THE LEARNING TRUST
BEYOND THE CLASSROOM

AFTER SCHOOL PROGRAMMES IN SOUTH AFRICA:
THE INVESTMENT CASE

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EXECUTIVE SUMMARY

South Africa's infamous inequality is systemically entrenched by unequal education. Learners from better-resourced backgrounds are far more likely to become literate and numerate, stay in school, and matriculate with academic scores that enable access to tertiary education and higher-paying jobs. While the education system has seen improvements in learning outcomes over the past few years, the pace is slow and from an unacceptably low base, despite significant investment.

Clearly there is a need to improve the quality of schooling. But at the same time, there is a compelling opportunity to leverage the waking hours children spend outside of the classroom to significantly and swiftly improve learning outcomes. Research shows that children in well-resourced homes achieve better learning outcomes, thanks to safe spaces to study, better-educated caregivers, and access to resources including books and e-learning. They are less likely to be hungry, bullied and unsafe and more likely to receive homework, remedial and psycho-social support and access to extra-mural activities. As a result of unequal education and socio-economic injustice, children attending no- to low-fee schools (quintiles 1 to 3)[1] are likely to fail minimum competency requirements for literacy and numeracy, repeat grades and drop out of school.

If every learner in the system was to stay in school and matriculate on time, a matric pass would require 12 years of schooling. However, due to the inordinately high prevalence of grade repetition and dropout in quintile 1 to 3 schools, it takes on average 15 years-of-schooling per grade 12 placement and 31 years-of-schooling per matric pass. The number of years-of-schooling are especially large for higher-level learning outcomes. For every Bachelor pass achieved, the system has invested 104 years-of-schooling; for every matric Maths pass over 50%, 207 years-of-schooling; and 1,400 years-of-schooling for each matric Maths pass over 65% [2]. The calculations behind these numbers are outlined in the Appendix.

The many years-of-schooling required per learning outcome means that the system is investing significant funds with low returns. This report outlines the system's investments per learning outcome over time, with frightening results: In quintile 1 to 3 schools, South Africa invests over R600k per matric pass, over R2m per Bachelor pass, and over R4m per matric Maths pass over 50%.

Evidently the education system needs an overhaul to deliver better returns on investment. However, most children in South Africa are living lives unconducive to learning, exacerbated by COVID-19. Given this context, it is unrealistic to expect that learning outcomes can be achieved through schooling alone. After School Programmes (ASPs)[3] fill the gaps between the kinds of support middle- and working-class children receive. They supplement formal schooling with academic and psycho-social support; safe places to learn and play; enrichment opportunities and meals.

Investments into ASPs enhance the education system's significant spend by increasing the likelihood that children will achieve good learning outcomes. By analysing the number of learner years required to produce outcomes for learners enrolled in long-established ASPs, this report outlines the potential returns that ASP investments present. Although more research is required to determine the replicability of these results at scale, the potential returns are explored through two examples of long-established ASPs with consistently impressive track records. These case studies demonstrate ASP's potential to significantly decrease the number of years-of-schooling required per learning outcome.

IkamvaYouth has enabled learners in townships across the country to pass matric with good results for 18 years. As 85% of the learners enrolled in IkamvaYouth pass matric, the number of years-of-schooling required per grade 12 learning outcome is significantly decreased. For example, the number of years-of-schooling required per Bachelor pass drops from 104 to 31. Hence, even when factoring in the ASP participation cost, the price tag per Bachelor pass drops from R2m to R770k.

The system's inequality is particularly pronounced when it comes to Maths outcomes. While around 15% of learners in quintile 5 schools achieve over 50% for matric Maths, less than 8% in quintiles 1 to 3 achieve this level (Shepherd *et al.* 2020). OLICO provides a catch-up opportunity to Maths learners in the senior phase. Their intervention decreases the number of years-of-schooling required per matric Maths pass over 50% from 207 to 25 and as such, potentially decreases the investment per outcome from over R25m to R1,3m. In both these cases, the investment per outcome is lower despite the additional cost of ASP participation. Even if the interventions were to deliver a fraction of their success to date at scale, they would offer a significant Social Return on Investment (SROI).

The increased earning ability that comes with higher qualifications is well-established in the South African literature. Branson *et al*. (2019) show that those armed with a degree earn four times more than those with a matric, and seven times more than those without. The system's dismal performance in mathematics is a large part of the explanation for the country's scarce skills crisis, and long, growing list of occupations-in-demand at the same time as is massive unemployment. Many of these scarce skills are key for achieving technological advancements and innovative responses to health and climate crises and hence, improving our performance in Maths and Science is key not only to economic growth, but for sustainability more broadly.

South Africa cannot afford to continue with staggering school dropout rates, low literacy and numeracy levels and less than half of our learners reaching and passing grade 12. We are failing to leverage South Africa's greatest resource – the talents and energy of our young people – and an investment into the ASP sector is an investment into turning this around, to redress inequality and promote social justice.

Acronyms

ASPs	After School Programmes
COVID-19	Coronavirus
CPL	Cost per learner
DBE	Department of Basic Education
MEL	Monitoring, Evaluation & Learning
NDP	National Development Plan
NEET	Not in education, employment or training
NSC	National Senior Certificate
POPIA	Protection of Personal Information Act
RCT	Randomised Control Trial
SGB	School Governing Body
SIB	Social Impact Bond
SROI	Social Return on Investment
TLT	The Learning Trust

INEQUALITY DRIVEN BY UNEQUAL LEARNING OUTCOMES

"Educational opportunity in South Africa is primarily a function of the colour of a child's skin, the province of their birth, and the wealth of their parents" (Spaull 2019).

Educational systems promote learners based on their achievements in examinations and tests. Children with the required support (including better-educated parents) are more likely to pass and are thus better off than children with less support. "A fair education system would provide a path for upward mobility for the poor families" (Stats SA 2017). Tragically, rather than upward mobility, the current South African education system perpetuates disadvantage, and is perhaps best known for the unequal learning outcomes it produces. Most poor children attend poor-performing schools with high grade repetition and dropout rates. On the other hand, those attending quintile 5 schools[4] are likely to matriculate with a secondary school education that enables them to access further study and employment. This is no accident; the investments into quintile 5 schools are significant. School fees enable school governing bodies (SGBs) to appoint more teaching and support staff and offer a range of additional services including after care, tutoring, psycho-social support, career guidance, sports and cultural enrichment activities.

However, unequal learning outcomes are not driven by differentiated schooling alone. For the most part learners attending well-performing schools live lives more conducive to learning, with space and support to do homework, without fear for their safety or hunger. COVID-19 has exacerbated the fragility of low-income communities, and the first lockdown brought access to learning and school meals to an abrupt halt for most learners. While the small privileged minority with computer and internet access were soon engaged in homeschooling (Parker *et al*. 2020) many children were left hungry, with the adults around them losing jobs and experiencing increased symptoms of anxiety and depression (Oyenubi *et al.* 2020 & 2021).

The likely medium- to longer-term impacts of lockdown and school closures will include greater learning losses and failures and deepening inequality. 73% of quintile 1 and 2 schools have large classes in contrast with only 17% of quintile 5 schools (Mohohlwane *et al.* 2021), and class size has a direct bearing on daily learner attendance, as classes exceeding 45 learners have to adjust schedules in order to meet social distancing requirements. As schools gradually opened following lockdown, time in the classroom varied significantly between quintiles. "The more crowded a school, the less space and the less resourced, the more days likely lost" (Hoadley 2020).

In 2021, the Department of Basic Education (DBE) has promoted considerably more learners to grades 11 and 12 than usual (Van der Berg *et al.* 2020a), which has major implications for the allocations of classrooms, books and teachers. Trying to teach large numbers of learners at different levels with big backlogs and missing foundational concepts is incredibly difficult (Van der Berg *et al.* 2020a; Hoadley 2020), and teachers will now have to grapple with learners' increased learning deficits and greater within-class heterogeneity compared with previous years. This will drive further inequality in the system. With a likely increase in repetition numbers in 2022 due to the disrupted school year in 2020[5], the need for remedial support addressing differentiated learning backlogs is urgent.

AFTER SCHOOL AS AN INEQUALITY INTERVENTION

After School Programmes (ASPs) fill the gaps between the kinds of support middle- and working-class children receive, by providing targeted support to schools, teachers, caregivers and learners (see figure 1).

ASPs responded quickly and innovatively to school closures in 2020, and really demonstrated their significant value during this turbulent time. "After School" became "all day", as ASPs pivoted quickly and effectively to reach learners at home. Community-based organisations are accustomed to navigating uncertainty and so their agility and resilience, combined with the innovative minds behind these programmes, meant that they were still able to provide food and learning resources as well as a range of support services. Thanks to their proximity and trusted relationships with learners and parents, as well as the commitment of their funders, ASPs were able to keep learners connected to learning and education, and provide much-needed psycho-social support (Youth and After School Programme Office, 2020).

Most research on the ASP sector has been conducted in the United States, where ASPs have been found to play a significant role in improving outcomes for under-resourced learners; including reduced school absenteeism and dropout (Weybright 2017), increased interest in schooling, improved academic results (Durlak *et al*. 2010) and improved health outcomes (After-SchoolAlliance 2005; Young 2017). Research on the sector in South Africa has typically focused on individual organisations and has found positive impacts on learning, psycho-social wellbeing, access to post-school opportunities and ultimately, increased life stability (Ikapadata 2019, Böhmer *et al.* 2016 & Waller *et al.* 2016).

This report outlines the return on investments into programmes serving learners in the lower quintiles, and highlights ways in which resources can be better aligned for impact going forward. It covers:

- ASPs as an inequality intervention
- Impact outcomes suggested for sector-wide focus
- Costing outcomes: what is the return on the DBE investment per outcome?
- The ASP difference: two examples showing ASP value-add and return on investments
- The social return on investing in learning outcomes

The learners attending no-fee schools live socio-economically disadvantaged lives that are often unconducive to learning. There are also structural inequalities in resource allocation across quintiles, hence these learners have fewer teachers, less-qualified principals and insufficient access to libraries and learning resources (Motala & Carel 2019). While there have been some improvements in learner outcomes in recent years (Gustaffson *et al.* 2020), there is still a very long way to go before most South African learners can read for meaning, calculate confidently, reach matric and matriculate with results that improve their likelihood of earning a dignified living.

Figure 1

ASPs as an inequality intervention

INEQUALITY GAPS

THE ASP OPPORTUNITY

SCHOOL QUINTILE 1-3

- Class sizes 40+
- High teacher absenteeism
- Lower teacher subject knowledge
- Less educated caregivers
- Bigger learning gaps
- Less likely to speak language used in tests & exams at home

ACADEMIC SUPPORT

- Fewer classroom days & hours
- Caregivers' long commutes & working hours
- Less after-school supervision
- Less homework support

TIME

- Higher levels of hunger & stunting
- Exposure to risky behaviours & places
- Less access to healthcare

HEALTH & SAFETY

- Low levels of access to extra-murals (creative arts, sport & enrichment opportunities)
- Less psycho-social support

WELLBEING

- Poor school infrastructure
- Fewer books & games
- Fewer devices & less data for e-learning

RESOURCES

SCHOOL QUINTILE 4-5

- Class sizes <40
- Lower teacher absenteeism
- Higher teacher subject knowledge
- More educated caregivers
- Remedial support
- More likely to speak language used in tests & exams at home

- More classroom days & hours
- More after-school supervision
- Extra lessons & private tutors

- More nutritious meals
- Better access to healthcare
- Better security

- Higher levels of access to extra-murals (creative arts, sport & enrichment opportunities)
- More psycho-social support

- Better school infrastructure
- More books & games
- More devices & data for e-learning

The ASP sector is largely ignored in education research and policy development in South Africa. It has traditionally been viewed as small and hence somewhat insignificant; more "mopping up" than a strategic lever in the education ecosystem. It is often thought that investing to improve the system itself makes more sense from a sustainability perspective, as opposed to availing funds and capacity to scale the ASP sector.

There are around 12 million children in the schooling system each year, and very little data available[6] on the extent to which low-income learners are enrolled in ASPs. However, the latest TIMSS (Reddy *et al.* 2020) data shows significant enrolment in out-of-school Maths and Science classes for learners in grades 5 and 9. Remarkably, 85% of grade 9 learners attending no-fee schools were found to have attended out-of-school Maths lessons in the 12 months prior to being surveyed[7]. There is evidently a large and under-researched sector of ASPs and a national audit of ASPs is needed to determine their reach and capacity.

The South African education system needs an overhaul. From resource allocation changes and teacher development, to improving accountability systems[8], there are important structural reforms that need to take place. Unfortunately, given the sector's size, complexity and politics, these are unlikely to take effect system-wide or lead to improved learner results any time soon. At the same time, budgets are shrinking and the impacts and aftershocks of COVID-19 and school closures will be felt for years to come.

School closures in response to COVID-19 will result in greater backlogs and wider inequalities across the system. The more heterogeneity in a classroom, the more learners need supplementary support to catch up. As more learners in each cohort fail to reach grade-level learning outcomes, they become increasingly disengaged, leading to dismal repetition rates, dropouts and high numbers of youth not in education, employment or training (NEET).

Grade repetition is a key warning sign along the path towards school dropout. 70% of learners in the lowest quintiles were over age for their grade before COVID-19, compared with under 31% of those in the wealthiest quintile (figure 2 developed using data from Van der Berg *et al.* 2020a).

Van der Berg *et al*. (2019) looked into the differences between wealthier and poorer schools at all grades and found that "in 2015 the grade 10 repetition rate in quintile 1 schools was *triple* that in quintile 5 schools." Van der Berg *et al*. (2020b) suggest a policy recommendation to "prioritise identifying and reaching out to learners at risk of not returning to school, something that has not received sufficient attention in South Africa."

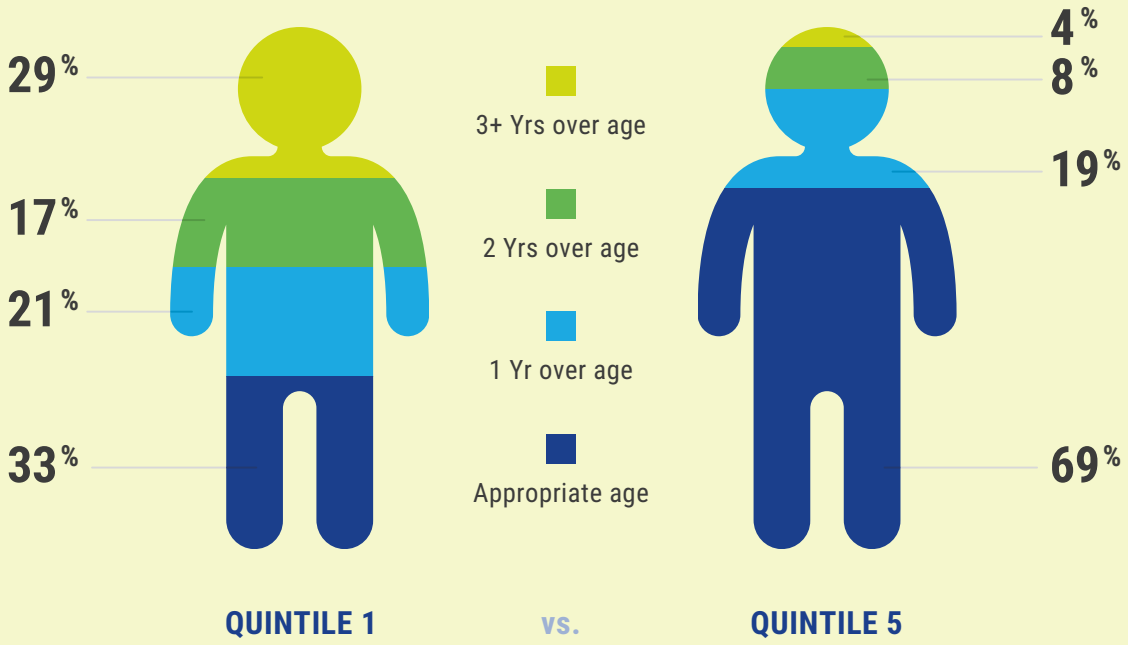
The extent and costs of school dropout are significant; according to the most conservative estimate employed by Van der Berg *et al.* (2019), the number of learners in public schools repeating in grades 1 to 12 in 2018 could have been 1 180 000. In monetary terms, this implies that the cost of having repeaters in the public education system was at least R20 billion[9], absorbing 8% of the total national budget allocated to basic education in 2018/2019. The impact of COVID-19 and school closures on grade repetition and its ripple effects are frightening to fathom.

Grade repetition only makes real sense if there is specialised support for the child that repeats. Unfortunately, given the mandate of curriculum coverage, combined with large class sizes, high levels of heterogeneity in learner ability and lack of training in remedial teaching, there is little opportunity for specialised learner support in a quintile 1 to 3 classroom (Van der Berg *et al*. 2019). These learners also face challenges getting support at home; 68% of learners in no-fee schools report parents' difficulties understanding the language used in schoolwork (Zuze *et al*. 2017).

Free from the curriculum-coverage mandate, institutional bureaucracy and system politics, ASPs are well-positioned to meet learners where they are. They typically offer programming in the language of tests and examinations and as a result fill the language comprehension barriers to parents checking homework. They generally work with smaller groups of learners, in less formal settings, and can provide holistic programming, including sports and enrichment programmes, to meet learners' diverse and varying needs.

Figure 2

Percentages of children over age per school quintile



Source: Van der Berg et al, 2020

ASPs targeting learners in lower grades, with a focus on reading for meaning and calculating with confidence, equip learners with the foundational skills needed to meet the requirements of subsequent grades. Programmes providing supplementary academic and psycho-social support to learners in higher grades help learners keep up with school demands, stemming school dropouts.

ASPs have also shown remarkable medium- to long-term impact, signalling their potential for addressing youth unemployment. For example, a comprehensive survey of IkamvaYouth alumni from 2005-2018 (Ikapadata, 2019), found that 80% of alumni go on to access tertiary education, learnerships or jobs. For the classes of 2015-2017 (medium-term impact), the researchers found that 70% of IkamvaYouth alumni were enrolled in tertiary education, and 5% had graduated. For the classes of 2005-2008 (long-term impact), the researchers found that 73% of IkamvaYouth alumni were employed; 53% had graduated, and 24% were still studying. These results are extremely encouraging, in the context where over 40% of South African youth in this age group are NEET.

THE IMPACT OF AFTER SCHOOL

It is impossible to calculate the value of young people getting opportunities to nurture talents, build relationships, express themselves, process trauma and succeed academically, as well as in sports and the arts. The ASP sector comprises many different initiatives working to achieve a range of objectives for learners across all grades in extremely varied ways. Some ASP outcomes are easier to measure than others (e.g. passing matric vs increased creative expression), but indicators such as staying in school and passing a grade can be proxies for objectives such as increased self-knowledge, confidence or grit. For a sector aiming to enrich learners' educational experience, inspiring and supporting learners to stay in school and pass each grade is an overarching goal.

There are ASPs delivering programmes to learners of all ages; from Early Childhood Development (ECD) to youth aged 18 to 35[10]. In order to work towards and deliver collective impact, the sector needs to focus on particular outcomes along learners' educational journeys. ASPs have the flexibility to provide context-responsive programming delivering a wide range of outcomes, and it is important that they continue to do so. However, in order to track and communicate the sector's contribution to reducing inequality, the following impact metrics are suggested for sectorwide focus:

1. Number of learners able to read for meaning in any language by grade 4.
2. Number of learners able to do basic arithmetic by grade 5.
3. Number of learners demonstrating achievement at the minimal level for grade 8 Maths and Science by grade 9.
4. Number of learners that reach matric.
5. Number of learners that achieve a Bachelors' pass for matric.
6. Number of learners achieving above 50% for Maths in matric.

Thanks to the increasingly robust research in education over the past few years, we know how the system delivers on each of these metrics. Figure 3 was developed using the number of learners enrolled in the system in 2016 (DBE), and drawing on findings from international benchmarking tests, and the NSC results. We do not have the exact number of dropouts per grade and quintile as the Lurits system does not track learners switching schools or provinces due to lacking unique identifying numbers, and so estimates[11] have been used, referencing Van der Berg *et al's* (2020a) proxies for dropouts and repeaters. These are outlined in detail in the Appendix.

The great extent to which the formal system fails to deliver learning outcomes means that ASPs that *do* deliver these results can add significant value. While the vision of every South African learner enrolled in an ASP is important, the sector does not need to reach this scale in order to move the needle on the system's outcomes. The following discussion unpacks the valuable contribution ASPs can make by supporting the system to better-deliver key learning outcomes.

The ways in which resources are allocated to educate South African children needs to be restructured as a social justice imperative (see Motala & Carel 2019; Chutga & Kanjee 2009 and Spaull *et al*. 2020, for more information). However, inequalities cannot be redressed by resource allocation alone. Unlocked funds need to be spent on interventions that yield results and there are unfortunately too many examples of big education projects with significant budgets yielding results that are either insignificant or non-existent; and often the return on these big investments isn't even measured.

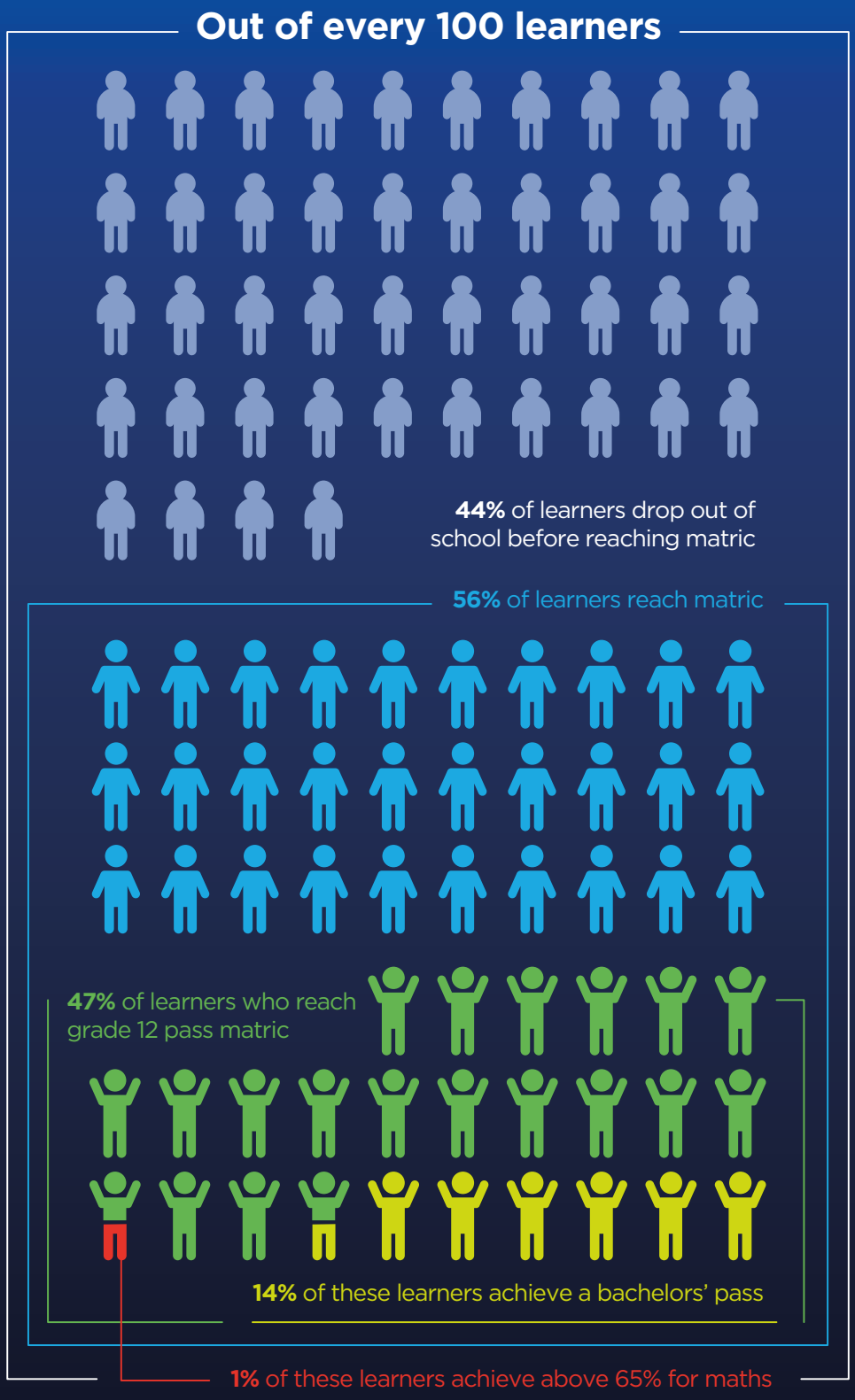
Figure 3

Percentage of learning outcomes (Quintiles 1-3)

ONE IN FIVE
learners can read for meaning in grade 4

ONE IN FIVE
learners can add and subtract in grade 5

13.6%
Have a minimal level in Maths and Science in grade 9



INVESTING IN LEARNING OUTCOMES

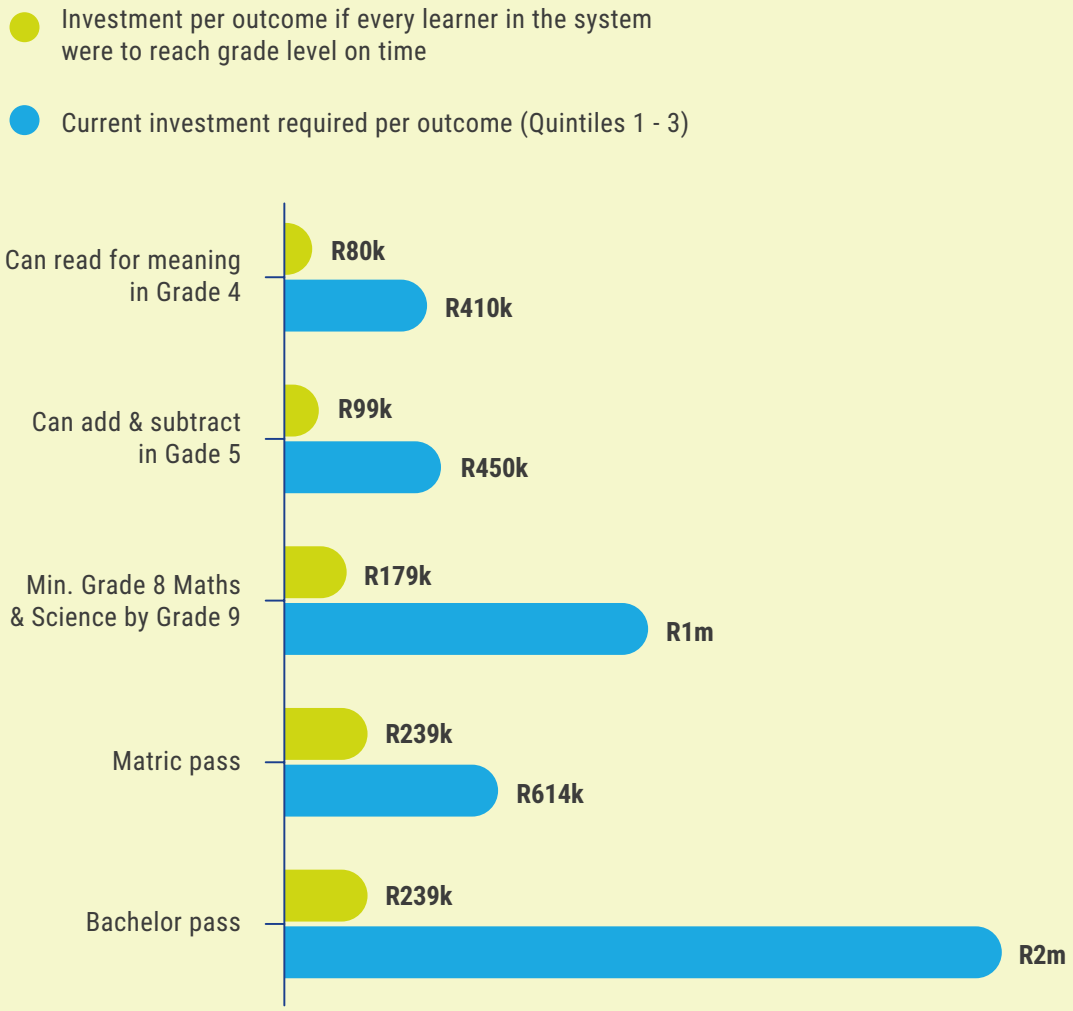
Thanks to recent work by Spaull *et al*. (2020), we have well-considered calculations of the system's investment per learner over the past few years. It is important to bear in mind that this investment excludes all income from school fees received by quintile 4 and 5 schools, enabling more teachers and better services and infrastructure. In a report looking at 2016 per learner spending inequities, the DBE (2018a) finds that "if one combines both public and private funding, one can say that the best funded 10% of the system is 64% better funded than the worst funded 10%, or that the best funded 20% of the system is 41% better funded than the worst funded 20% of the system".

Spaull *et al's* (2020) findings, along with the DBE's 2016 learner numbers, were used to calculate the investments made per learner outcome. This is detailed further in the Appendix. Figures 4 and 5 illustrate the investments per learning outcome; if every learner were to achieve on time (in yellow), versus investment per actual outcome in 2016 in quintile 1 to 3 schools (in blue).

Unfortunately it is clear that the system is woefully underdelivering on learner outcomes and effectively failing to show appropriate returns on its significant investments.

Figure 4

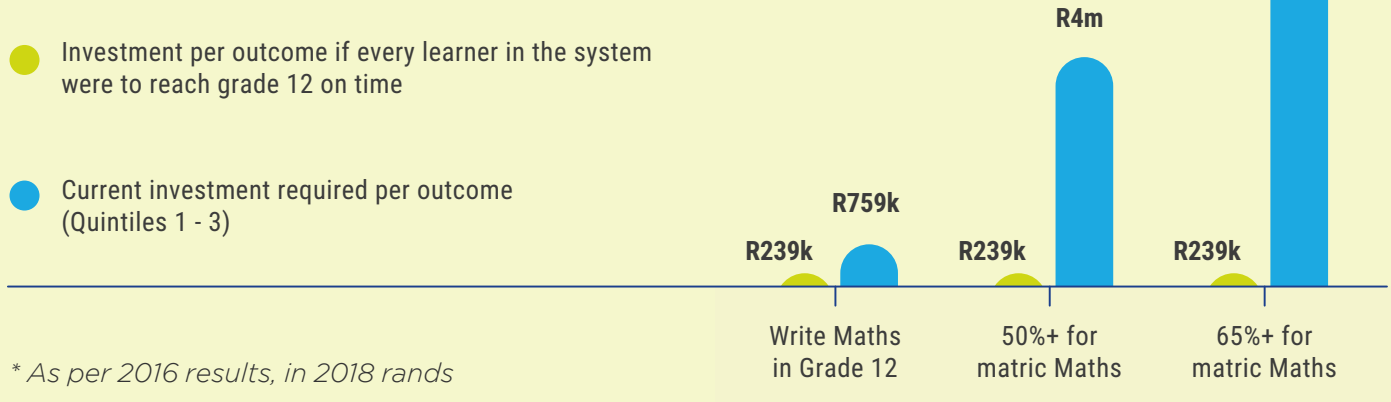
Investment per learning outcome in 2016*



** As per 2016 results, in 2018 rands*

Figure 5

Investment per Maths learning outcome in 2016*



** As per 2016 results, in 2018 rands*

THE ASP DIFFERENCE

In a context where "three percent of South African high schools create more Maths and Science distinctions than the remaining 97% put together" (Spaull 2019), there is an important opportunity to redress inequality by enabling more learners to excel.

ASPs are well-positioned to do so but are yet to deliver at scale due to financial constraints; ASPs are primarily reliant on donor funding. While the cost per learner (CPL) required for ASP participation varies greatly[12], for the most part, the price tag for large-scale roll out appears prohibitively expensive on a per learner basis. However, funding decisions need to consider the investment required per learning outcome, rather than simply the CPL.

In the examples that follow, the investments required per matric Bachelor pass and per matric Maths pass over 50% are unpacked in order to understand the ASP value add.

IkamvaYouth: Enabling more learners to matriculate with a Bachelor Pass

IkamvaYouth delivers peer-to-peer tutoring and career guidance programmes to grade 8 to 12 learners attending quintile 1 to 3 schools. IkamvaYouth provides a holistic range of support services to learners, including enriching holiday programmes, but the core offering is small group tutoring sessions facilitated by volunteer tutors (mostly university students, many of whom were previously learners in the programme themselves). Learners attend two- to three-hour sessions at least twice a week and are required to meet a minimum of 75% attendance to keep their place in the programme.

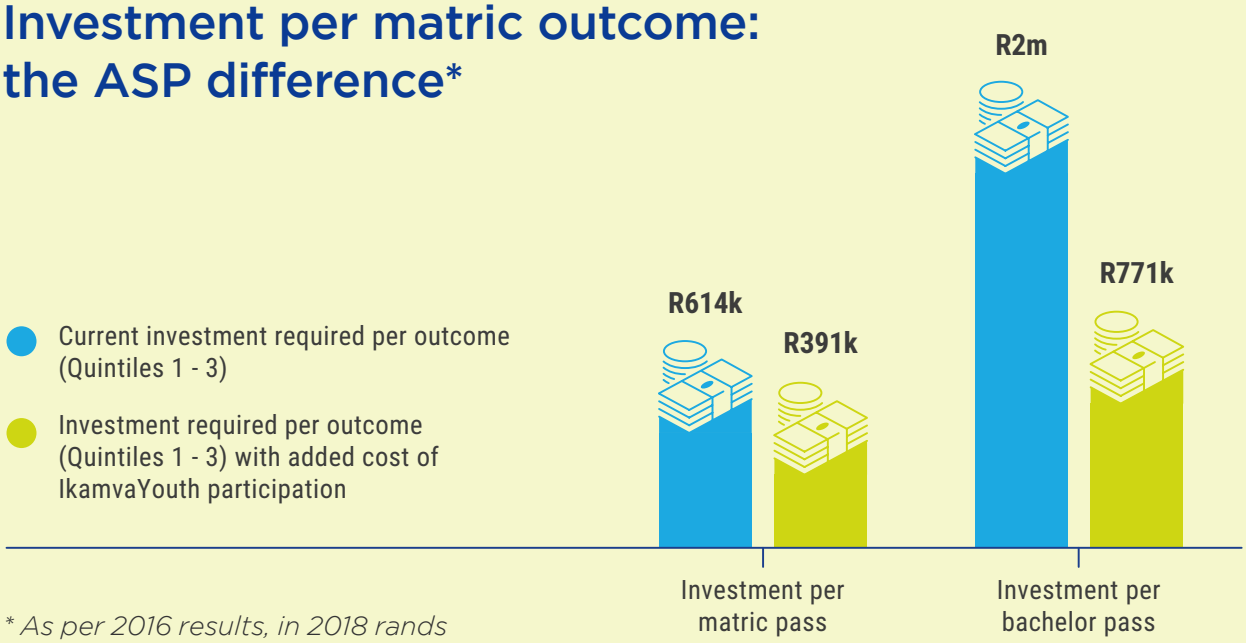
Over the last 15 years, IkamvaYouth has delivered an average 85% matric pass rate, with 43% achieving Bachelor passes. This track record of results is remarkable, given that learners are generally performing at the same level or lower than their peers when they enrol (Spaull *et al.* 2012). These results have been replicated and even exceeded by IkamvaYouth's partner organisations (participating in the Community Collaboration Programme). IkamvaYouth's Class of 2020 achieved an impressive 88% pass rate with 51% Bachelor passes. The organisation overcame lockdown challenges by leveraging its strong relationships with learners and parents; its robust learner management information system; and by rerouting funds earmarked for tutor transport to data and devices for learners and tutors.

Learners attend IkamvaYouth two to three times per week and most days of the winter holidays. It costs the organisation around R30k per learner reaching matric (participation in the programme for an average two and a half years, including the costs of repetition (around 14%) and dropouts[13].

For every matriculant attending a no-fee school, the system invests R288k over twelve years (including the costs of repetition and dropout). Despite the additional costs for participation in after-school tutoring, the investment required per matric learning outcome actually drops, as learners' likelihood of achieving good matric results dramatically increases. Hence, as illustrated in figure 6, although there is an

Figure 6

Investment per matric outcome: the ASP difference*



** As per 2016 results, in 2018 rands*

additional per learner cost of R30k for each learner that reaches grade 12, the investment per outcome actually drops by 36% per matric pass and by 63% per Bachelor pass.

A key lever in redressing inequality in South Africa is ensuring that more learners in no-fee schools matriculate with Bachelor passes, enabling them to go on to study at university. In achieving this goal, investing in learners' participation in an ASP like IkamvaYouth brings the required investment to 38% of that required when this outcome is achieved without additional support.

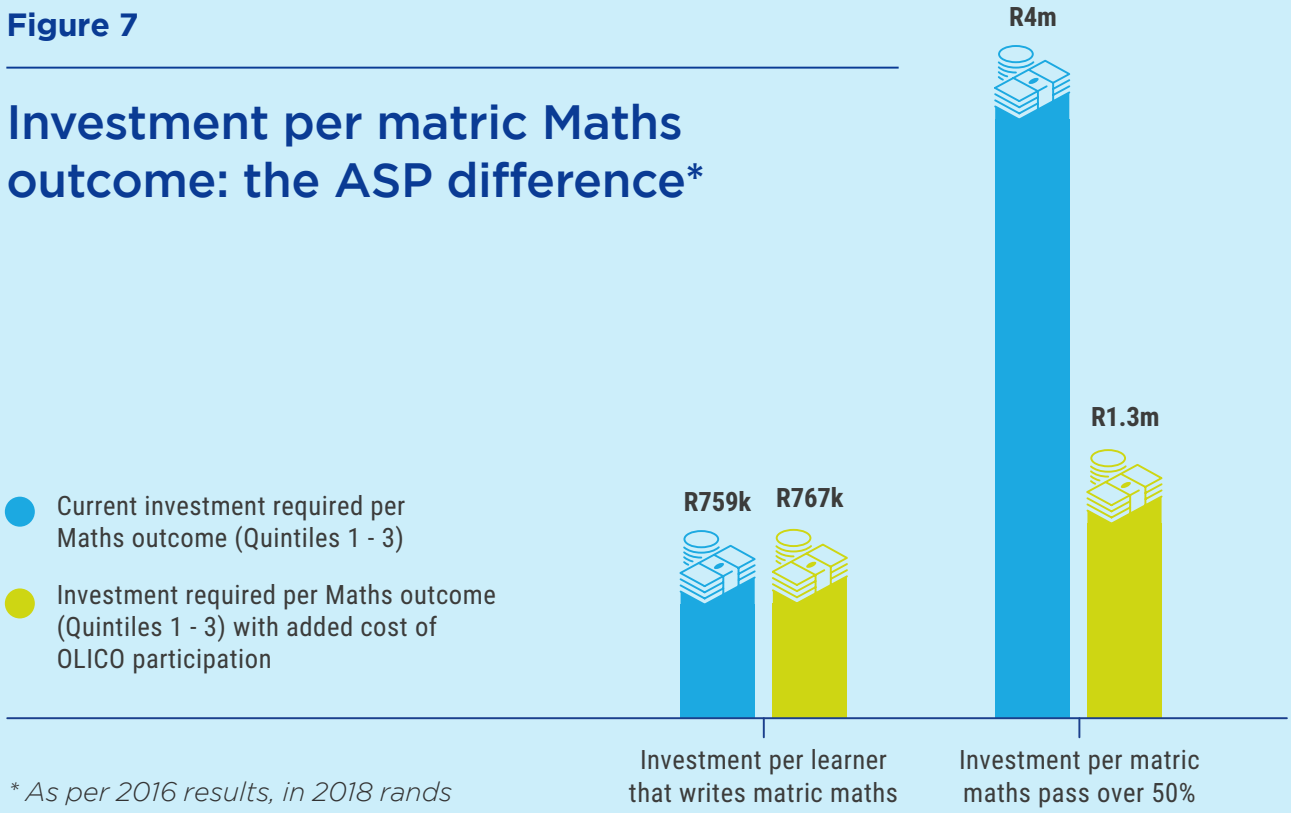
OLICO Maths: Enabling more learners to matriculate with a Maths-level Bachelor pass

OLICO Maths provides a catch-up opportunity to senior phase learners who are three to four years behind grade level, with under-developed mathematical fluencies and gaps in foundational knowledge (Youth and After School Programme Office, 2020). Free from the curriculum coverage mandate held by schools, ASPs are uniquely positioned to address learner backlogs, which are depressingly striking when it comes to Bachelor-level Maths passes. For example, quintile 1 to 4 schools in Gauteng and the Western Cape produce an average of 8 and 4 Bachelor-level Maths passes **per school** respectively.

Over the past few years, the OLICO intervention in Diepsloot has produced between 15 and 22 Bachelor-level passes per school. OLICO founder, Andrew Barrett, explored the question, "What would it take to double Bachelor-level Maths passes in the Western Cape and Gauteng?" at a recent Monitoring, Evaluation

Figure 7

Investment per matric Maths outcome: the ASP difference*



** As per 2016 results, in 2018 rands*

and Learning (MEL) Seminar[14], in positioning the use of ASPs to maximise existing in-school investments. Assuming similar results at current per learner costs, Andrew presented a very compelling scenario where, in the Western Cape for example, the Province could double the number of Maths Bachelor passes with just a R30m annual investment.

A similar comparison between the returns on investment for schooling only and schooling plus OLICO participation is depicted in figure 6. While the OLICO dataset is very small, and no causation can be established between participation in OLICO and enrolled learners' results, it is an interesting exercise nevertheless to look at the value add that this additional support could deliver to 100 learners in the event that these results are replicated.

Of the 38% of matrics in quintiles 1 to 3 who wrote Maths, 18% passed[15]. Seven percent of enrolled learners achieved over 50%, but factoring in dropouts, this decreases to 4%[16]. OLICO's track record of Maths passes over four years shows 58% of learners achieving over 50%.

This is incredibly valuable; as Maths passes over 50% are so rare, the system is investing R25m per outcome. Despite the additional cost of OLICO support (R26k per learner over 5 years), the requisite investment drops to R1.3m. With Maths performance a key lever for reducing inequality (Graven 2013), there is a compelling case to be made for scaling up this intervention and its results. In fact, even if OLICO were to deliver a fraction of its current track record at scale, investing in the programme would still yield a valuable return.

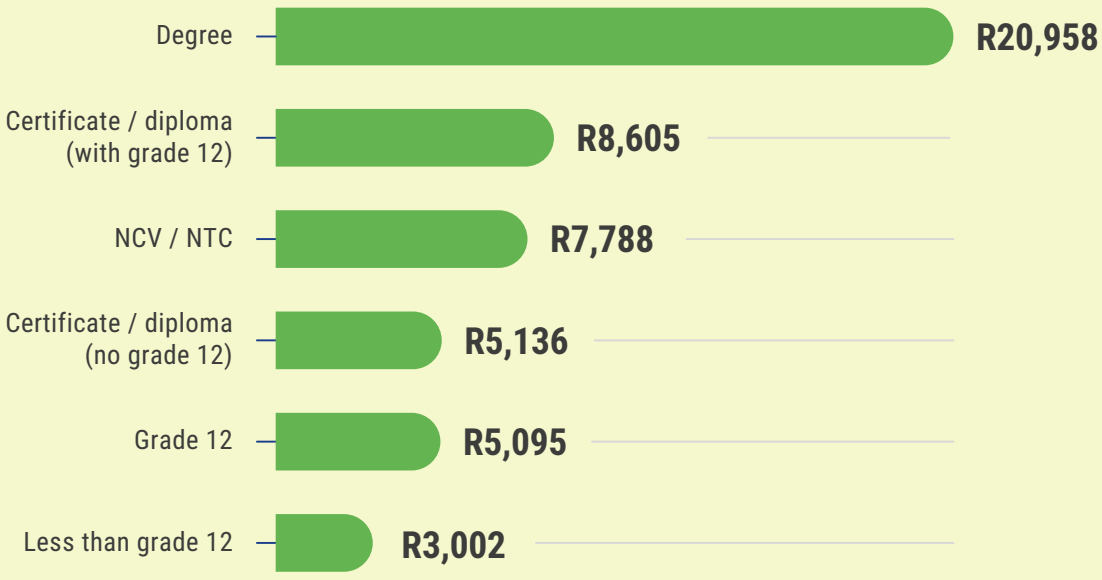
While MEL capacity in the sector still has a long way to go, there have been significant improvements in recent years, and the evidence base for the impact that local ASPs are delivering is steadily growing. Without randomising ASP enrolment, it is impossible to prove causation; we do not know whether the outcomes achieved by children motivated to enrol in ASPs are due to their ASP participation. However, given the dismal level of outcomes, it is clear that the system is currently failing motivated children, and so while more rigorous evaluations of ASPs are certainly needed[17], investments into scaling up models with a track record of delivering results need not wait.

THE SOCIAL RETURN ON INVESTING IN LEARNING OUTCOMES

Educational attainment is a key predictor of labour market outcomes, with each year of education completed, from achieving matric and above, offering extremely high return on investment, "both in terms of employment probabilities and wages earned" (Moses *et al.* 2017). Branson *et al.* (2019) show that those armed with a degree earn four times more than those with a matric, and seven times more than those without.

Figure 8

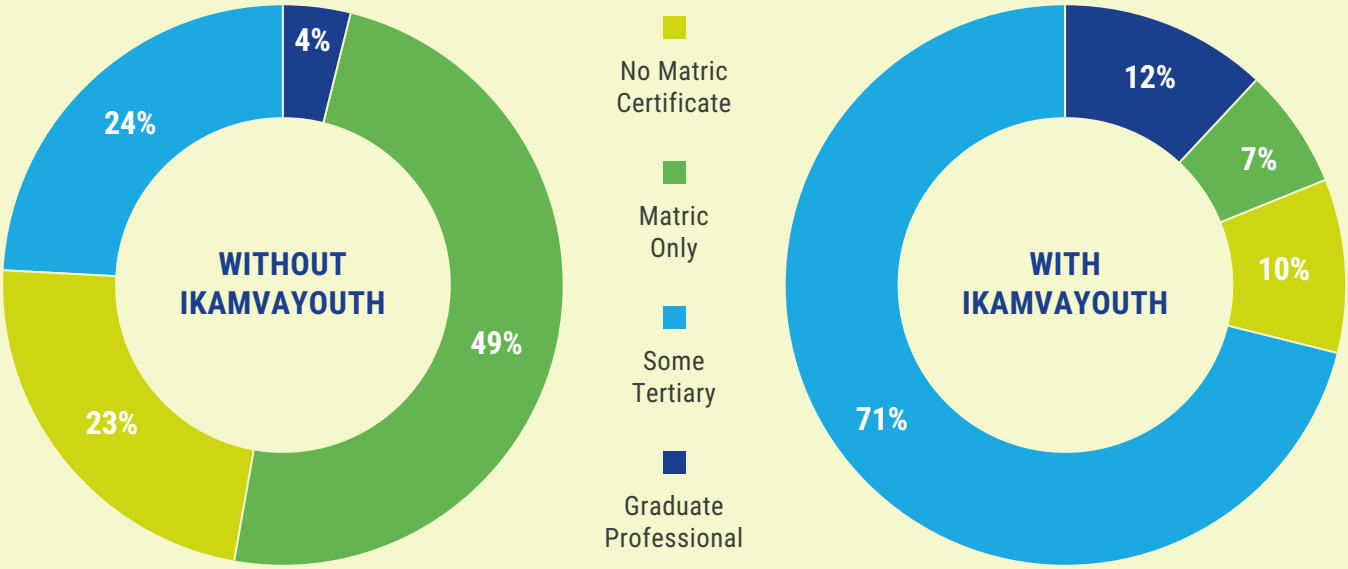
Earnings by qualification type, using the NIDS Wave 5 data



Source: Branson et al, 2019

Figure 9

Labour force composition: The ASP difference



Source: Bertha Centre, 2015

The Bertha Centre (2015) produced a "Projected Economic Impact" report, estimating the social return on investment (SROI) of the IkamvaYouth programme. Figure 9 illustrates the expected labour force composition for the cohort of matric writers pre- and post-participating in IkamvaYouth participation. "The greatest change effected under the set of assumptions is in terms of reallocating learners who may previously have only attained a matric certificate into some tertiary completion alongside a smaller increase in the proportion of graduates." The author estimated benefit-cost ratios[18] for this shift "ranging from 2.42 to 2.99", and "lifetime economic value created (net of costs)... in the range of R7.01m to 8.73m on a tax basis and to the magnitude of R24.68m to 31.16m on a wage basis for each cohort of 100 students" (Bertha Centre 2015).

When extrapolated across the potential hundreds of thousands of learners that a well-resourced ASP sector could serve, the potential economic impact is astounding. The present value of lifetime earnings through ASP participation shows a startling increase in SROI compared with more school hours. As the system grapples with its Covid-19 recovery plans, ASPs provide a significantly more affordable route for improving education outcomes.

CONCLUSION

The DBE serves all the learners in the school system (and the many more that should be, if attrition were not such a challenge). While the ASP sector is currently too small to realistically support this mandate in its entirety, it is well-positioned to move the needle on key impact metrics. Sector-wide research is urgently needed to build the evidence base beyond the few organisations able to afford evaluations, and to test whether the findings in the international research that ASP participation increases school engagement and prevents dropout are reflected in South Africa.

With COVID-19 and school closures intensifying learning backlogs in a system where so many learners were already lagging behind, we need action research to bring about needed change. In modelling different response scenarios[19], Kaffenberger (2020) finds that with some mitigation efforts, education systems could indeed come back from the crisis stronger than before. Gustaffson and Deliwe (2020) also show the significant impact that successful catch-up efforts could have on learning trajectories for South African learners.

Albright and Giannini (2021) emphasise the need to prioritise education for recovery and claim that "up-front investment in catch-up and remedial programmes will save money down the line by reducing the costs of repairing COVID-19-related damage by up to 75 percent". There is a real opportunity to scale up remedial programmes with track records of building foundational skills, and promoting rapid learning recovery for learners at risk of repetition and dropout. In their recently published paper drawing on the NIDS-CRAM Wave 3 data, Mohohlwane *et al.* (2021) emphasise that "the most effective way to prevent dropout in the years to come will be to prioritise the recovery of learning now".

Many more children need support to overcome learning backlogs and achieve outcomes that reflect their abilities as opposed to systemic injustice.

With significant additional investment, the ASP sector can provide this support. The public funding is there: whether through redistribution of non-personnel funding between quintiles; by allocating a percentage of public funding currently going to schools charging school fees of over R20,000 p.a., as suggested by Motala & Carel (2019); or by rerouting funds currently allocated to expensive programmes with insufficient evidence of their efficacy or returns on investment. A strong case can also be made for a Social Impact Bond (SIB), tied to the priorities outlined in the National Development Plan (NDP) and impact metrics in this report. However, this approach will need to be balanced with ensuring that a focus on outcomes does not impact the heart of the ASP sector; "as much as quality afterschool programmes are capable of saving money and providing a significant monetary return on the investment, many benefits to individual students, teachers, schools and communities cannot be assigned a dollar value. Time to find a passion or a skill, better self-esteem, teamwork skills, confidence, a greater sense of curiosity, a lifelong love of learning – these things are priceless. Society will absolutely reap the benefits of making an investment to create future generations of scientists, teachers, leaders, artists and thoughtful citizens" (Afterschool Alliance 2005).

All learners have the right to an enriching education, yet without significant investment, learners in under-resourced schools will continue to have a very different educational experience to those attending better-resourced schools. South Africa cannot afford to continue with staggering school dropout rates, low literacy and numeracy levels, and less than half of our learners reaching and passing grade 12. We are failing to leverage South Africa's greatest resource – the talents and energy of our young people – and an investment into the ASP sector is an investment into turning this around, to redress inequality, promote social justice and build the skills we need for a sustainable future.

APPENDIX

Investments of time & money per grade & learning outcome in 2016, Quintiles 1-3

Learning outcome / impact metric	No. of years' schooling investment per learner if every learner were to achieve learning outcome	Accumulative years' schooling for 100 learners if every learner were to achieve	Accumulative years' schooling for 100 learners to reach grade level when including repeaters & dropouts [1]	No. of learner years per impact outcome including repeaters & dropouts[2]	Cohort investment if every learner were to achieve learning outcome on time[3]	Investment required per learning outcome including dropouts & repeaters[4]
Can read for meaning (Grade 4)	4	400	454	21[5]	R7 951 600	R410 321
Can add and subtract (Grade 5)	5	500	567	23[6]	R9 939 500	R450 458
Achieves minimal level in Maths and Science (Grade 9)	9	900	1052	53[7]	R17 891 100	R1 045 138
Reaches matric (Grade 12)	12	1200	1452	15[8]	R23 854 800	R288 603
Matric Pass	12	1200	1452	31[9]	R23 854 800	R614 050
Bachelor's pass	12	1200	1452	104[10]	R23 854 800	R2 061 452
Writes matric Maths	12	1200	1452	38[11]	R23 854 800	R759 482
Achieves above 50% for Maths	12	1200	1452	207[12]	R23 854 800	R4 122 905
Achieves 65% or more for Maths	12	1200	1452	1452[13]	R28 860 332	R28 860 332

1 This is calculated by adding the accumulative years-of-schooling per 100 learners due to repetition & dropouts. For example, for grade 4: (100 learners X 4 years) + 29.2 (accumulative repeaters) + 24.9 (accumulative dropouts) = 454.

2 These are calculated by multiplying the accumulative years-of-schooling including repeaters and dropouts by the percentage of enrolled learners achieving the learning outcome. The percentages are estimates, determined using data on outcomes and percentages from various datasets, most of which speak directly to learner cohorts in 2016. These are further detailed in the endnotes below.

3 Accumulative learner years-of-schooling if every learner were to achieve outcome * R19,879. Cost per learner in 2015/2016 in 2018 rands (Spaull *et al.* 2020)

4 No. of learner years per impact outcome including repeaters & dropouts * R19,879. Cost per learner in 2015/2016 in 2018 rands (Spaull *et al.* 2020)

5 454 accumulative learner years-of-schooling / 22 (22% of learners in grade 4 can read for meaning (Howie *et al.* 2017)

6 567 accumulative learner years-of-schooling / 25 (25% of low-income learners in grade 5 can add & subtract (Reddy *et al.* 2016)

7 1052 accumulative learner years-of-schooling / 20 (20% of low-income learners in grade 9 achieve minimum level for grade 8 Maths and Science (Zuze *et al.* 2017)

8 1452 accumulative learner years-of-schooling / 100 learners reaching matric

9 1452 accumulative learner years-of-schooling / 47 (47% of Q 1-3 learners passed matric in grade 12 in 2016: 272,615 Q 1-3 matric passes / 580,155 learners who wrote). Data supplied by DBE; calculations author's own.

10 1452 accumulative learner years-of-schooling / 14 (14% of Q 1-3 learners achieved Bachelor passes in grade 12 in 2016: 78,878 Q 1-3 Bachelor passes / 580,155 learners who wrote matric). Data supplied by DBE; calculations author's own.

11 1452 accumulative learner years-of-schooling / 22 (22% of learners writing matric Maths in 2016: 219,090 Q 1-3 learners wrote grade 12 Maths in 2016 / 580,155 learners who wrote matric). Data supplied by DBE; calculations author's own.

12 1452 accumulative learner years-of-schooling / 7 (7% of Q 1-3 learners achieved 50% or more for Maths in 2016: 42,575 Q 1-3 learners achieved 50% or more for Maths in 2016 / 580,155 learners who wrote matric). Data supplied by DBE; calculations author's own.

13 1452 accumulative learner years-of-schooling * 1 (1% of Q 1-3 learners achieved 65% or more for Maths in 2016: 5,173 Q 1-3 learners achieved 65% or more for Maths in 2016 (Shepherd *et al.* 2020) / 580,155 learners who wrote). Data supplied by DBE; calculations author's own.

Years-of-schooling invested per grade due to repetition & dropout

	Repetition rates[14]	Accumulative years-of-schooling per 100 learners due to repetition	Dropout rates[15]	Accumulative years-of-schooling per 100 learners due to dropout
Grade 1	7.5%	7.5	6.6%	6.6
Grade 2	7%	14.5	5.9%	12.5
Grade 3	7.3%	21.8	6%	18.5
Grade 4	7.4%	29.2	6.4%	24.9
Grade 5	6.8%	36	5.6%	30.5
Grade 6	7.9%	42.9	6.5%	37
Grade 7	7.6%	50.5	6%	43
Grade 8	17%	67.5	11%	54
Grade 9	14%	81.5	16%	70
Grade 10	32%	113.5	17%	87
Grade 11	26%	139.5	17%	104
Grade 12		139.5	8.3%	112.3

14 For grades 1 to 7, these percentages are as per the GHS (2016) data presented by van der Berg *et al.* (2020). For grades 8 to 11, the percentages are as per van der Berg's (2020) presentation on Progression, Repetition and Dropout to DGMT.

15 2. For grades 1 to 6, these percentages are as per the GHS (2018) data. Grade 7 is author's own (conservative) estimate. For grades 8 to 11, the percentages are as per van der Berg's (2020) presentation on Progression, Repetition and Dropout to DGMT. Grade 12 is calculated as per the difference between the number of learners enrolled in matric in 2016 and the number who wrote that year.

REFERENCES

Afterschool Alliance (2005). Afterschool Programmes: A wise public investment. Afterschool Alert Issue Brief, no. 25. https://files.eric.ed.gov/fulltext/ED498165.pdf

Youth and After School Programme Office (2020). '*After School Programmes* Pulse Check Survey'. Western Cape Government

Albright, A. & Giannini, S. (2021). 'It is time to prioritise education for recovery: Longer term efforts to fund education equitably should be at the heart of the recovery from the pandemic', Aljazeera, 12 February 2021. https://www.aljazeera.com/opinions/2021/2/12/it-is-time-to-prioritise-education-for-recovery

Bertha Centre for Social Innovation & Entrepreneurship (2015). 'IkamvaYouth Estimated Economic Impact Report', University of Cape Town, Cape Town. https://drive.google.com/file/d/15EfPXpxWnvgbiBW9kwyg2Hnl6J1_mYCJ/view?usp=sharing

Böhmer, B., Burns, J. & Crowley, L. (2014). Testing Numeric: Evidence from a randomized controlled trial of a computer based mathematics intervention in Cape Town high schools. University of Cape Town, Cape Town. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/AEC_2014_-_Testing_Numeric_Evidence_from_a_randomized_controlled__-_bianca_bohmer_-_11_2014.pdf

Branson, N., Culligan, S. & Tonini, S. (2019). What and Where you Study Matters in the Labour Market: Unpacking how employment and wages vary by qualification and institution type. SALDRU, University of Cape Town, Cape Town. http://www.opensaldru.uct.ac.za/bitstream/handle/11090/999/2019-what-where-studymatters-siyaphambili.pdf?sequence=1

Chutga, A. & Kanjee, A. (2009). School money funding flaws 7(4):18–19, DOI. http://hdl.handle.net/20.500.11910/4546

Department of Basic Education. (2004). 'National Norms and Standards for School Funding: Proposals for amendments', Pretoria.

Department of Basic Education. (2018). 'Education Statistics in South Africa 2016', Pretoria. https://www.education.gov.za/Portals/0/Documents/Publications/Education%20Statistic%20SA%202016.pdf?ver=2018-11-01-095102-947

Department of Basic Education (2018a). 'Per Learner Spending Inequities in 2016', Pretoria. https://www.education.gov.za/Portals/0/Documents/Reports/Research%20Repository/Funding%201/Per%20learner%20spending%20inequities%20in%202016.pdf?ver=2019-09-09-112446-080&timestamp=1570184568871

Durlak, J.A., Weissberg, R.P., Pachan, M. (2010). 'A Meta-Analysis of After-School Programmes that seek to promote Personal and Social Skills in Children and Adolescents.' *American Journal of Community Psychology 45*: 294-309. https://pubmed.ncbi.nlm.nih.gov/20300825/

Gustaffson, M. & Deliwe, N. (2020). 'How is the COVID-19 pandemic affecting educational quality in South Africa? Evidence to date and future risks', Insight Brief. National Income Dynamics Study (NIDS) Coronavirus Rapid Mobile Survey (CRAM). https://ideas.repec.org/p/sza/wpaper/wpapers358.html

Graven, M. (2013). 'Poverty, inequality and mathematics performance: the case of South Africa's post-apartheid context', *International Journal on Maths Education*, 46(7), Springer. https://www.researchgate.net/publication/267266060_Poverty_inequality_and_mathematics_performance_the_case_of_South_Africa's_post-apartheid_context

Hoadley, U. (2020). Schools in the Time of COVID-19: Impacts of the Pandemic on Curriculum. RESEP, Stellenbosch. https://www.researchgate.net/publication/345310078_Schools_in_the_Time_of_COVID-19_Impacts_of_the_Pandemic_on_Curriculum

Howie, S., Combrinck, C., Roux, K., Tshele, M., Mokoena, G., Mcleod Palane, M. (2017). 'Progress in International Reading Literacy Study, 2016 : South African children's reading literacy achievement', CEA, Faculty of Education, University of Pretoria, Pretoria. https://www.up.ac.za/media/shared/164/ZP_Files/pirls-literacy-2016_grade-4_15-dec-2017_low-quality.zp137684.pdf

ikapadata (2019). IkamvaYouth Alumni Survey 2019 Report. http://ikamvayouth.org/wp-content/uploads/2020/06/2019-IkamvaYouth-Alumni-Survey-Report.pdf

Kaffenberger, M. (2020). Modeling the Long-Run Learning Impact of the COVID-19 Learning Shock: Actions to (More Than) Mitigate Loss. Research on Improving Systems of Education (RISE). https://riseprogramme.org/sites/default/files/2020-10/RISE%20Insight%202020_17_Modelling_Impact_0.pdf

Lilenstein, A. and Spaull, N. (2019). Expenditure on Education in South Africa: Per Learner Estimates 2008/09-2021/22

McLean, L. & van der Berg, S. (2016). Succeeding Against the Odds: A Quantitative Assessment of the effectiveness of IkamvaYouth. https://econpapers.repec.org/paper/szawpaper/wpapers281.htm

Mohohlwane, N., Taylor, S. & Shepherd, D. (2021). Schooling during the COVID-19 pandemic: An update from Wave 3 of the NIDS-CRAM data. https://cramsurvey.org/wp-content/uploads/2021/02/7.-Mohohlwane-N.-Taylor-S.-Shepherd-S.-2021-Schooling-during-the-COVID-19-pandemic-An-update-from-Wave-3-of-the-NIDS-CRAM-data.pdf

Moses, E., van der Berg, S. & Rich, K. (2017). How Unequal Education Quality Limits Social Mobility in South Africa: Synthesis report for the Programme to Support Pro-Poor Policy Development (PSPPD). https://ssrn.com/abstract=2973759

Motala, S. & Carel, D. (2019). Educational Funding and Equity in South African schools. In *South African Schooling: The Enigma of Inequality* (pp.67-85) Springer International Publishing. https://www.researchgate.net/publication/337033802_Educational_Funding_and_Equity_in_South_African_Schools

Oyenubi, A. & Kollamparambil, U. (2020) COVID-19 and depressive symptoms in South Africa. NIDS-CRAM Wave 2. https://cramsurvey.org/wp-content/uploads/2020/09/12.-Oyenubi-A.-_-Kollamparambil-U.-2020-COVID-19-and-depressive-symptoms-in-South-Africa.pdf

Oyenubi, A. & Kollamparambil, U. (2021) How has the easing of lockdown influenced depressive symptoms in South Africa? NIDS-CRAM Wave 3. https://cramsurvey.org/wp-content/uploads/2021/02/9.-Oyenubi-A.-Kollamparambil-U.-2021-How-has-the-easing-of-lockdown-influenced-depressive-symptoms-in-South-Africa.pdf

Parker, R., Morris, K. & Hofmeyr, J. (2020). Education, inequality and innovation in the time of Covid-19. JET Education Services, Johannesburg. https://www.jet.org.za/resources/theme-9-final-july-2020-parker-et-al.pdf/view

Reddy, V., Isdale, K., Juan, A., Visser, M., Winnaar, L., & Arends, F. (2016). 'TIMSS 2015: Highlights of Mathematics Achievement amongst Grade 5 South African Learners.' Human Sciences Research Council, Pretoria. https://www.iea.nl/publications/study-reports/national-reports-iea-studies/timss-2015-highlights-mathematics

Reddy, V. Winnaar, L., Juan, A., Arends, F., Harvey, J., Hannan, S., Namome, C., Sekhejane, P., Zulu, N. (2020). TIMSS 2019: Highlights of South African Grade 9 Results in Mathematics and Science: Achievement and Achievement Gaps. Human Science Research Council, Pretoria. https://www.timss-sa.org/download/TIMSS-2019_Grade9_HSRC_FinalReport.pdf

Shepherd, D.L. & Van der Berg, S. (2020). 'Analysing matric data to identify "promising" schools in mathematics performance'. RESEP Working Paper WP16/2020. Department of Economics, Stellenbosch University, Stellenbosch. https://econpapers.repec.org/paper/szawpaper/wpapers351.htm

Spaull, N., Burger, R., Burger, C., Van der Berg, S., Van Wyk, C. & Dzivakwi, R. (2012). Against the odds: An evaluation of the IkamvaYouth programme. Department of Economics, Stellenbosch University, Stellenbosch. http://wordpress.ikamvayouth.org/wp-content/uploads/2018/07/Impact-Evaluation-2013.pdf

Spaull, N. & Kotzé, J. (2015). 'Starting Behind and Staying Behind in South Africa: The Case of Insurmountable Learning Deficits in Mathematics.' *International Journal of Educational Development*,*41*:13-14. https://www.sciencedirect.com/science/article/abs/pii/S0738059315000036

Spaull, N. (2018). Chapter 3: Education. In *Provincial Budgets and Expenditure Review: 2010/2011-2016/2017*. http://www.treasury.gov.za/publications/igfr/2015/prov/03.%20Chapter%203%20-%20Education.pdf

Spaull, N. (2019). 'Equity: A price too high to pay?' In Spaull, N. & Jansen, J. (eds) *South African Schooling: The Enigma of Inequality*, Springer International Publishing.

Spaull, N., Lilenstein, A., & Carel, D. (2020). The Race Between Teacher Wages and the Budget: The case of South Africa 2008-2018. Research on Socioeconomic Policy (RESEP). Stellenbosch University, Stellenbosch. https://nicspaull.files.wordpress.com/2020/06/spaull-lilenstein-carel-2020-the-race-between-teacher-wages-and-inflation-19jun20-1.pdf

Statistics South Africa (2017). Education Series Volume III: Educational Enrolment and Achievement, 2016/Statistics. South Africa. http://www.statssa.gov.za/publications/Report%2092-01-03/Education_Series_iii.pdf

Van der Berg, S., Wills, G., Selkirk, R., Adams, C. & van Wyk, C. (2019). 'The cost of repetition in South Africa', Working Papers 13/2019, Stellenbosch University, Department of Economics. https://ideas.repec.org/p/sza/wpaper/wpapers327.html

Van der Berg, S. (2020). 'Dropout and repetition – Twin symptoms of deeper educational problems'. Virtual Seminar on After School Programmes: Input to Panel 2. https://drive.google.com/file/d/1rLo7sK4KELWwAjzZMrxRx-OeD6wnRs9F/view

Van der Berg, S., van Wyk, C. & Selkirk, R. (2020a). 'Schools in the time of COVID-19: Possible implications for enrolment, repetition and dropout', Working Papers 20/2020, Stellenbosch University, Department of Economics. https://ideas.repec.org/p/sza/wpaper/wpapers355.html

Waller, C.E., Wheaton, P. & Asbury, N. (2016). 'Mechanisms for inspiring action in South African youth.' *African Evaluation Journal, 4.* https://aejonline.org/index.php/aej/article/view/120/291

Weybright E.H., Caldwell, L.L, Xie, H., Wegner, L. & Smith, E.A. (2017). Predicting secondary school dropout among South African adolescents: A survival analysis approach. *South African Journal of Education*, *37*(2). https://www.ajol.info/index.php/saje/article/view/157308

World Bank. (2020). The COVID-19 Pandemic: Shocks to Education and Policy Responses. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/33696

Youth and After School Programme Office. (2020). Re-thinking South Africa's Education Ecosystem: Reflective Essay & Framing Piece for the ASP Research Symposium hosted by Stellenbosch University, CHEC and the Western Cape Government. https://drive.google.com/drive/u/0/folders/1luW_0nLJlFvZmKEtYuXF-ZR3INJycHH3

Youth and After School Programme Office. (2020a). Re-thinking South Africa's Education Ecosystem: Report on the ASP Research Symposium, 28-30 October, 2020. https://drive.google.com/drive/u/0/folders/1luW_0nLJlFvZmKEtYuXF-ZR3INJycHH3

Zuze, L., Reddy, V., Visser, M., Winnaar, L. & Govender, A. (2017). 'TIMSS 2015 Grade 9 National Report: Understanding mathematics and science achievement amongst Grade 9 learners in South Africa', HSRC, Pretoria. https://www.iea.nl/publications/study-reports/national-reports-iea-studies/timss-2015-grade-9-national-report

ENDNOTES

1 South African schools are categorised in quintiles 1 to 5. "Quintile 1 is the group of schools in each province catering for the poorest 20% of learners. Quintile 2 schools cater for the next poorest 20% of schools, and so on. Quintile 5 schools … cater for the least poor 20% of learners." (DBE, 2004).

2 The years-of-schooling have been calculated using estimates for repetition (Van der Berg *et al.* 2019) and dropout (Van der Berg *et al.* 2020) for quintile 1-3 learners.

3 The "After School Sector" comprises programmes run largely by NGOs (often in partnership with tertiary institutions, government departments, foundations and/or companies), serving learners in quintile 1-3 schools, and/or their parents, teachers and principals (Youth and Afterschool Programme Office, 2020). The diversity of programmes, models, approaches and focus areas are broad across the sector, but what unites these initiatives is a common goal to enable learners to thrive and succeed. The literature suggests that holistic programming that promotes whole child development delivers optimal results. For example, a tutoring programme where participants build strong relationships with role models (near-peers from their communities who are enrolled in tertiary institutions) will see both improved academic outcomes and increased life skills such as confidence and motivation; sports programmes integrating health programming alongside sporting activities will likely see both improved understanding of health issues, inter-personal skills and sports adeptness.

4 Noted by Van der Berg in his presentation at the After School Programmes (ASPs) Research Symposium. https://drive.google.com/drive/folders/1luW_0nLJlFvZmKEtYuXF-ZR3lNJycHH3

5 From Servaas van der Berg's presentation to DGMT in 2020

6 An audit of ASPs in Gauteng (UCLA, 2017) found 82 single-site and 25 multi-site programmes, serving a small fraction of the 2.4 million children enrolled in public schools in the Province.

7 Data availed to researcher by TIMSS team at the HSRC.

8 For example, 77% of learners in no-fee schools reported teacher absenteeism as a problem in the TIMSS (Zuze *et al.* 2015) survey.

9 Just under R17,000 per learner.

10 Many ASPs enrol young people as volunteers and staff members, and so while the stated focus is school-attending learners, the sector provides significant opportunities for work experience and employment to youth aged 18-35.

11 All of the data used for these calculations (author's own) pertains directly to the 2016 cohort, besides the TIMSS results which are for the 2017 cohort.

12 CPL is impacted by the size, maturity, reach, budget and geographical location of the organisation, as well as whether the programme works directly with learners (and the practitioner: learner ratios), or indirectly (e.g. through teacher training or principal leadership development), as well as the number and duration of sessions offered, and materials and equipment required. As multiple factors influence the cost per learner (CPL) for ASP participation, CPL comparisons between programmes need to allow for contextual differences.

13 IkamvaYouth is only able to measure dropout from the programme, rather than school dropouts, due to data access challenges. Hence, in calculating the investment required per participating learner that reaches matric, dropout percentage estimates for quintile 1 to 3 schools (Van der Berg, 2020) are used. IkamvaYouth's grade repetition rates are far lower than those of quintile 1 to 3 schools generally, and as grade repetition is a key indicator of dropout, it is most likely that this proxy overestimates school dropouts for IkamvaYouth.

14 The ASP Research Symposium held in 2020 featured a follow-on MEL seminar.

15 2016 results are used as this is the year for which the requisite information is accessible to calculate the DBE investment per outcome.

16 Calculations author's own, with data provided by DBE.

17 Randomised Control Trials (RCTs) are expensive and time-consuming, and given the urgency with which remedial support is required, a less-rigorous methodology is recommended: The extent to which ASPs are delivering impact can be gleaned through analyses comparing the educational outcomes of learners with similar academic results and demographics (age, socio-economic status) in the same grades at the same schools who have not attended, or have received a lower dosage of ASP attendance, with those who have participated in an ASP and achieved a minimum dosage of attendance. By studying sufficiently large numbers of learners in this way, across a variety of organisations, contexts, and years, we can improve our knowledge of ASPs' impact. However, in order to conduct this analysis, access to individual learner data is required, and so partnerships with the DBE and ASPs for data access, as well as systems and processes to ensure Protection of Personal Information Act (POPIA) compliance are needed.

18 "A benefit-cost ratio (BCR) is a ratio used in a -benefit analysis to summarize the overall relationship between the relative costs and benefits of a proposed project. BCR can be expressed in monetary or qualitative terms. If a project has a BCR greater than 1.0, the project is expected to deliver a positive net present value to a firm and its investors" (Investopedia).

19 In modeling the impact of the COVID-19 learning shock, Kaffenberger uses a pedagogical production function (PPF) which models the learning gained by children at different points in a student distribution in a year of schooling. "The PPF is what, on average, a child with a certain skill level can learn at a certain grade level." The skill level at the onset is a key function of the result that comes from attending school, and without remediation, children with low skill levels cannot keep up without remediation. "They begin to fall outside the range of the PPF (i.e. outside the range of the curriculum and instruction) … cannot engage with the material … and hence make no learning gains."

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