded and Mobile Systems". Of these, 25 are receiving a scholarship. The students come

from all member countries of the East African Community. The close involvement of the private sector is key in ensuring that the skills are meeting the demands of the labor market. Internships in companies are an essential part of the curriculum. Technical and didactic training for teachers and IT laboratory technicians complete the project. A partnership among German and regional universities is coordinated by the German Academic Exchange Service (DAAD) and support the ICT Centre of Excellence.

Imprint

Published by:
Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Registered offices
Bonn and Eschborn

Dag-Hammarskjöld-Weg 1-5
65760 Eschborn, Germany
T +49 61 96 79-0
F +49 61 96 79-11 15

E info@giz.de
I www.giz.de

Responsible/Contact:
Dr. Michael Hollaender and Britta Lambertz
Competence Centre Education, Vocational Education and Training, Labour Markets
Division Economic and Social Development, Employment
E: berufsbildung@giz.de

Photo credits:
Front page (from left to right): GIZ/Markus Kirchgessner; GIZ/Carlos Vargas/Kopperkollektive
Back page (from left to right): GIZ/Ursula Meissner; GIZ/Carlos Vargas/Kopperkollektive; GIZ/Ahmad Daghlas

GIZ is responsible for the content of this publication.

Eschborn 2022