



**MOUNT KENYA
UNIVERSITY**



**UNIVERSITÄT
LEIPZIG**

**MKU-ACCESS SHORT VIRTUAL STAY SPONSORSHIPS REPORTING
TEMPLATE**

- I. Name: **Stephen Mokoro**

- II. Research Study Title: **Design of an online platform through which entrepreneurs, startups and organizations can access top talent in colleges to affordably build their tech prototypes or explore ways technology can address their business needs**

- III. Amount of Money received (in Euros): **Euro 975 per month**

- IV. Timeframe (e.g. October 2021 – December 2021):

- V. Executive Summary of the Project (Maximum of 2-pages)
Should contain an introduction, problem statement, objectives, methodology, results obtained, and recommendations

Introduction

The World Economic Forum estimates that 15 to 20 million increasingly well-educated young Africans will join the workforce every year for the next three decades. However, the African Center for Economic Transformation estimates that 50% of these graduates are unable to secure jobs because of a mismatch between the education they are getting and labor market needs. This mismatch is exacerbated by the Fourth Industrial Revolution (Industry 4.0). According to the International Finance Corporation (IFC), there is a significant gap in supply and demand of digital skills in Africa, particularly intermediate and advanced digital skills. IFC estimates that over 230 million jobs in Africa will require digital skills by 2030, resulting in almost 650 million training opportunities and a \$130 billion investment opportunity. This mismatch has created a need to change what, how and when people learn. The most proposed solution to this problem is aligning training with market demand and employer requirements with a focus on graduate employability for digital skills courses as a critical approach to addressing the digital skills gap on the continent. The goal of digital skills development programs should be to ensure students gain the technical and soft skills required by industry.

Problem Statement

The mismatch between labor market needs and the skills of many graduates in Africa costs them many job opportunities. An IFC interview report with top industry experts indicated that, 80% of industry experts interviewed believe that an undersupply in digital skills would hamper expected economic growth. In addition, 70% of the companies surveyed who only recruit internationally for digital talent do so because of the lack of skilled locals.

Objectives

This study therefore set out to investigate the extent to which the problem of digital skills mismatch with the industry affected student/graduate employability and recruitment, particularly in tech-oriented startups and organizations. The second objective was to investigate existing solutions and identify gaps that could be addressed with a new offer. Lastly, we set out to design and implement a suitable technology-enabled solution to the digital skills mismatch problem.

Methodology

Objective 1: To investigate the extent to which the problem of digital skills mismatch with the industry affected student/graduate employability and recruitment, particularly in tech-oriented startups and organizations.

To achieve this objective, a market discovery exercise was undertaken with the aim of further ascertaining that there existed a digital skills gap in Africa was conducted. The

exercise was iterative and leveraged the design thinking approach to capture customer needs more precisely. It provided a feedback loop to the solution engineering team so that they could continually capture needs of our potential users i.e., students, employers, and colleges.

The following methods were used in capturing this information:

- *Interviews*: interviewed 20 information technology (IT) graduates, 5 IT lecturers, 1 Dean of a School of Computing, 5 technology startup founders, 2 recruitment firms, 10 entrepreneurs.
- *Surveys*: used a credit extended to us by Google for Startups on Google Task Mate worth USD 2,000 to run an employment survey in Kenya. The target population was recent diploma graduates or higher.
- *Focus group discussions*: 3 focus group discussions were held with 30 students and 1 focus group discussion with 10 recent graduates (with a preference of those still unemployed and are from a technology background).

Objective 2: to investigate existing solutions and identify gaps that could be addressed with a new offer.

To achieve this objective, an extensive literature review was conducted to understand the problem, existing gaps, key players, and solution proposals fronted. Sources reviewed include reputable reports, articles, podcasts, and research papers.

Objective 3: to design and implement a suitable technology-enabled solution to the digital skills mismatch problem.

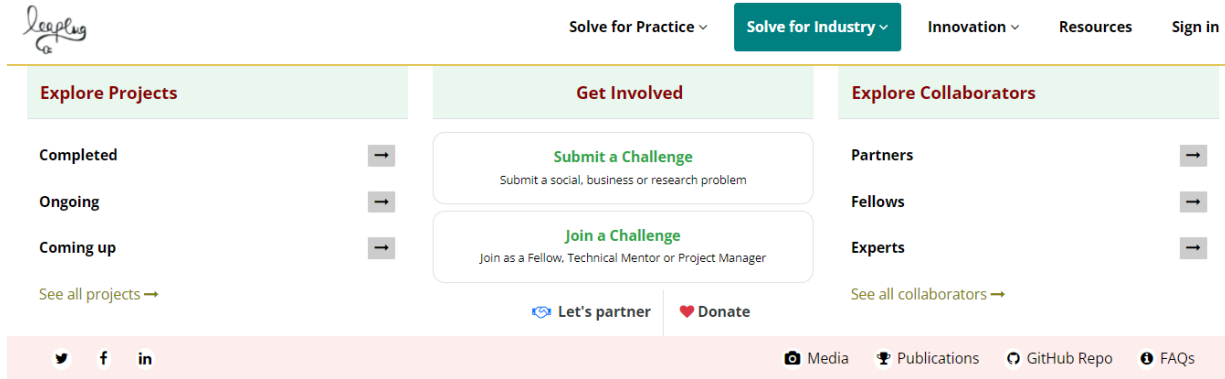
To achieve this objective, a high-fidelity prototype for a web-based platform—[Leaplug](#)—was designed and developed. The platform will allow startups and organizations to access top talent in colleges to affordably build their tech prototypes for market validation.

Results obtained

A lot of proposals on the features of possible solutions to the problem have been fronted. An ideal potential solution should provide networking, mentorship, and career advice; focus on graduate employability for digital skills training and align with industry needs; explicitly link to employment opportunities; involve private sector in developing the curriculum or training methods or in providing on-the-job training; impart advanced cognitive skills, socio- behavioral skills, and adaptability; provide opportunities for lifelong learning, and offer a platform for innovation.

The solution: the Leaplug platform is an interface between academia and industry on different fronts. However, for this specific sponsorship, the focus was on the *Solving for*

Industry module and the screenshots below capture the different modules of the high-fidelity prototype. The prototype has been critical in iteratively capturing the needs of the potential users before the actual test and launch scheduled for later in March.



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Article: a blog article on “[challenge-based learning and the future of post-pandemic digital skilling](#)” was published that gives an overview of the problem and the solution.

Recommendations

This platform is extremely promising and a second university—Strathmore University, has expressed interest in partnering with us. The researcher recommends further funding to create a dedicated team of about 10 engineers to advance the implementation and testing of all modules of the solution, as well as sustain the project during the test period.