Inclusive Digital Economy Kit

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CASE STUDY

South Africa: building digital skills for unemployed youth- *WeThinkCode_*

People

South Africa faces high youth unemployment and information communication and technology (ICT) skills shortage. The country's two-tiered education system and high-income inequality are part of the cause. WeThinkCode_ (WTC), a non-profit training provider offering software development courses and job placements to young people, was set up to help tackle the problem. WTC recruits a diverse cohort of students including those from disadvantaged backgrounds. Since it began in 2016, 834 students have enrolled in the programme, 214 students have graduated and 206 are now employed in software development jobs.

The problem

South Africa faces a severe youth unemployment crisis. While the country's overall unemployment rate is a high 29%, the burden disproportionately falls on young people, with 40.3% of those aged 15-34 years not being engaged in employment, education, or training in 2019.[1] Additionally, labour market outcomes are unfavourable for black and mixed-race groups, with black women registering the greatest unemployment rate (above 35% across all ages).[2]

The country also has widening skills gap, particularly in the tech sector. A 2017 World Economic Forum (WEF) report identified that the ICT intensity of jobs in South Africa has increased by 26% over the last decade.[3] However, there is a domestic shortage in skills to match these changing needs, and more employers are resorting to offshoring software development tasks.[4]

The country's historically two-tiered education system and high-income inequality lie at the root of why skills development has not kept pace with needs. As a lingering result of the Apartheid era, select schools in previously white neighbourhoods are resourced well, but the vast majority of children go to under-resourced schools. Additionally, many students who make it out of primary and secondary school cannot afford a tertiary education. Despite government-led efforts to remedy this situation, progress remains patchy and unequal.[5]

Solution

In this context, WeThinkCode_ was established to provide young South Africans with an alternate route to productive employment. Based on the pioneering model of the French programming school 'Ecole 42', WeThinkCode_ was designed as a tuition-free, two-year programme based on a novel peer-to-peer pedagogy. Anyone between the ages of 18-35 are

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eligible to apply, regardless of their educational background. Upon passing a series of three online games designed to assess intellectual, problem-solving and logic aptitude, successful candidates attend a four-week intensive boot camp where they learn foundational coding skills. The final cohort is selected from boot camp attendees to continue on to the two-year course. The coursework is designed and completed through a gamified peer-to-peer intranet environment, where students mark other students' work, gain points for this, which they can in turn 'spend' on getting their work marked by other students. Two other marking systems that provide automated feedback for students' code are used. The intranet system provides automatic feedback to students, and an external assessment is also conducted through HackerRank, a hiring platform that assesses developer skills. Tutors are also present on-site to ensure the system's smooth operation and provide additional assistance as needed, but the core part of the system is the peer-to-peer model where students learn on their own. Such a model provides good value for money by cutting down on salary costs.

Inclusion is a key consideration that is programmed into WeThinkCode_'s design in various ways. First, entry into the programme is not predicated on applicants' prior academic experience. In the current cohort of students at WTC, 73% (167 of 229) do not have qualifications beyond high school, and 43% (93 of 229) have no prior coding experience. Second, each year a third of the cohort is specifically recruited from underprivileged, low-income households (benchmarked as those households earning less than 60,000 ZAR annually) and from under-resourced schools (as identified by the South African government). Finally, in recognition of the low female enrolment into the programme (currently at 17%), a new programme called 'WomenThinkCode_' has been launched in August, 2019 to dedicate efforts toward the recruiting women in a targeted manner, retaining them in the programme, and ensuring their pathways to employment by identifying corporate partners with a genuine interest in sustained employee diversity.

Providing students with stipends and making available nearby student accommodation additionally helps to increase the diversity of the cohort. Recognising that enrolling full-time in a two-year course involves substantial foregone income and financial burden, WeThinkCode_ has collaborated with a property owner near the Johannesburg campus to make available a cheap accommodation solution to students (which can be paid for with part of the stipend students receive). This additionally boosts the programme's retention of women, for whom working during night hours at the campus poses particular security concerns. The Capetown campus, which does not have student accommodation, has significantly less black and minority students. The WTC staff attribute this to the fact that the Johannesburg campus better addresses student's accessibility issues

A defining feature of WeThinkCode_ is its close relationship with corporate partners, who sponsor the students' training upfront, and subsequently employ the programme's graduates. Corporates are incentivised to participate in training because of the South African government's Broad-Based Black Economic Empowerment (BBBEE) initiative that scores companies based on, among other things, whether they hire black and female talent, and how much they spend on skills development. Companies with scores below a certain threshold are prevented from working with the government. WeThinkCode_ therefore leverages companies' existing investments into skills development; additionally, given its competitive applicant screening

process and willingness to evolve the training curriculum based on employers' feedback, companies that partner with WeThinkCode_ are guaranteed a pool of high-skill, relevant talent to recruit from. The success of this model is evident in the rapid expansion of the number of WeThinkCode_'s corporate partners: starting in 2015 with four partners, WeThinkCode_ now has over thirty-five corporate partners.[6]

Students are matched with employers. In each year of the two-year course, students spend the first eight months on campus learning software development skills, and the latter four months interning with potential employers. In the first year, a matching process between students and employers takes place, where students submit preference rankings, and potential employers interview students. The vast majority of students are permanently placed with the employers they intern with.

Impact

WeThinkCode_ has recently welcomed its fourth cohort in May 2019, and to date, boasts an impressive 95% placement rate for its graduates. In 2019, the programme had over 80,000 applicants, from whom 230 students were recruited. There are far more people who want digital skills and jobs in tech than there are jobs and training spots. Across all cohorts to date, 70% of recruits have graduated, and 95% have been employed in software development jobs after graduation. Given these achievements, initial discussions are presently under way to open branches in other Sub-Saharan African countries.

Risks and lessons

A tricky challenge that the organisation has had to contend with concerns how to manage students coming from very different educational and social backgrounds. By recruiting a diverse set of students, WeThinkCode_ runs the risk of group conflict and polarisation, which could result in a suboptimal education experience for all students. Given these challenges, the organisation places a substantial emphasis on fostering an open dialogue involving students and facilitators, continually tweaking the boundaries and guidelines, and garnering support from professional psychologists as required.

WeThinkCode_ may also have challenges for scaling to other African countries. Each campus requires a lot of resources, both financial and human, to support students. As WeThinkCode_ considers expanding its reach to other countries where corporate social responsibility initiatives like the BBBEE are absent they may have some challenges with financing and sustainability. In other countries, companies would only invest if the cost per trained person was lower than the cost of outsourcing.

This case study benefited from the input of Ms Nyari Samushonga

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Endnotes:

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