

policy brief



First workplace experience for young people with tertiary qualifications:

Lessons from the Department of Science and Innovation's National Youth Service programme

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Executive summary

South Africa experiences both skills shortages, and graduate unemployment and under-employment. Government programmes such as the National Youth Service (NYS) are becoming increasingly important in bridging the divide between graduation and the workplace to ensure that these graduates are not lost to the national system of innovation. Such programmes provide first workplace experience to young people with tertiary qualifications who cannot find employment commensurate with their qualifications. This addresses the need to promote mechanisms that allow the most disadvantaged groups – those with the least social capital – access to labour market networks to gain this experience. Thereafter, they will have better access to appropriate job opportunities. Evaluating such programmes helps to ensure that they play this interventionist role effectively. This policy brief examines the Department of Science and Innovation's (DSI) version of the NYS as a case study of such a programme. Based on data from a participant tracer study, recommendations are provided for future implementation, including the continuation and expansion of the DSI's model and adopting it in other government departments and organisations.

Introduction

In the 2020 State of the Nation address, President Cyril Ramaphosa stated that: “We are confronted by the crisis of youth unemployment. Of the 1.2 million young people who enter the labour market each year, approximately two-thirds remain outside of employment, education or training¹.” According to the Quarterly Labour Force survey, in the first quarter of 2020, the unemployment rate for persons aged 15–24 years was 59,0%².

Tertiary-qualified, unemployed young people are part of this larger story of youth unemployment in South Africa. Nationally, graduate unemployment is relatively low at 6%², however, the unemployment rate for graduates 24 years and younger increased by 8,5 percentage points quarter-on-quarter, from 24,6% in the fourth quarter of 2019 to 33,1% in the first quarter of 2020³. Paradoxically, South Africa experiences both skills shortages, and graduate un- and underemployment⁴ where graduates face the challenge of being unable to find employment at a level that is commensurate with their qualifications. Studies on the causes of these phenomena point to workplaces increasingly requiring first-time employees to demonstrate work experience.

Graduate unemployment also carries a racial dimension, as black graduates are more likely to be unemployed than their white counterparts². Given the high levels of investment in tertiary education and the skills shortage in the country, graduate unemployment is a policy issue, which requires attention from economic and social policy. Advantages associated with an individual’s social class are expected to reduce and disappear over time as a result of higher levels of education, however, factors such as social origin, social networks and cultural capital continue to influence labour market outcomes⁵.

Demonstrating workplace experience is an important aspect of a new graduate’s curriculum vitae. Yet, the conundrum is that one needs an initial opportunity in a workplace to gain this experience. In the current South African labour market, graduates need to have work-ready skills from their first day, including technical and other workplace skills such as deadline management, telephone and email etiquette, and the ability to work well in a team⁶. Labour market research has shown that organisations use two main approaches in recruitment.

The first is the ‘pipeline’ strategy, which entails employing young people at entry-level positions. These recruits are groomed and trained for higher positions within the organisation. The second approach is to only hire people with work experience⁷.

This policy brief will focus on a government intervention – the National Youth Service (NYS) programme – which seeks to provide first workplace experience for tertiary-qualified young people in South Africa.

This policy brief uses the Department of Science and Innovation’s (DSI) version of the NYS as a case study. A description of the DSI model is followed by findings from a study conducted by the Human Sciences Research Council (HSRC). Based on the findings, recommendations for the NYS are proposed.

The Department of Science and Innovation’s National Youth Service

Several government interventions have been implemented to ensure that graduates who do not yet possess work experience are not lost to the national system of innovation⁸. One such programme is the NYS, which is targeted at un- and underemployed graduates. The programme is located within each government department and has six objectives. Collectively, the first four objectives relate to fostering social cohesion, patriotism and a culture of service in young people. The fifth objective is to improve young people’s employability through opportunities for work experience, and the sixth is to provide a programme for enhancing the service delivery of the government⁹.

The DSI developed their version of the NYS programme and incorporated it into their Science Engagement Strategy¹⁰. The primary aim of the DSI programme is to provide workplace experiences to un- and underemployed Science, Technology, Engineering and Mathematics (STEM) graduates. In addition to providing these graduates with first work experience, the DSI also aims to retain these young people in STEM-related occupations while providing resources to the institutions that host them. Since the programme's inception in 2008, participants have been placed at over 125 host institutions across the country for one to two years. These institutions have included: science centres, schools, observatories, zoos, research councils, and to a lesser extent, private sector organisations. From the inception of the programme to 2018, the NYS benefited 1 603 graduates in South Africa.

Findings

This policy brief draws on the findings from the full report "*The DST National Youth Service: Work experience for unemployed science graduates. 10-year commemorative report*". The HSRC has, over several years, conducted a tracer study of the participants of the DSI's NYS programme. The HSRC contacted the participants in their year of entry into the programme and then for two subsequent years, collecting information on their educational and labour market transitions. Data collected from 1 321 participants were analysed to evaluate the programme. The key findings are grouped into four main themes: participant profile, participant gains from the programme, labour market outcomes and the gains for host institutions.

NYS participant profile

Those accessing the NYS programme were largely black and female – demographic groups considered 'vulnerable' in terms of accessing the labour market. The tertiary qualification profile of the NYS programme participants was that one-quarter (26%) had completed a diploma, while three-quarters (74%) had completed a bachelor's degree or higher. Participants graduated from all major South African tertiary institutions and not only from historically black institutions, as is often assumed.

The majority of participants graduated with qualifications in the areas of biology, chemistry, engineering, and environmental sciences. The description of the participants shows that despite their tertiary STEM qualifications (diploma to PhD), which are listed as scarce skills in the country, these graduates were unable to find employment.

Participants stated that the primary reason they could not access employment was a lack of work experience. Almost 60% of participants were unemployed before entering the programme. This lack of work experience is a particular obstacle for vulnerable groups whose social and economic positions do not expose them to even casual work opportunities.

Participant gains in the NYS programme

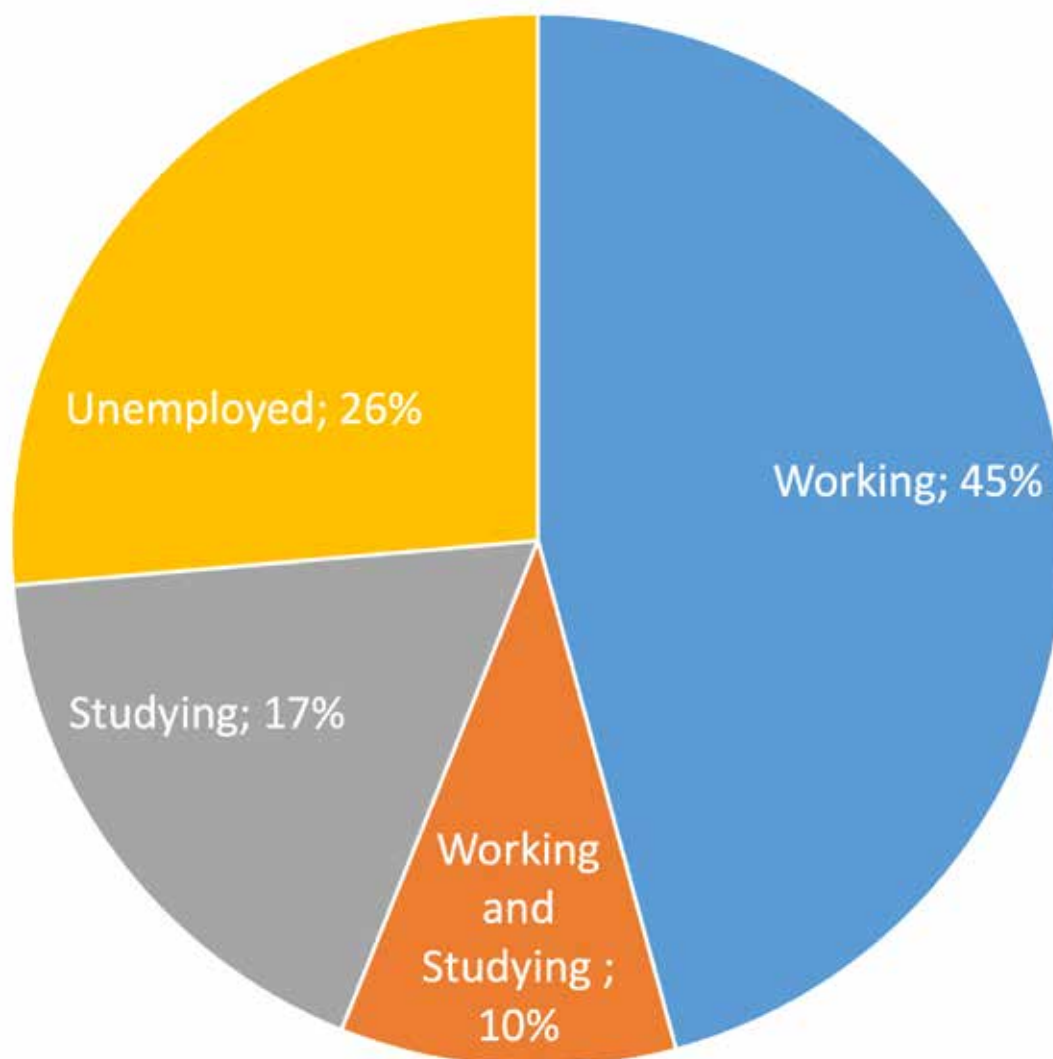
For the NYS participants to gain relevant work experience, which will assist them in their future chosen careers, some link needs to exist between what they studied at a tertiary level (a signal of their intended career path) and the work placement. Eighteen percent of participants indicated that there was a direct link; 57% an indirect link and 25% no link between their area of tertiary study and the work placement gained through the NYS programme.

Despite the limited direct link between participants' disciplinary knowledge and their NYS programme work experience, participants indicated that other skills were enhanced through their participation in the NYS programme. These included the expertise to communicate science, interpersonal skills and the ability to work in teams. The NYS programme thus succeeded in providing the participants with the opportunity to experience and understand the dynamics of workplace interactions. Technical skills and STEM-related skills were perceived to have had the least improvement during the programme. Regardless of this, 83% of participants indicated that participation in the NYS programme improved their employability to some degree.

Labour market outcomes

Upon completion of their participation in the NYS programme, just under half of the participants were working, 10% were working and studying – a total of 56% were, therefore, employed and 18% were studying (Figure 1). Just over a quarter indicated that they were unemployed citing a scarcity of appropriate jobs available to them. Thus, the NYS programme appears to successfully improve employability, with the majority of participants moving into employment or further studies after exiting the programme.

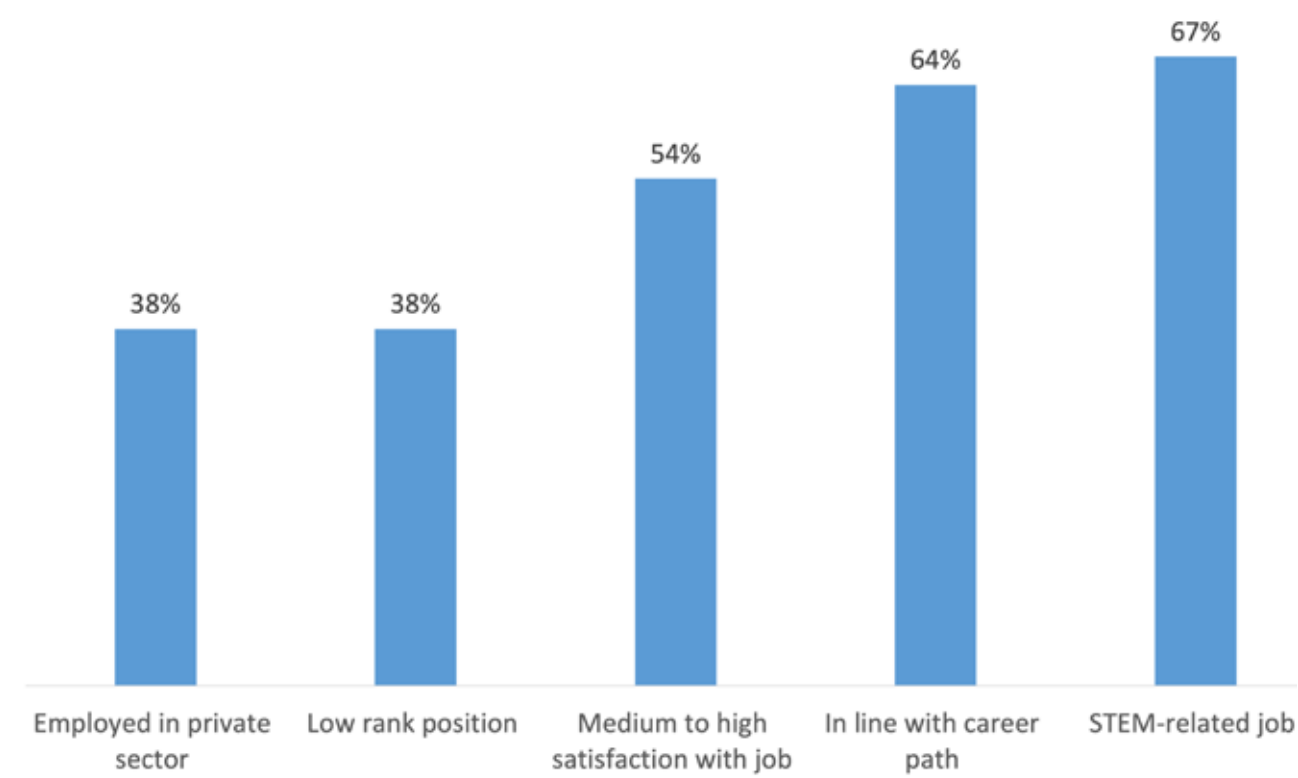
Figure 1: Pathways out of the NYS (2008–2018)



From Figure 2, we see that one year after exiting the NYS, of those who were employed, around two-thirds had found jobs that were in STEM-related fields and in line with their career paths. This is positive as it shows that many of the participants can access appropriate labour market opportunities after completing the NYS.

Thirty-eight percent of these participants were employed by the private sector, 27% were employed in the government and the remainder were employed in NPOs, parastatals and educational institutions. More than half of the participants noted that they were moderately to highly satisfied with their jobs. Therefore, this programme has contributed to increasing the pool of STEM graduates in the labour force, thereby enhancing STEM human capital in the country – an aim of the National Development Plan¹¹.

Figure 2: Characteristics of current job



Gains for Hosting Institutions

The growing public interest in science centres, and the support that they received from the government and the private sector, resulted in their growth in South Africa. The rapid pace of this growth presented a capacity challenge in terms of their management and sustainability¹². Through the NYS, temporary staff were deployed to Science Centres and similar institutions, enabling them to expand and enhance their services. In this way, the institutions can train and recruit staff for permanent employment at very little risk.

Recommendations

Based on the above findings from the tracer study, three policy recommendations are offered.

1. Continuation of the programme

The DSI's NYS programme is an example of the government playing an interventionist role in attempting to address an inhospitable labour market for STEM graduates. As the NYS programme aims to provide the first workplace experience for unemployed STEM graduates, thereby equipping participants with the practical experience required by many employers and strengthening the pool of STEM practitioners in the country, this is a programme that should be continued.

2. Expansion of the model

In the 2019 State of the Nation Address, the president set a goal of increasing the NYS participants to 50 000 a year. Although the DSI's NYS has reached approximately 1 600 graduates since its inception, this is a small number (160 per year) over a 10-year period. For the programme to contribute towards meeting the president's goal actively and effectively, it needs to target more participants. It is recommended that the university qualification criteria be expanded to include those with technical-and-vocational-education-and-training (TVET) qualifications.

Currently, the DSI's NYS participants are mainly hosted at government-funded science centres and public schools. It is recommended that the host institutions be expanded to state-owned enterprises and more private sector organisations. This could be achieved by including organisations that have participated in the Youth Employment Services (YES) programme. The YES programme boasts a network of 1 280 host organisations, which provide work experience to young people (not necessarily graduates)¹³. Another opportunity is to work with Sector Education Training Authorities (SETAs) that are responsible for managing and creating learnerships, internships, unit-based skills programmes and apprenticeships within their jurisdiction. Using this wider network of host institutions may provide a better match between NYS participant qualifications and the skills that can be gained during the workplace experience.

3. Adoption of this model by other government departments and sectors

Over the last decade, government departments have designed and implemented various models of the NYS programmes. These programmes vary in their design and implementation, with some programmes emphasising service and others emphasising skills development¹⁴. The DSI's NYS programme provides a useful model for providing workplace experience and emphasising volunteerism to unemployed graduates that other government departments and the private sector can follow. Other government departments responsible for the implementation of policies in South Africa relating to youth development, should use this model to inform their own NYS programmes.

This Policy brief is based on the report: Juan, A., Hannan, S., Zulu, N. and Reddy, V. 2018. *The DST National Youth Service: Providing work experience for unemployed science graduates. 10 Year commemorative report (2007- 2017)*. Report to the Department of Science and Technology. Pretoria: Human Sciences Research Council.

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