

SOCIAL RETURN ON INVESTMENT ANALYSIS:

measuring social impact
in education



KAGISO
TRUST
Overcoming poverty



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TABLE OF CONTENTS

About Kagiso Trust	9
Executive Summary	10
Scope and Objective	10
Findings and Recommendations	11
Introduction to the study	13
Programme brief	13
Structure of this report	13
Section 1: Contextual Analysis	14
1.1 Societal Challenges	14
1.1.1 Education in South Africa	14
1.1.2 Challenges in the education system in South Africa	14
1.1.3 Consequences of educational challenges on learners	15
1.1.4 Negative impact of the current education system	15
1.1.5 Positive impact of improved educational outcomes	18
1.1.6. Background on the Kagiso Trust Beyers Naudé Schools Development Programme (BNSDP)	18
1.1.7 Kagiso Trust and BNSDP	19
1.1.8 Overview of the programme	19
1.1.9 The BNSDP programme in Limpopo Province	20
1.2 Socio-economic Analysis of Programme Environment	20
1.2.1 Geographical and spatial context: Limpopo Province and Sekhukhune District	20
1.2.2 Demographic analysis	21
1.2.3 Economic activity	25
1.2.4 Socio-economic factors	25
1.2.5 National and provincial academic results analysis	26
1.2.6 Findings relevant to this study	28
1.3 Best Practices/Benchmarking Study	28
1.3.1 The Care Support Teaching and Learning (CSTL) Programme	28
1.3.2 The Global Partnership for Education (GPE) Programme	29

Section 2: SROI Study	31
2.1 SROI approach and methodology	31
2.1.1 Methodology	31
2.1.2 SROI principles	31
2.1.3 Benefits of an SROI	31
2.2 Scope and limitations	31
2.2.1 Scope of the SROI	31
2.2.2 Theory of Change	32
2.2.3 Limitations to the study	33
Section 3: Stakeholders	34
3.1 Stakeholder engagement	34
3.1.1 Stakeholder identification and mapping	34
3.1.2 Sampling process	35
3.1.3 Sampling parameters	35
3.1.4 Stakeholder engagement methodology	35
Section 4: Key findings	36
4.1 Mapping and evidencing outcomes	36
4.1.1 Identifying inputs, outputs and verifying outcomes	36
4.1.2 Identifying outcomes	36
4.1.3 Identifying indicators	43
4.1.4 Financial proxies	51
4.2 Establishing and calculating impact	60
4.2.1 Outcome start	60
4.2.2 Outcome duration	60
4.2.3 Discounting factors	60
4.2.4 Assumptions	62
4.3 Social return of the Kagiso Trust BNSDP	65
4.3.1 Kagiso Trust BNSDP investment	66
4.3.2 Parameters pertaining to the Impact Map	66
4.3.3 Impact created per stakeholder group	67
Section 5: Conclusion	68
Section 6: Recommendations	71
Bibliography	74-75

ACRONYMS

Acronym	Description
ABET	Adult Basic Education and Training
AKT	About Kagiso Trust
ANA	Annual National Assessments
BNSDP	Beyers Naudé Schools Development Programme
COP	Develop communities of practice
CPF	Community Police Forums
CSTL	Care Support Teaching and Learning
DWSD	District Whole School Development
DoE	Department of Education
ECD	Early Childhood Development
EDF	Education Development Fund
EMIS	Education Management Information System
FET	Further Education and Training
FGDs	Focus Group Discussions
GDP	Gross Domestic Product
GP	General Practitioner
GPE	Global Partnership for Education
ICT	Information and communications technology
IMF	International Monetary Fund
IRR	The Institute of Race Relations
LDP	Local Development Plan
LSM	Living Standard Measure
M&E	Monitoring and Evaluation
MoPSE	Ministry of Primary and Secondary Education
NDP	National Development Plan
NSC	National Senior Certificate
PDoE	Provincial Department of Education
PLAP	Performance Lag Address Programme
PV	Present Value
ROI	Return on Investment
SACAP	South African College of Applied Psychology
SAHRC	South African Human Rights Commission
SAMJ	South African Medical Journal
SGB	School Governing Body
SMART	Specific, Measurable, Achievable, Relevant and Timebound
SROI	Social Return on Investment Study
TALIS	Teaching and Learning International Survey
ToC	Theory of Change
TWG	Technical Working Group
UNICEF	United Nations Children's Fund
ZELA	Zimbabwe Early Learning Assessment

LIST OF TABLES

Table: Kagiso Trust's 30-year Strategic Architecture)	9
Table 1: Challenges in the South African education system (Kagiso Trust, 2016)	14-15
Table 2: Stakeholders of the BNSDP programme	20
Table 3: Population in Limpopo Province by group/race	22
Table 4: Number of people with the highest qualification in Limpopo by district 2008 and 2016 (aged 20+) (Limpopo Provincial Government: Provincial Treasury, 2018)	23
Table 5: Employment per industry in Limpopo (Statistics SA, 2018)	24
Table 6: Comparison of NSC pass rates: 2016 – 2018 across provinces (Kagiso Trust, 2019)	27
Table 7: Gateway subject 2018 average % achieved	27
Table 8: Successes, challenges and lessons learnt from the CSTL programme/initiative	29
Table 9: Successes, challenges and lessons learnt from the GPE programme	30
Table 10: List of limitations	33
Table 11: Stakeholder inclusion and exclusion rationale	34
Table 12: Sample population vs sample engaged	35
Table 13: Stakeholder input values	36
Table 14: Evidence of outcomes - learners	38
Table 15: Evidence of outcomes for teachers	40
Table 16: Evidence of outcomes for principals	41
Table 17: Evidence of outcomes for the Department of Education	42
Table 18: Evidence of outcomes for the community	43
Table 19: Indicator quantities	51
Table 20: Financial proxies	61
Table 21: Discounting factors sliding scale	62
Table 22: Monetary values of impact	65
Table 23: Investment and operational costs	66
Table 24: Analysis of impact value per stakeholder group	68

LIST OF FIGURES

Kagiso Trust's 30-year Strategic Architecture	9
Figure 1: Aspects of the context included in the study	13
Figure 2: The state of education in South Africa (Carelse, 2018)	14

Figure 3: Challenges in the education value chain (Kagiso Trust, 2016)	15
Figure 4: Unemployment rates by level of education for the period 2008 to 2017 (International Montetary Fund, 2019)	16
Figure 5: Kagiso Trust model	19
Figure 6: Education Development Framework	19
Figure 7: Map of Limpopo and Sekhukhune	21
Figure 8: Population by group/race in Sekhukhune (2016) (Sekhukhune District, 2018)	22
Figure 9: Population by age group (2016)	22
Figure 10: Growth rate of educational attainment in Limpopo and South Africa	22
Figure 11: Total number of matriculants who sat exams and the pass rate in Limpopo	23
Figure 12 : Q4 2018 Provincial Unemployment rates	24
Figure 13: GDP, 4th quarter 2018	25
Figure 14: Type of dwelling in Sekhukhune (2016)	26
Figure 15: National Certificate/Matric Pass Rate (2018)	26
Figure 16: Challenges that prevent youth from progressing	28
Figure 17: SROI methodology	31
Figure 18: Theory of change	32
Figure 20: Mobile classroom at a school that is without sufficient classrooms	52
Figure 21: Relationship between discounting factors	62
Figure 22: Calculating the SROI	66
Figure 23: SROI Ratio	66
Figure 24: Impact value across stakeholders	67
Figure 25: Recommendations	73

ABOUT KAGISO TRUST

Kagiso Trust (KT) was established as an anti-apartheid organisation in 1985, using empowerment as a tool to fight the oppressive regime. With the advent of democracy in 1994, the Trustees decided to take the Trust in a different direction. Although the regime was abolished, its after-effects lingered and socio-economic challenges continue today.

KT aims to address these inequalities by helping to bolster development in communities through its programs in education development, socioeconomic development and institutional capacity building in local government and civil society.

KAGISO TRUST'S 30-YEAR STRATEGIC ARCHITECTURE

VISION	WHAT KT HAS TO OFFER	A prosperous, peaceful, equitable and just society.			
MISSION	WHAT KT HAS TO DELIVER	to contribute to development through sustainable funding, with like-minded partnerships and innovative scalable development models.			
VALUES	WHAT WE STAND FOR	Integrity Accountability Passion for Development Hands-on. Bottom-up Approach			
STRATEGIC GOALS	HOW KT WILL DELIVER	To extend Educational development programmes	To promote and support Socio-economic Development	To support strategic institutional capability development for sustainability	To ensure financial sustainability of Kagiso Charitable Trust

Kagiso Trust sets itself apart from other organisations through its ability to relate to ordinary people; the very people it aims to empower. Led by the values of integrity, accountability, a passion for development, and a belief in a hands-on, bottom-up approach, KT has proved itself an effective facilitator of sustainable development.

KT's commitment to a society built on liberty, justice, and freedom from poverty, remains as strong as ever.



EXECUTIVE SUMMARY

Scope and Objective

This is a forecast Social Return on Investment (SROI) analysis of the Beyers Naudé Schools Development Programme (BNSDP) that will be implemented by Kagiso Trust (KTs) District Whole School Development (DWSD) education model in the Riba Cross Education District in the Greater Sekhukhune District of Limpopo Province, South Africa.

This study looks forward at the potential impact that can be created if Kagiso Trust and the Department of Education implement the education programme over a period of 5 years. The purpose of this study was not to evaluate the programme design but to assess the potential impact.

SROI is a framework for measuring and accounting for the broader concept of value. SROI measures change in ways that are relevant to the stakeholders who experience or contribute to the change. It articulates the story of how change is created by measuring the outcomes and uses monetary values to represent them, enabling a ratio of benefits to costs to be calculated.

As a social education investor, Kagiso Trust is implementing the DWSD education model in partnership with the Limpopo Department of Education and has commissioned this analysis in order to understand the BNSDP impact to better validate the programme design and strategy. The objectives of the forecasted SROI study are to:

- Provide an in-depth analysis of the impact the programme will have on the key stakeholders, based on the findings and results from stakeholder interviews, surveys and secondary research;
- A forecast of the social value that the programme will derive for key stakeholders based on the envisioned outcomes of the programme; and
- The ROI the programme will yield compared to the capital invested.

This analysis is a pilot to test the SROI methodology which has gained global popularity as the method to measure the social impact of any intervention. Kagiso Trust is looking at innovative and different ways of institutionalising programme measurement tools and addressing impact evaluation, which will address the need to communicate such impact to a broader (and external) base of stakeholders.

Based on the positive changes that were experienced in the Free State and the successful track record of Kagiso Trust's programmes, this SROI analysis looked retrospectively at how stakeholders in Free State experienced the BNSDP initiative in order to understand the social value created in the past to project similar, but customised, outcomes for Limpopo, taking into consideration the different context and environment. This forecast is a benchmark for the measurement of impact and value creation (cumulatively through the life span of this initiative in Riba Cross) to be achieved by the BNSDP programme in the future.

The BNSDP aims to eradicate poverty, uplift and empower poor communities through education. There are three main objectives of the programme:

- Enhancing the capacity of the leadership in schools;
- Improving the quality of the curriculum in schools; and
- Enhancing the quality of infrastructure.

Although the programme is teacher centred, the ultimate impact is to improve learner performance and the schooling system as a whole. This is achieved through education interventions that not only focus on the results of learners but also on transforming educators as well as leadership in schools and communities.

Understanding the environment in which the programme will be implemented was key to interpreting and determining the study findings. A contextual analysis study was therefore conducted to inform what considerations needed to be taken into account when implementing the BNSDP's District Whole School Development education model and how they could affect results. The main purpose of the contextual analysis was to understand the following:

- Societal challenges related to the education system in South Africa; and
- Socio-economic factors in Limpopo and Sekhukhune District of Limpopo (where the Riba Cross Education District is located).

As predicted, a crucial finding from the contextual analysis was that poverty and poor educational outcomes are interconnected. Poverty results in poor educational outcomes, and poor educational outcomes are a result of poverty. Low educational outcomes have a negative effect on the economy and society, particularly in smaller communities as are found in Limpopo which experiences the second worst academic results from all nine provinces in South Africa. There is a clear linkage between the societal challenges that arise from the low education levels and the poor education system in the province and the socio-economic challenges in Limpopo and Sekhukhune District (where Riba Cross Education District is located). Consequently, the Province and District are compromised by the low education levels and poor education system.

Findings and Recommendations

The SROI analysis identified a list of five (5) key stakeholders who will be involved in the BNSDP. Stakeholder engagement and interviews were executed by interviewing and surveying schools that will be part of the intervention sample. Some of the stakeholders were involved in the pilot programme in 2009, with successful outcomes. This analysis is conservative, and to avoid over claiming of outcomes, only looked at those outcomes deemed material, in line with SROI principles. Conservative assumptions were also used throughout the analysis: including for the duration of outcomes, attribution to other programmes or interventions and understanding of what would have happened regardless (in the absence of this programme).

As a result, from this SROI analysis we can conclude the following:

An investment of R 400 000 000 could potentially create R2 613 936 038 of present value, resulting in an indicative SROI ratio of 6.53:1. That is, for every R1 invested in the BNSDP, R6.53 is returned in social value.

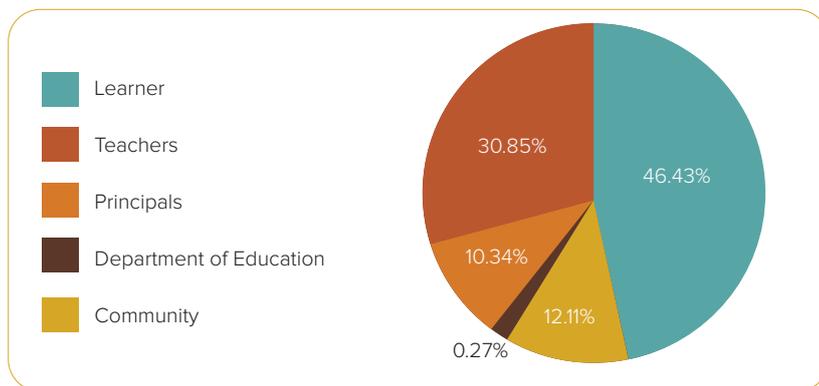
$$\text{SROI Ratio} = \frac{\text{PV of social value created}}{\text{Value of total investments}} = \frac{\text{R 2 613 936 038}}{\text{R400 000 000}} = \text{R6.53}$$

SROI Ratio

Data used for this forecast SROI analysis was based on a combination of BNSDP projections, stakeholder engagement, secondary research and data from the Free State, that triangulated information, giving this analysis a strong basis.

The SROI ratio stays above par (1:1) even when major assumptions are tested in the sensitivity analysis. As such, the SROI ratio of 6.53:1 should be considered as a baseline for future evaluations.

Specific stakeholder impact is highlighted in the graph below:



Impact per stakeholder (%)

Learners who are the ultimate beneficiaries and who are supported via the programme to improve their educational outcomes receive the greatest impact, yielding 46.43% of the total net positive impact that is created by the programme. This is in alignment with the overall purpose of the programme.

Learners

Generate 46.43% of the total impact that is created by the programme. The forecasted outcomes for learners are:

- More self-awareness and leadership skills gained, leading to a reduction in at risk behaviour (4.22% of learner outcomes);
- Access to resources, an enhanced environment and mechanisms that will lead to an improvement in the learner’s defined knowledge and competencies (81.23%);
- Improvement in the matriculation pass of learners and the quality of passes which enables learners to increase their chances to participate in employment opportunities and earn an income (3.22%); and
- Improved health and sanitation for learners leading to a reduction in illnesses (11.34%).

Community

Generates 30.85% of the total impact that is created by the programme. The forecasted outcomes for the community are:

- Reduction in the burden on family members to provide care for their children (4.20%); and
- Increase in the circular flow of economic activity in Sekhukhune District (95.80%).

The value created by the BNSDP’s District Whole School Development education model, in terms of monetary impact, is reflected below.

Teachers

Generates 12.11% of the total impact that is created by the programme. The forecasted outcomes for teachers are:

- Regain a sense of purpose in their profession demonstrated by being more accountable and professional (37.45% of teacher outcomes);
- A positive change in the behaviour demonstrated by learners leading to teachers feeling safer (3.10%);
- Increase in teacher productivity as a result of better time management and planning (51.20%); and
- Enhanced curriculum delivery executed by teachers resulting from an improvement in their knowledge, skills and resources of teachers (8.26%).

Department of Education

Generates 10.34% of the total impact that is created by the programme.

The forecasted outcomes for the Department of Education are:

- More support for schools as a result of district officials (district and circuit managers) increasing their capacity and improving their planning and coordination (100%).

Principals

Generates 0.27% of the total impact that is created by the programme.

The forecasted outcomes for principals are:

- Improved accountability by principals (57.59% of principal outcomes); and
- Empowered principals as a result of increased leadership skills and confidence (42.41%).

Stakeholder	Evidence outcomes	Impact per outcome	Total impact
Learners	Decrease in 'at risk' behaviour as a result of improved self-awareness, leadership skills and future prospects	R16 171 594	R383 574 807
	Improved acquisition of defined knowledge and competencies as a result of improved school environment, learning mechanisms, infrastructure and quality of teaching	R311 578 432	
	Improvement in the matriculation pass rate	R12 336 061	
	Access to safe and clean toilet facilities	R43 488 720	
Teachers	Increased sense of purpose amongst teachers resulting in an improvement in their behaviour and accountability	R37 458 990	R100 033 840
	Improved safety of teachers as a result of improved learner behaviour	R3 099 541	
	Improved productivity as a result of better time management (implementation of better teacher planning, classroom management)	R51 216 576	
	Improved knowledge, skills and resources for teachers leading to better curriculum delivery	R8 258 733	
Principals	Increased accountability of principals	R1 307 261	R2 269 978
	Improved leadership, confidence and empowerment of principals	R962 717	
Department of Education	Increase in the district official's (district and circuit) capacity, coordination and support to the schools	R 85 398 958	R 85 398 958
Community	Reduction in the burden on family members to provide care for their children (glasses, feeding scheme, school uniforms etc.)	R10 693 429	R254 852 931
	Increase in the circular flow economic activity in Sekhukhune District of	R244 159 502	

Analysis of impact value per stakeholder group

Recommendations

Based on the findings of this forecast SROI analysis, the following actions are recommended:

- The outcomes identified should form the basis of an evaluation framework to track and monitor the outcomes to be achieved as the programme is implemented.
- Conduct a thorough baseline study to understand the current situation in schools and to assess targets against.
- Build key partnerships in order to deliver on aspects that are necessary for the programme to achieve its objectives but are outside of the programmes scope such as partnerships with churches for the provision of space for learners to attend after-school classes.
- Parental and community engagement is going to be necessary to sustain the programme outcomes. Getting these key stakeholders involved is crucial.

INTRODUCTION TO THE STUDY

Programme brief

In response to the increasing necessity to implement value for money and impactful programmes whilst paying attention to its effectiveness, Kagiso Trust is adapting and piloting an impact methodology based on measuring and valuing social and education outcomes against the investment made.

Kagiso Trust commissioned IQbusiness to conduct a Forecast SROI study on the implementation of the BNSDP's District Whole School Development Programme in Riba Cross Education District in Limpopo Province.

- The following research questions were formulated for the SROI analysis:
- What is the social value that will be created by the BNSDP whole school development programme?
- How can the forecasted monetary value of intended and unintended changes that will be created by the programme, be used to validate the investment?
- What considerations need to be accounted for to increase the impact the programme will have in Limpopo?

The SROI analysis aimed to provide the BNSDP with the following:

- The identification and collation of the range of forecasted outcomes generated by the programme for key stakeholders who are tangibly involved in the programme;

- An understanding of the forecasted value of these outcomes for the various stakeholder groups;
- The development of appropriate metrics that will enable Kagiso Trust and Department of Education to quantify outcomes;
- A monetary valuation of the forecasted outcomes in comparison to the investment. In other words, the value that will be obtained (in rand terms) for every rand spent;
- A clear analysis and interpretation of results for stakeholders (e.g. sponsors) of the impact and value that will be derived from the programme; and
- An articulation of the story of change that is predicted to occur, presented in a concise report.

As part of the Social Return on Investment (SROI) assessment, a contextual analysis was conducted to understand the important features of the micro and macroenvironment in which the BNSDP operates in, as well as the specific aspects that will be of importance to the implementation of the BNSDP in the Sekhukhune District of Limpopo.

A consideration of the context allows for the accurate interpretation of the SROI findings and results as well as the assessment of their generalisability. There are four (4) aspects of context that were carried out, as these directly influenced the results/findings of the assessment:

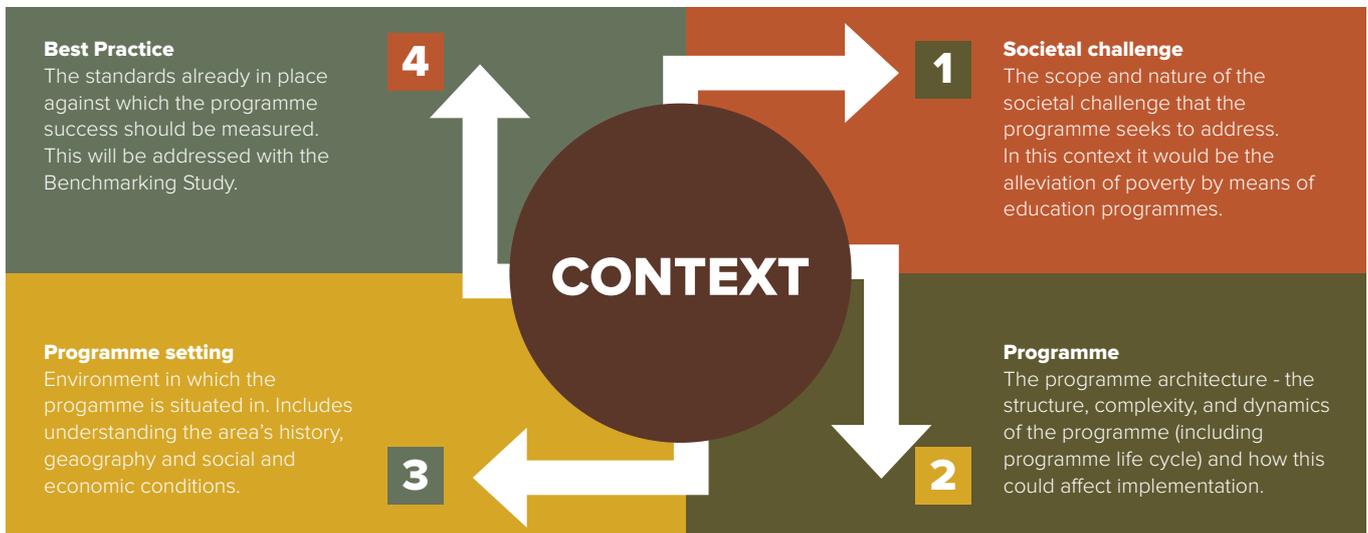


Figure 1: Aspects of the context included in the study

Structure of this report

The report structure reflects the SROI process and contains:

- Background information depicting the contextual environment of the BNSDP and the District Whole School Development education model in Limpopo, as well the BNSDP's District Whole School Development Programme Theory of Change (ToC);
- A brief overview of the SROI methodology and its application in the context of the programme;
- The scope and limitations relevant to this study, as well as assumptions applied;

- An outline of how stakeholders were identified and engaged throughout the SROI process;
- Core findings based on the forecasted outcomes and the forecasted impact for each stakeholder group analysed;
- The SROI ratio calculated for this programme; and
- Conclusions and recommendations to guide the programme implementation.

SECTION 1: CONTEXTUAL ANALYSIS

1.1 Societal Challenges

1.1.1 Education in South Africa

On average, 6% of South Africa’s GDP is spent on public education (roughly R245 billion). Despite high education expenditure, the primary education system in South Africa has been ranked 126th out of 138

countries in the World Economic Forum 2017 Global Competitiveness Report. South Africa lags in terms of good educational outcomes compared to other SADC countries that spend much less on public education.

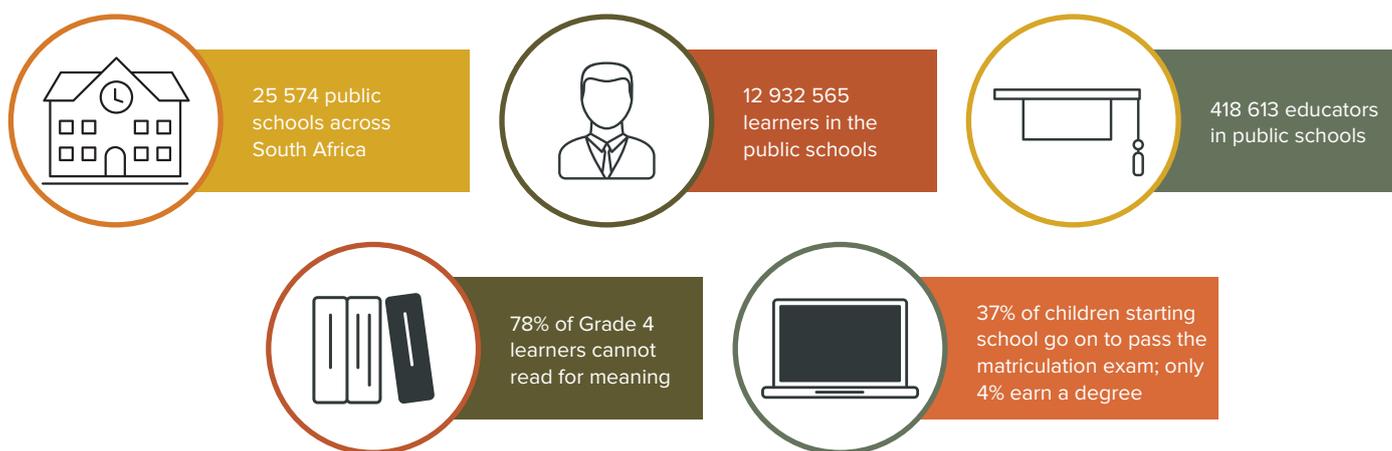


Figure 2: The state of education in South Africa (Carelse, 2018)

The schooling system in South Africa is marred by inequality, with about 20% of schools being classified as wealthy schools and 80% as poor schools (Carelse, 2018). The resources that both category of schools have access to are incomparable, meaning that low resourced schools are significantly impacted compared to well-resourced schools. A fifth of the 25 000 schools in South Africa do not have proper toilet facilities and use pit toilets (Rampaphosa, 2018).

South Africa scores amongst the lowest in Mathematics and Science. The Trends in International Mathematics and Science Study (TIMSS), a quadrennial test sat by 580,000 pupils in 57 countries, had South Africa at or near the bottom of its various rankings though its scores had improved since 2011. Performance in Mathematics is extremely low, only 22% of matric candidates obtained a 50% and above pass mark. Additionally, the pass rate for subjects such as Accounting, Agricultural Science and Business Studies are declining (Carelse, 2018). It has also been estimated that in 2018, only 40% of those learners that started grade 1 in 2007, matriculated from high school.

Although 2017 and 2018 saw an improvement of 3% in the National

Senior Certificate results from 2016, and the number of Bachelor passes increased to 48% amongst the poorest learners in quintiles 1 to 3, the number of learners that wrote matric in 2017 decreased by 100 000 (Carelse, 2018). Attendance and accessibility to public schools has improved, yet the quality of the education system remains a challenge (Carelse, 2018). In addition, the efficiency and management of resources is underprovided in schools, meaning that resources often do not make their way to the intended recipients, despite funding efforts by government.

1.1.2 Challenges in the education system in South Africa

South Africa faces serious challenges that hinder the performance of the education system irrespective of government’s expenditure on basic education. Education, and the quality of education, is pivotal for the creation of a skilled-labour force. The necessary inputs into the system such as trained and motivated teachers, proper school infrastructure, instructional material such as textbooks, as well as strong leadership is missing in the current education system. Some of the key challenges are highlighted in Table 1. This emphasises the constraints learners, teachers and schools are faced with.

Challenge	Description
Learners	<ul style="list-style-type: none"> • Learner performance and retention; • Lack of exit opportunities for learners; • Poor learner performance at early childhood and foundational phases; and • Truancy, absenteeism and violence;
Socio-economic	<ul style="list-style-type: none"> • Effects of poverty and malnutrition on learner attendance and performance; • Psychological issues; • Lack of parental support; and • Lack of housing stability.
Teachers	<ul style="list-style-type: none"> • Teacher retention and shortage; • Under qualified teachers and poor teacher performance; • Poor teacher training; • Poor teacher learning and accountability; and • Limited support and support materials.
Infrastructure	<ul style="list-style-type: none"> • Lack of adequate and fully functional infrastructure.

Challenge	Description
District capacity	<ul style="list-style-type: none"> The incapacity of districts to provide adequate support.
School governance and leadership	<ul style="list-style-type: none"> Poor leadership capability within schools and their governing bodies; and Poor school management and ineffective governance.
Sustainability of programmes	<ul style="list-style-type: none"> Lack of sustainability in intervention programmes.

Table 1: Challenges in the South African education system (Kagiso Trust, 2016)

The education system in South Africa is not only impacted by challenges related to teachers, infrastructure, governance and leadership in schools. Socio-economic factors such as the environment a learner is exposed to has consequences on the performance of a learner.

1.1.3 Consequences of educational challenges on learners

All the above challenges have placed a massive burden on the education system in South Africa which has resulted in:

- High drop-out rates;
- Low ANA results;
- Low pass rates;
- Lowering of pass rates requirements;
- Low literacy and numeracy rates;
- Poor infrastructure;

- Unskilled teachers;
- Lack of readiness of schools;
- Inadequate infrastructure;
- Lack of youth leadership in schools;
- Few learners pursuing trade skills;
- Lack of access to facilities;
- Existence of appropriate non-academic programmes;
- Poor quality passes;
- Lack of progressed learners; and
- Lack of focus of key gateway subjects.

A deeper analysis into the education value chain provides insights into the consequences of the challenges in the South African education system on learners, and the long-term effects on their employment opportunities.

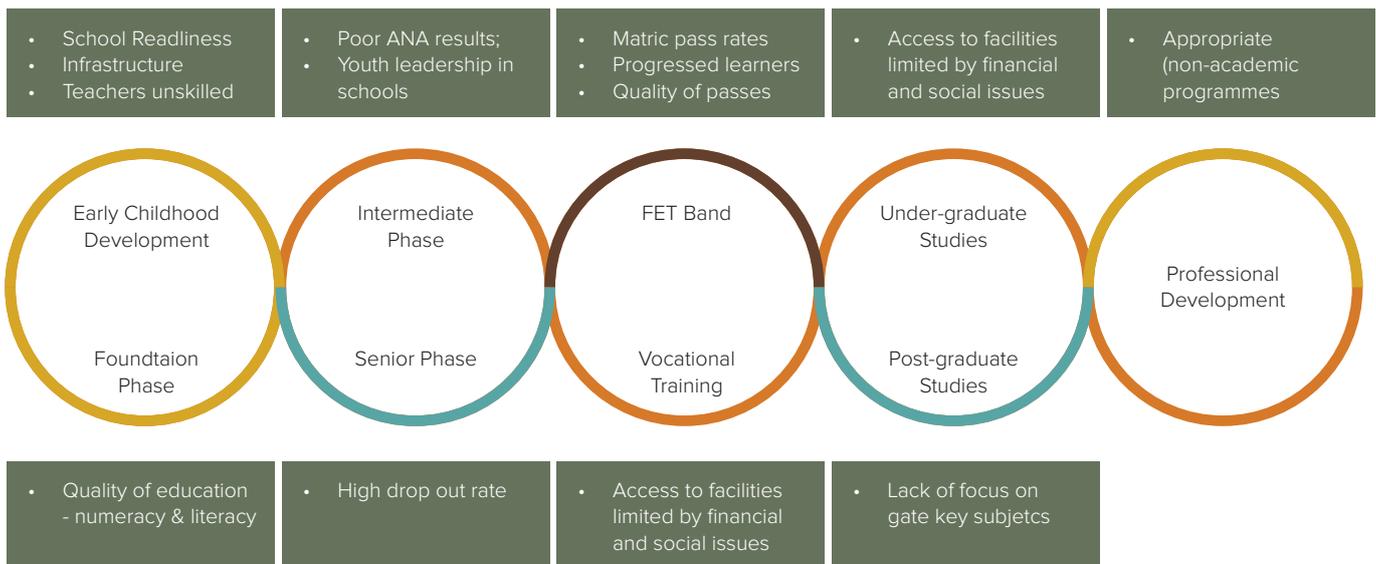


Figure 3: Challenges in the education value chain (Kagiso Trust, 2016)

As per Figure 3, the challenges in the education system in South Africa have a negative impact on the whole educational value chain from foundation phase right through to the professional development of learners in the future. At an ECD level, poor quality education created by inadequate infrastructure and unskilled teachers result in low numeracy and literacy performance of learners. The lack of basic numeracy and literacy skills as a foundation leads to high drop-out rates, poor academic results and lack of youth leadership in schools. A learner is continued to be impacted by a poor education system at an FET level. Matric pass rates and the quality of passes are low resulting in fewer learners pursuing trade skills.

Inadequate infrastructure affects higher education facilities due to financial constraints and social issues. Furthermore, there is a lack of focus of key gateway subjects at a postgraduate level. Family support and life circumstances influence the professional development of a student; therefore, poor institutional support in the education system at a university level affects a learner’s pursuit of further professional development.

A study on teacher quality, “Poor quality teachers are holding back SA’s education system” found that 75 - 80% of poor learners are reliant on dysfunctional public schooling, with teachers not adequately qualified for the roles they play (van Zyl, 2019). Learners are affected from the start of their schooling careers, and this has an impact on their performance as they progress through school. In the end, employment opportunities for these learners are limited by the quality of education they receive. As an example, if the quality of education a learner receives is poor, employment prospects for the learner are affected in the future as poor-quality education influences the learner’s ability to progress/qualify onto higher levels of education (van Zyl, 2019). The study also found that the quality of the schooling affects the learner’s ability to maintain or search for a job (van Zyl, 2019).

1.1.4 Negative impact of the current education system

Poverty and unemployment are intertwined and are as a direct result of poor education systems. The effect of low educational outcomes on communities in South Africa is far reaching. It is a complex challenge, with poverty and education interlinked - poverty leads to low educational outcomes, and low educational outcomes causes poverty.

Poverty in South Africa

Multidimensional poverty has been associated with low educational outcomes in South Africa. Poverty is defined by unidimensional measures such as expenditure and income, but multidimensional poverty encompasses various factors such as poor health, lack of education, inadequate living standards, lack of income, disempowerment, lack of decent work and threats from violence, all which lead to deprivation (Statistics SA, 2014).

South Africa has seen a decrease in the number of people that are in LSM (Living Standard Measures) categories 1 to 3 (Statistics SA, 2017), and between 2012 and 2013 the estimated average monthly income declined in LSM category 1 (the poorest category) (Statistics SA, 2017). The poverty headcount index also showed a decline in poverty for the same period; however, poverty still remains high particularly in Limpopo Province where there is the highest percentage of poor households and where there is one of the highest poverty gaps (inequality) (Statistics SA, 2017). Between 2011 and 2016, there has been a stagnation in the improvement of multidimensional poverty indicating that the circumstances of the poor have barely improved

(The World Bank, 2018).

Multidimensional poverty is predominately high in rural areas in Limpopo. There are two main contributors to multidimensional poverty, unemployment and lack of education. In 2016, unemployment was the highest contributor to multidimensional poverty in South Africa and contributed to more than 50%, this is followed by the number of years of schooling attended, which contributed to more than 10% of multidimensional poverty in South Africa (The World Bank, 2018).

Poorer households that are vulnerable to inequality spend less on education. The total and average annual household expenditure in 2015 saw only 2.5% of household expenditure being spent on education compared to 32.6% spent on housing, water, electricity, gas and other fuels and 12.9% on food (Statistics SA, 2014). With limited disposable income available, families spend much needed money on core household necessities, with education, although being seen as critical, not immediately pressing.

Unemployment in South Africa

Unemployment and education affect the country on a micro-economic level with the labour market participation strongly influenced by education (The World Bank, 2018). Low quality education increases the incidence and duration of unemployment and increases poverty and income inequality incidence (International Monetary Fund, 2019). As shown in Figure 4, unemployment rates are highest amongst South Africans that have less than primary school completed.

premiums to tertiary education are high and have increased over time (International Monetary Fund, 2019)."

In Q3 of 2018, 6.2 million individuals were unemployed of which 68.8% of these individuals were unemployed for a year or more. Unemployment in South Africa is the highest amongst individuals aged between 15 and 24, followed by individuals between 25 and 34 (Department of Planning, Monitoring and Evaluation, 2014). South Africa's youth unemployment rate is the highest in the world and there is a linkage between the poor quality of the education system in South Africa and the skills shortage in the country (Pijoos, 2019).

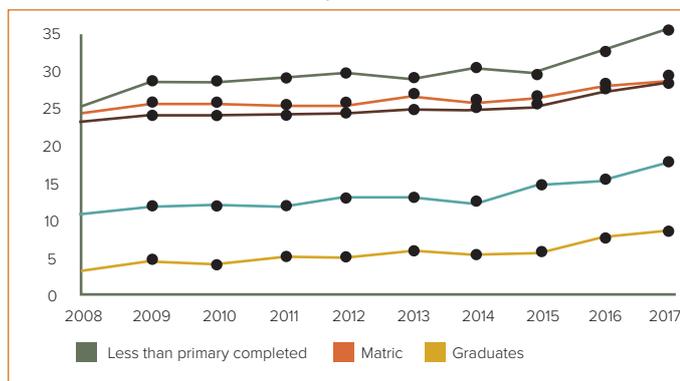


Figure 4: Unemployment rates by level of education for the period 2008 to 2017 (International Monetary Fund, 2019)

“Struggling to Make the Grade: A Review of the Causes and Consequences of the Weak Outcomes of South Africa’s Education System”, a study by the International Monetary Fund (IMF) was conducted to assess the correlation between the level of education completed and employment probability for 15–64-year-old individuals. The results of the study revealed evidence of “increased propensity to be in employment was higher for those that have some secondary, matric and tertiary education than for those with primary or less than primary education. Additionally, the employment probability

South Africa is also one of the most unequal countries in the world with inequality increasing since the end of apartheid in 1994 (The World Bank, 2018). A report by the World Bank on “Overcoming Poverty and Inequality in South Africa” states that the probability of labour market participation is strongly influenced by levels of education (The World Bank, 2018). Compared to individuals with no education, 34% of individuals with post-secondary education are more likely to participate in the labour market, indicating that the probability of participation increases based on the education level of an individual (The World Bank, 2018).

South Africa’s also has a bi-modality education system, with 75% of school learners in dysfunctional schools with poor education systems and 25% in wealthy schools with better education systems. This contributes to economic inequality through employment and earnings channels, where poverty incidence rates and unemployment rates are distributed according to levels of education and race, and where the highly educated were the primary beneficiaries of the skill-intensive economic growth in the early 2000s.

EFFECTS OF POVERTY AND UNEMPLOYMENT IN SOUTH AFRICA

Low economic growth

South Africa's economy has seen 1.1% growth over the past 4 years, although population growth has increased by 1.6%. The economy has struggled to absorb people entering the market, with the population growing poorer over time.

The effects of unemployment and poverty have a detrimental effect on the economic growth of the country. Slow long-term economic growth in South Africa, can to some degree be attributed to the poor quality of the South African education system (The World Bank, 2018).

The challenges faced in the South African education system have a knock-on effect on various industries in South Africa that are key drivers of economic growth in the country, particularly in industries that require skilled and professional workers. With low Mathematics, Science and English outputs, the public education system in the country is below standard, and this largely influences labour market participation. Additionally, the contribution of these industries to the economy (GDP) is affected as sourcing workers with sufficient levels of education that can actively participate in the semi-skilled and skilled labour market is difficult (The World Bank, 2018). An IMF study has shown that "the cross-country differences in educational achievements explain a great part of the variations in GDP per capita growth rate" (International Monetary Fund, 2019).

Although only partly, at a macro level the low quality of South African education is hurting the country and has contributed to the country's slow economic growth. The lack of a skilled workforce is rated by the World Economic Forum as the third-most problematic factor for doing business in South Africa. Reduced foreign investment is detrimental to the economy, and education is clearly a hindrance to economic progress and performance, especially considering the Fourth Industrial Revolution.

Crime

Over time, studies have shown that education is important in the fight against crime. Although empirical evidence is not conclusive as to whether low education levels leads to crime, one American study called 'The effect of Education on Crime' used evidence from prisoners, arrests and self-reports to determine if schooling had an effect on incarceration. The study showed that completion of high school lowered the probability of conviction (Lochner & Enrioc, 2003). In a country like South Africa, where crimes rates are high, improved educational systems may have a positive effect in reducing crime.

Crime has been found to be higher in countries that are more unequal (Lochner & Enrioc, 2003). A poor education system in a country has an effect on inequality, which results in increased crime. This prevents the progression and improvement of the quality of life in communities and keeps them mired in poverty.

There is also evidence of a significant social return of completing high school in the form of social savings from crime reduction. The direct private return benefit of schooling is clear for the individual. However, the social benefits generated may far exceed the private returns received by individuals. Crime is a negative externality with enormous social costs, and even small reductions in crime associated with education may be economically important (Lochner & Enrioc, 2003).

There are several reasons to believe that education will affect crime. As schooling increases the returns to legitimate work the opportunity costs of illicit behaviour are far greater.

Alcohol and drug abuse

Alcohol use is rising quickly in parts of the developing world. Drinking and smoking from as young as 11 years old has been reported. South Africa has also seen a rise in the usage of illicit drugs, with Crime Stats SA reporting 450 drug related crime incidents out of 2548 total crime incidents in Sekhukhune District in Limpopo, which is the

programme intervention area. Social and environmental factors such as urbanisation, poverty, migration, technological change and educational deficits all contribute to situations that make the propensity for engaging in substance usage higher.

In South Africa, crime related to driving under the influence of alcohol or drugs increased by 14.8% between 2017 and 2018, an indication that alcohol abuse is on the rise. South Africa is faced with an issue of high alcohol consumption, which is worsened by socioeconomic issues such as poverty and lack of education. A GIZ funded study "The State of Urban Safety Report" said the availability of alcohol plays a role in fueling crime. A study conducted in 63 countries found that inequality, followed by youth (male) unemployment, had the highest correlation to murder and assaults (South African Cities Network, 2017).

The link between alcohol and drug abuse and low education levels has been explored for decades. A study found that individuals who had dropped out of high school were 6.34 times more likely to develop alcohol abuse or dependence than were individuals with a college degree (Crum, Helzer, & Anthony, 1993). Although there is no direct cause and effect relationship with low income/education leading to substance abuse, the risk factors that influence certain people to substance abuse are less prevalent in higher-income families and among individuals with a higher level of education (Behavioral Rehabilitation Services, 2016). In another study involving more than 30,000 men and women between the ages of 20 and 93, researchers measured education level, alcohol use, obesity and smoking, and found that those with the lowest level of education were most frequently heavy drinkers, heavy smokers, obese, and physically inactive.

Limited education prevents employment opportunities and the ability to obtain knowledge which result in high levels of alcohol consumption and crime. Again, the reduction in the cost of alcohol and drug related incidents could yield a high social return for the country.

Teenage pregnancy

"Approximately 16 million girls aged 15 to 19 years and 2.5 million girls under 16 years give birth each year in developing regions" said a World Health Organisation report on Adolescent Pregnancy (World Health Organisation, 2018). The report found that the occurrence of adolescent pregnancies around the world, are more likely to occur in marginalised communities, and is driven by lack of education, poverty and employment opportunities (World Health Organisation, 2018).

The social costs and consequences of teen pregnancy are profound including but not limited to decreased rates of high school graduation, lower income earning potential, lower overall educational attainment and poverty. Poverty leads to teenage pregnancy, and teenage pregnancy leads to poverty (Gyan, 2013).

Studies have found that school dropout is a "predictive factor" of teenage pregnancy and a precursor to, rather than a consequence of, becoming pregnant. Learners drop out of school due to a number of reasons such as a dislike for school, truancy, lack of educational attainment, low aspirations and expectations, and belief that the education system cannot lead to employment opportunities (Gyan, 2013).

A key determinant of households achieving economic stability and an improved socio-economic status in South Africa is access to higher levels of education (The World Bank, 2018). The economic costs and consequences of teen pregnancy is astounding when considering costs such as healthcare, lost productivity and social benefits, grants etc., and affects the individual, household and the country. The reduction thereof would generate benefit for a range of stakeholders.

1.1.5 Positive impact of improved educational outcomes

The positive social impact of improved education outcomes on a country is far reaching. Improved secondary education will lead to higher access to tertiary education, which leads to higher labour market participation thereby reducing poverty and unemployment and the negative socio-economic issues associated with it as stated above.

Economic transformation

A recently published World Bank report indicates that access to higher levels of education (determined by the primary and secondary school foundation) and stable labour market income are key determinants for households to achieve economic stability in South Africa (The World Bank, 2018). Higher levels of education are influenced by the entire educational value chain starting from ECD right through to matric and access to higher levels of education cannot be achieved without a good ECD, primary and secondary foundation.

The National Development Plan’s Vision for 2030 places emphasis on the importance of a good quality education system to transform South Africa’s economic outlook. The quality of the education system largely influences society’s ability to innovate, have access to further education, increase college rates and performance, and ultimately be absorbed into the labour market and reduce poverty (Government of South Africa, 2019).

Some of the key benefits for South Africa in raising educational outcomes that will lead to increased employment levels mentioned in the National Planning Commission’s Diagnostic Overview are (National Planning Commission, 2014):

What needs to be done to improve educational outcomes

A report published in 2019 by the IMF states that weak foundations in the primary and secondary school level need to be addressed to improve the education system in South Africa. The report concludes that the following interventions will have the greatest impact on long-term educational outcomes (International Monetary Fund, 2019).

- **Closing the gaps in knowledge through improved teacher learnings:** interventions and programmes in the form of teacher training and coaching is needed to build the capacity of teachers and address the shortfall and lack of knowledge of teachers;

- **Improving school management:** focus should be on additional support and training for schools and principals that have poor performance and redesigning of staff policies in order to incentivise and attract better quality principals and teachers;
- **Increasing teacher accountability:** the introduction of “teacher professional standards” which would entail conduct, professional knowledge and skills that good teaching should be characterised by; and
- **Improving the availability of resources and learning:** government needs to address backlogs in infrastructure in schools and particular focus should be on the expenditure on basic sanitation facilities, desk and chairs for learning and school buildings.

Although the internal factors impacting the education system in South Africa can be addressed through the interventions mentioned above in order to improve the education system, the external factors that impact a learner’s performance and ability such as external socio-economic factors- the environment, living conditions and life circumstances a learner is exposed to, plays as important a role. The improvement of the education system in South Africa alone will not solve the issues of high drop-out rates and poor pass rates amongst learners, and a holistic approach is required.

1.1.6. Background on the Kagiso Trust Beyers Naudé Schools Development Programme (BNSDP)

Given the challenges that are present within the South African education system, as well as the effects that multidimensional poverty has on the ability of a child to gain a meaningful education, it became clear to Kagiso Trust that both school-based and system-wide interventions are needed to bring about change. Interventions at school level needs to target the whole school as changing only one component of the school system will not result in long lasting change that can impact the future fortunes of a generation, particularly those located at the bottom of the pyramid. At the core of the Kagiso Trust education programme, is that education is the key driver of change in order to transform communities, eradicate poverty and reduce inequality as seen in Figure 5.

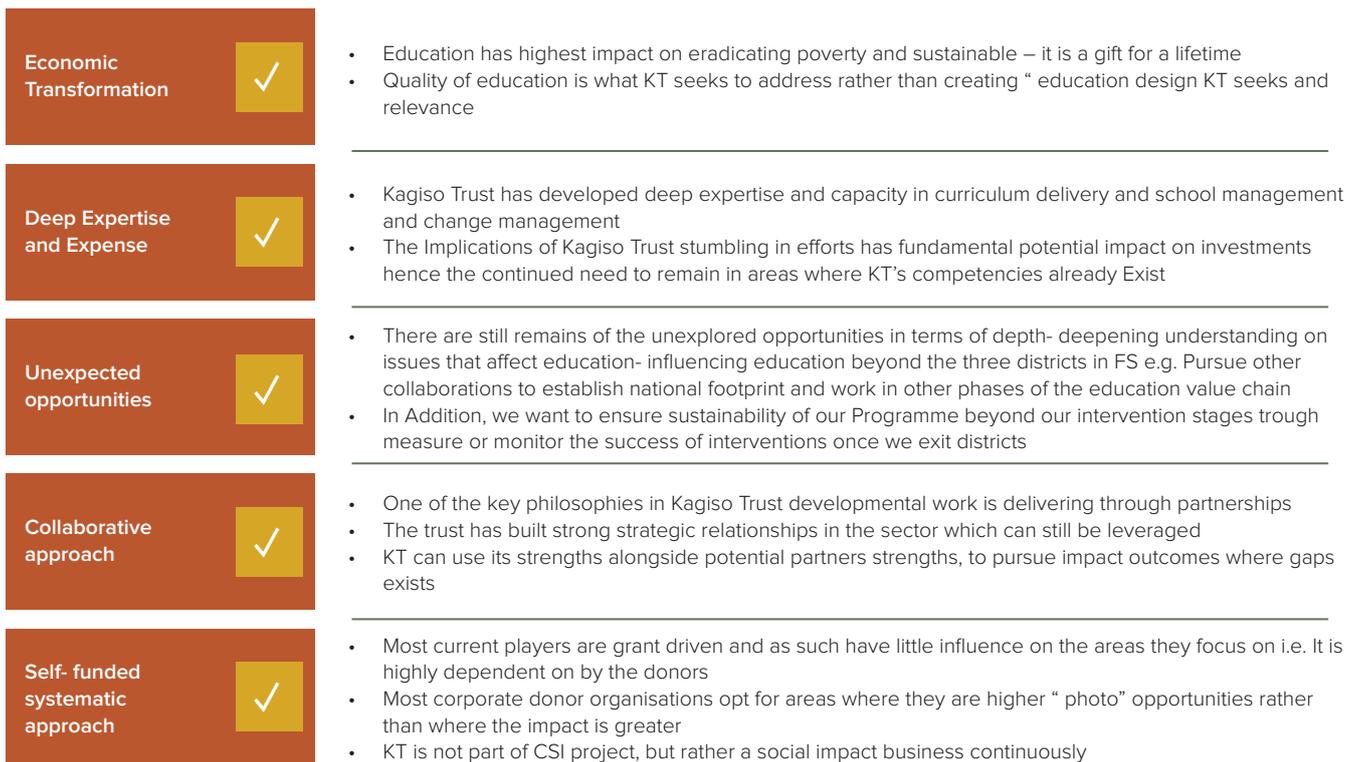


Figure 5: Kagiso Trust model

1.1.7 Kagiso Trust and BNSDP

Based on the above premise, in 2007 Kagiso Trust embarked on an education programme – based on KT’s designed District Whole School Development education model, that was named after one of its founding trustees and luminary, Beyers Naudé. Kagiso Trust has always believed that education is a responsibility for all within society and that the burden to empower the next generation through education must be borne by all. Hence the Beyers Naudé Schools Development Programme (BNSDP) was born with a focus to transform not only learners and educators, but also the communities and the leadership within which the schools exist.

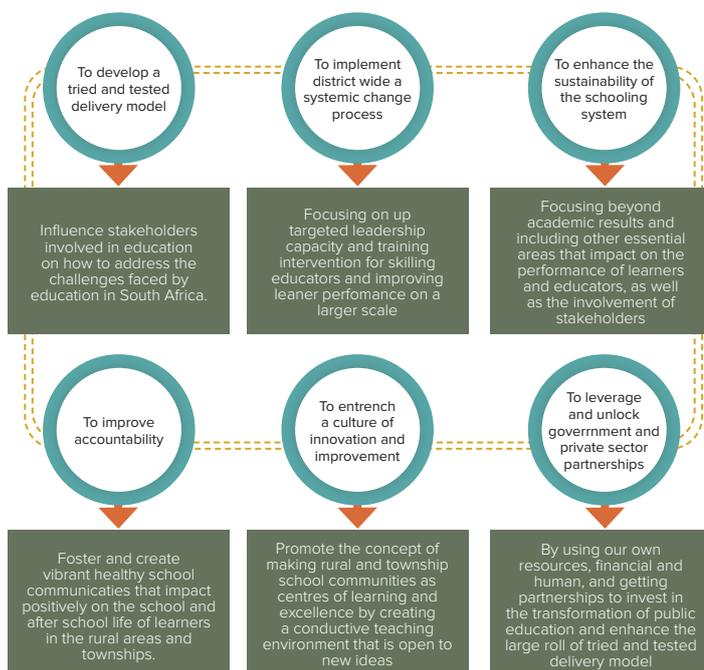
The core objective of the programme was to foster and create functional, vibrant, healthy, accountable and sustainable school communities that impact positively on the after-schooling life of learners in rural areas, through effective partnerships at the school, district and community levels. Kagiso Trust recognised central government’s role in education through the Department of Education. As such, partnering with government was viewed as fundamental to the sustainability of Kagiso Trust’s educational interventions. Kagiso Trust’s primary service is to implement development interventions in the South African sphere using a strategy of addressing the needs of ordinary people, particularly in rural communities, with the goal of enhancing quality of lives and achieving sustainable solutions towards poverty eradication (Kagiso Trust, n.d). The BNSDP is therefore Kagiso Trust’s initiative that plays a part in resolving some of the challenges facing the nation’s education system. In this way, the whole school approach was designed as a systematic, rewards-driven intervention, premised on the belief that a uniform approach and short-term interventions are not appropriate to turn around the performance of schools.

1.1.8 Overview of the programme

Programme objective

The BNSDP is implemented in a district in marginalised communities over a five-year period, after which the schools are able to continue on their own (Kagiso Trust, 2014). The focus is on leadership and management skills for principals, teachers and governing bodies, and leadership skills for learners.

The programme’s objective is to restore a culture of learning and teaching in rural public schools, and to develop functional and sustainable relationships between key stakeholders within the schooling community (Kagiso Trust, 2014). The programme’s overarching objective is to use education as a tool to eradicate poverty in rural areas as well as reduce inequality



Programme model

The BNSDP is a Whole District School Development education model which focuses on institutional level development, whilst advocating and mobilising for change in broader policy interventions and partnerships. The design of the BNSDP involves a match funding principle and commitment from the Government to ensure ownership of the programme which will lead to attitude and behavior change within the school and engagement of the community to take a keen interest in and partner with education ensuring the whole school transformation.

The programme is based on:

- Leveraging collaborative partnerships with various stakeholders, particularly with the Department of Education at a district level,
- Retreats where key stakeholders are engaged, issues are brought to the forefront and solutions are established;
- Curriculum training; and
- Infrastructure incentivisation.

The framework focuses on seven key areas as can be seen in Figure 6. Success measures consist of improved academic performance, upgraded infrastructure, effective leadership and involved parents and community (Kagiso Trust, n.d). The model encompasses an education development framework in order to holistically achieve effective change within the district. The framework incorporates both advocacy and partnerships to achieve educational development. The framework looks at all the key areas that can be improved to achieve holistic development, even incorporating learner exit support for the learner and community to continue development after the programme.

By focusing on these seven areas, the programme’s model is designed around the idea to make a systemic implementation framework that works with schools over a period of five years, with the aim of bringing about change across these areas in terms of the capacity and practice within the overall schooling system for optimum learner outcomes.



Figure 6: Education Development Framework

Programme Approach

Initially the BNSDP began by focusing largely on team building retreats and leadership capacity building, the programme later integrated curriculum management and infrastructure improvement (Kagiso Trust, 2014). Currently the programme consists of a more comprehensive and holistic implementation approach to achieve the programme’s aims (Kagiso Trust, n.d).

The first step in their implementation approach would be formalisation. Programme formalisation is meant to ensure that the programme has both political and administrative support at provincial and district levels. The formalisation will ensure co-funding and leadership commitment between the Kagiso Trust and the Department of Basic Education. The programme then undergoes a district selection process, this is where the districts that the programme will be implemented in will be selected, for this programme the selected district would be Riba Cross District. After district selection, a needs assessment is done, this is done by engaging the school's stakeholders in order to gauge what the school requires.

Next, after forming an understanding of the needs of the school, an empowerment and transformation workshop retreat is held. The purpose of the workshop (retreat) is to engender a culture of accountability and to ensure all stakeholders take responsibility for improving learner achievement. This retreat forms a baseline for subsequent interventions, which are curriculum delivery followed by social support, leadership and governance development, infrastructure development and provision, and lastly incentivisation and beautification to promote environmental awareness. This implementation approach can be viewed in the diagram below starting from the formalisation phase to sustainability beyond intervention.

Key stakeholders

Stakeholder	Description
National and Provincial Government	The BNSDP has the same objectives as both national and provincial government, to enhance the quality of education for all. The BNSDP can start rolling out certain aspects of the programme (e.g. school retreats) to leverage support from the President and the National Minister of Education.
The Provincial Department of Education (PDoE)	Kagiso Trust has formulated a partnership with the PDoE to deliver the BNSDP. The programme has developed a funding model based on the principle of co-funding with the PDoE and other private sector partners. The PDoE is responsible for their role in the programme while the district must take ownership of its role as being the primary player in the provision of quality education to the nation.
The Community	Involvement of the community in the programme will ensure ownership and enhance pride of communities in their schools. Participation by communities is crucial to the success and sustainability of the programme. The community should be involved in the implementation as a way of empowering them and addressing socio-economic concerns.
The Private Sector	Strategic sector partnerships who may be called upon to assist with further funding of the programme or for assistance with other key areas in the programme.
Teachers and Principals	Teachers and principals are responsible for effective management of the schools as well as curriculum delivery.
Learners	Learners are the direct beneficiaries from the programme, not only through academic interventions. They will also benefit from infrastructure development as well as the learner exit support strategy that the programme has in place.
Other Stakeholders	Involvement of stakeholders working in the chosen district/circuit involved in the process of education and enhancement of schools.

Table 2: Stakeholders of the BNSDP programme

Programme footprint

The programme pilot was started in the Vhembe districts of Limpopo in 2005 and that pilot served as a springboard to expand the programme into other areas. The programme was then expanded to the Thabo Mofutsanyane district of the Free State and the Mount Fletcher region of the Eastern Cape in 2007, the Kwaggafontein region of Mpumalanga in 2008, the uMzinyathi district of KwaZulu-Natal and the Sekhukhune in Limpopo in 2009, focusing mainly on high schools in each district. To date, the programme has already worked with more than 400 schools (Kagiso Trust, n.d).

1.1.9 The BNSDP programme in Limpopo Province

Expansion of the programme to the Limpopo Province

The BNSDP programme is mainly implemented in rural and township underdeveloped public schools over a period of 5 years, in partnership with the Department of Education at provincial level. Limpopo is the first place that the programme was piloted, in the Vhembe district in 2005. It then went onto other provinces and will now be implemented in the Sekhukhune district in Limpopo.

Kagiso Trust has signed a Memorandum of Understanding (MoU) with the Limpopo Department of Education, to implement a comprehensive whole school improvement intervention in the Sekhukhune over a period of five years. Kagiso Trust and the Limpopo Department of Education have agreed that the programme should be earmarked for the Riba Cross Education District in Sekhukhune area. Within this area, 255 schools have been chosen to participate in the programme over five years (Kagiso Trust, n.d).

A comprehensive needs analysis has been conducted in all the Riba Cross schools earmarked for the programme and a needs analysis report was compiled. The intention being to ascertain the extent of the needs within the respective schools in the district. The programme aims to address these needs through its education development framework that covers various areas of development.

1.2 Socio-economic Analysis of Programme Environment

For the purpose of the Social Return on Investment study, and to understand the context of which the programme will operate in, a socio-economic analysis of the programme area was conducted using secondary research. It looked at the environment at a provincial and district level.

1.2.1 Geographical and spatial context: Limpopo Province and Sekhukhune District

Limpopo Province

Limpopo lies in the northernmost part of South Africa. Historically, it formed part of the old Transvaal and included former homelands like Venda, Gazankulu and Lebowa (Limpopo, 2019). The history of Limpopo spans back to 20 000 years ago when San hunters roamed the plains of Limpopo. Centuries later, iron ore miners and traders frequented the region from their settlements at Mapungubwe (a pre-colonial state located close to the Limpopo river). Polokwane is the capital city of Limpopo; as a modern city today, it came to exist due to its past as a replenishment station for the early hunters and traders making

the journey through Limpopo to northern destinations such as the neighbouring countries and the rest of Africa. The discovery of gold in the 1880's led to the establishment of a more permanent town named Pietersburg, after the Boer leader Piet Joubert. After independence in 1994 the name was changed to Polokwane, meaning "Place of Safety" (Polokwane Municipality, 2017).

The discovery of gold deposits south of the town attracted international prospectors who came to work in their individual trade in a flourishing town environment. Today, gold mining has all but ceased in the area, but agriculture played and continues to play an important role in the economy. Agricultural produce originally farmed to feed the local community is now exported to all corners of South Africa and abroad.

Limpopo Province consists of the vast Lowveld plain, which is contrasted by several mountain ranges rising out of the Highveld plateau in the province's south and centre (Polokwane Municipality, 2017). As the northern-most province in South Africa, it shares borders with Botswana, Zimbabwe and Mozambique. Limpopo is rich in arable land, giving it the opportunity to have agriculture as a key part of its economy.

Limpopo is mostly rural; however, some areas are urban such as Polokwane (Polokwane Municipality, 2017). Limpopo is divided into five key district municipalities which are further divided into a multitude of sub-districts.

Governance of Limpopo Province

The political landscape in Limpopo is still traditional, and traditional leaders continue to play a key role in decision making. Although they are symbolic figureheads in the country who carry little political power, these rulers play an important role in local disputes and often perform advisory roles to government, as well as in the lives of the traditional rural populations. 85% of Limpopo's population live in rural areas which are under the jurisdiction of traditional leaders. The province hosts and supports 201 traditional authorities, including two kings and one queen (Ledwaba, 2017).

Economy

The economy of Limpopo has managed to sustain a positive 1.2% growth in 2017, which is an improvement from the 2016 growth rate, and can largely be attributed to the improved performance of the agricultural sector after it recovered from a severe drought in 2015 (Limpopo Provincial Government: Provincial Treasury, 2018). However, this is still below the 3% growth rate set out by the Local Development Plan.

Budget

Provincial expenditure grew from R61.4 billion in 2017/18 to R65.4 billion in 2018/19 and is further expected to grow to R68.6 billion in 2019/20 (Limpopo Provincial Government: Provincial Treasury, 2018). Of this expenditure budget, education received a budget allocation of R30.6 billion in 2018/19 and R32.3 billion for 2019/20. This is almost half of the budget's allocation (Limpopo Provincial Government: Provincial Treasury, 2018). Through this allocation, the department has committed to prioritising the provision of quality basic education which will include learner attainment programmes, school nutrition, scholar transport, delivery and maintenance of school infrastructure and appointment of qualified educators and administration personnel (Limpopo Provincial Government: Provincial Treasury, 2018). The following safety net interventions were introduced (Statistics SA, 2016):

- School Nutrition Programme (the right of access to sufficient food);
- School Fee Exemption Policy (the right to education);
- Child Support Grant (the right to social security);
- Free Basic Water Policy (the right to water);
- Free Primary Health Care (the right to health care services); and
- Housing Subsidy Scheme (the right to basic shelter and housing).

Effectiveness and Efficiency of the Province

A 2016/2017 audit by the Auditor General South Africa showed that none of the municipalities had received a clean audit. In addition, the

provincial compliance rate on the payment of suppliers within 30 days was sitting at 87% against their 95% goal.

The province is still infamously known for the 2012 textbook crisis where the budget to buy textbooks in 2012 was reallocated in 2011 by the province, and the procurement of textbooks could not take place (Veriaca, 2013) The resolution of this issue took approximately six months and caused a national outrage, while students only received their textbooks in June of that academic year. Investigation into the textbook crisis further revealed that Limpopo had a bigger issue than just textbooks, many schools had not received their funding for the management of operational activities leaving many schools with poor infrastructure and inadequate water and sanitation facilities (Veriaca, 2013).

Sekhukhune District

Established in 2000, Sekhukhune is one of five districts in Limpopo, lying south of the province closer to Johannesburg (Municipalities of South Africa, 2019). The District makes up 11% of the geographic area, which is relatively small in comparison to the other districts in terms of area size. Out of the five districts, Sekhukhune has the second smallest population, with a population of 1.17 million.

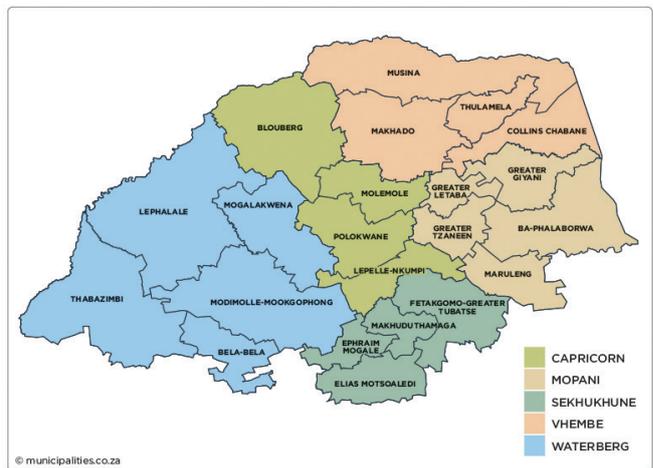


Figure 7: Map of Limpopo and Sekhukhune

Sekhukhune hosts the largest reserves of platinum metal in the world and is known globally for its high biodiversity in the area. There are approximately 740 rural villages in Sekhukhune, and approximately 5% of the population live in urban areas (Sekhukhune District Municipality, 2019).

According to the Sekhukhune Drafted Spatial Framework report – a framework that addresses the spatial, environmental and economic issues confronting both the rural and urban areas in the district - services and infrastructure of the required standard are limited in the area and service delivery is inadequate in meeting the needs of the community. The settlement structure is extremely dispersed, making it difficult for households to expand internet and e-telecommunication facilities, especially for business and educational purposes (Sekhukhune District Municipality, 2018)

1.2.2 Demographic analysis

Limpopo Province population

Limpopo has a population of roughly 5.8 million people, the fifth largest province in the country by population (Statistics SA, 2016). Demographically, it is the most populated by Black Africans at 97.1%, 17% higher than the national average (80.7% Black African) (Statistics SA, 2016).

Race	Limpopo		South Africa	
Black African	97.1%	5 630 163	80.7%	44 891 603
Coloured	0.3%	16 839	8.8%	4 869 526
Indian/Asian	0.3%	17 085	2.5%	1 375 834
White	2.3%	135 003	8.1%	4 516 691

Table 3: Population in Limpopo Province by group/race

Sekhukhune District population

The total population in Sekhukhune in 2016 was 1 169 762 people (Statistics SA, 2016). The Greater Tubatse/Fetakgomo district in Sekhukhune comprises 42% of that population (Statistics SA, 2016). Between 2011 and 2016, Sekhukhune experienced an 8.6% increase in the population, this is the second largest population increase of the five municipalities. On average the population increases by 1.1% per annum (Statistics SA, 2016).

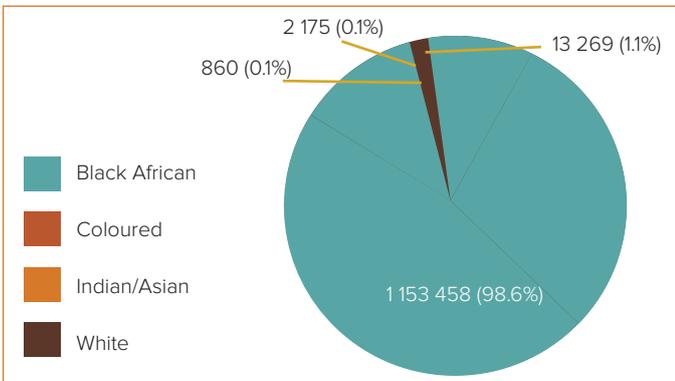


Figure 8: Population by group/race in Sekhukhune (2016) (Sekhukhune District, 2018)

Sekhukhune’s population is predominately made up of individuals considered as previously disadvantaged, with other race groups making up less than 2% of the population. The segmentation of the population per race group is important in order to understand the demographic landscape, particularly in the South African landscape where inequality is prevalent amongst previously disadvantaged groups especially, and in rural provinces and districts.

Sixty two percent of the population are between 15 and 64 years of age with a significant percentage of the population under the age of 15 (33%). The working age population can be defined as individuals that are between the ages of 15 to 64 (Sekhukhune District, 2018). This age category is the most important as it provides an estimation of the number of potential workers in the economy within a given area.

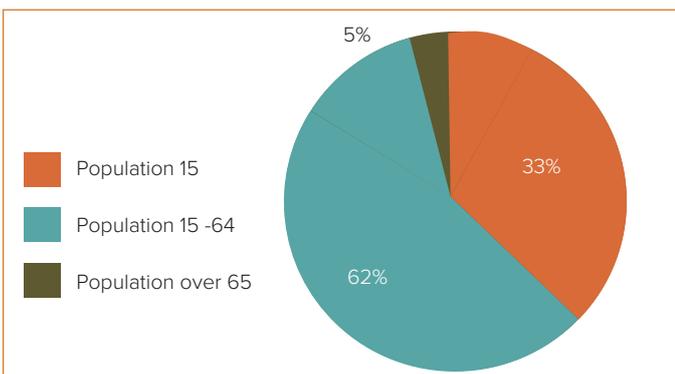


Figure 9: Population by age group (2016)

Education in Limpopo

Limpopo is considered to have one of the most complex education histories in the country, as it represents the consolidation of former “homelands”; Lebowa, Gazankulu, Venda, and the northern part of what was known as the Transvaal province. The legacies of the Bantu education system have resulted in large scale educational inequality, with the ramifications likely to remain decades after. International and national benchmark tests demonstrate that Limpopo’s learners are failing to achieve basic literacy and numeracy outcomes (Democratic Alliance MPL Assistance Network, 2015). Limpopo has the highest illiteracy rates in South Africa, with 28.7% of the population illiterate. Of those that are illiterate, 7.2% of them are youth. This is higher than the national average, where 6.1% of youth are illiterate (Statistics SA, 2016).

The Education Series Report on schooling in Limpopo that was released in 2013, states that 80.2% of individuals aged between 7-24 years were enrolled in some educational institution in Limpopo in 2013 (Statistics SA, 2013). Four or more out of ten learners are older than the norm in their particular grade, with a steady upward trend for over age learners until Grade 11 (where 55% of students are over age) and a slight decline in Grade 12 to 48.7% (Statistics SA, 2013). The decline in over age learners in Grade 12 can mostly be attributed to the dropouts that occur after Grade 11. Dropout and academic failure rates in South Africa are high in general, with 74% of learners that started primary school in 2001 not making it to matric in 2012 (Democratic Alliance MPL Assistance Network, 2015). Similarly, the 2016 dropout rates for Limpopo were alarmingly high, where 46% of learners in the province had dropped out of school (BusinessTech, 2017).

Particularly at secondary and tertiary levels, more learners are completing their matric as well as going on to attain even higher levels of education Figure 10. The growth rate of individuals in Limpopo going on to complete a diploma or a postgraduate degree is higher than the national level.

Over the years, the province has made strides in increasing educational attainment. There was a 20% decline in the number of people who do not have any form of schooling, as well as individuals who only have primary level schooling in 2016 (Limpopo Provincial Government: Provincial Treasury, 2018).

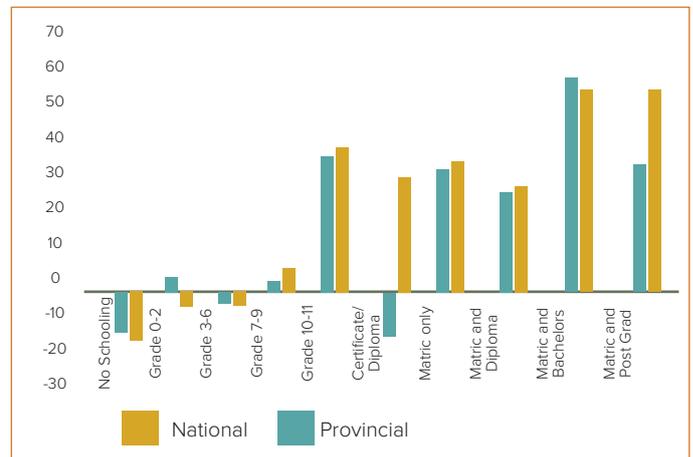


Figure 10: Growth rate of educational attainment in Limpopo and South Africa

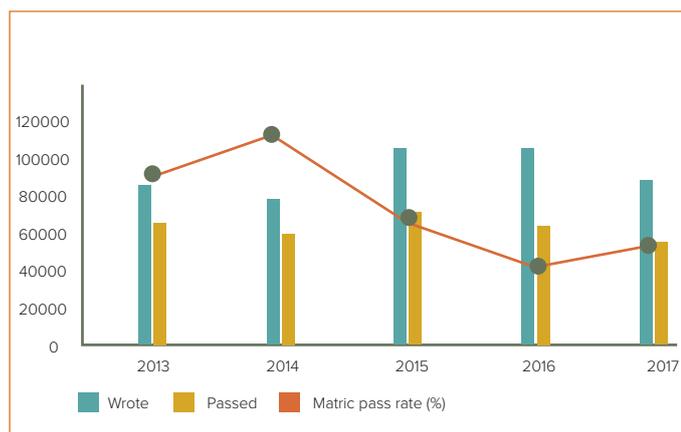


Figure 11: Total number of matriculants who sat exams and the pass rate in Limpopo

Despite Limpopo having the highest rate of individuals that had completed their matric qualification in 2018, Limpopo only managed to

receive a 69.4% pass rate for the final matric examinations, the lowest rate in the country for that year. The pass rates can be seen in Figure 11 where there is a trend displaying a significant difference between individuals who wrote the final examinations and those who passed. Although many learners make it to matric, learners struggle to cross over and pass their final examinations at the end.

Education in Sekhukhune

There are approximately 537 primary schools, 321 secondary schools and 41 schools which are combined primary and secondary school (Sekhukhune District Municipality, 2018).

The increase in educational attainment has been achieved across the five districts in Limpopo, with Sekhukhune increasing the number of learners receiving an education. The number of people who have no schooling has decreased significantly between 2008 and 2016. Additionally, there has been an increase in number of individuals that have completed their matric (34% increase), matric certificate (29%) and tertiary level certifications (35%) (Limpopo Provincial Government: Provincial Treasury, 2018).

Category	Sekhukhune		
	2008	2016	Difference
No schooling	132 374	101 686	-30 689
Grade 0-2	13 086	13 675	589
Grade 3-6	55 905	52 466	-3 439
Grade 7-9	89 892	108 358	18 466
Grade 10-11	120 089	186 124	66 034
Certificate / diploma without matric	2 668	3 563	894
Matric only	84 788	128 945	44 157
Matric & certificate / diploma	19 921	28 106	8 185
Matric & Bachelor's degree	7 067	10 927	3 860
Matric & postgrad degree	2 483	4 795	2 312

Table 4: Number of people with the highest qualification in Limpopo by district 2008 and 2016 (aged 20+) (Limpopo Provincial Government: Provincial Treasury, 2018)

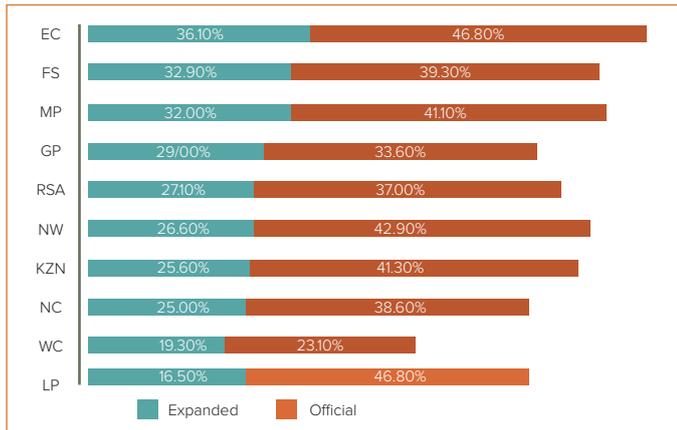
However, the difference in the number of people that have completed Grade 10 to 11 is high in comparison to the number of people who went on to complete matric, with a 29% dropout/failure rate. Similarly, in Sekhukhune, although more people are achieving a matric in comparison to previous years, pass rates in the district are still dire. Current pass rates for Sekhukhune are not available, but in 2013 the overall pass rate of the National Senior Certificate (NSC) exams in Sekhukhune was 65.5% (Statistics SA, 2013). This is one of the lowest pass rates in Limpopo, compared to the other districts. Despite the 34% increase in individuals completing their matric, this was only 24% of Sekhukhune's population of individuals aged 20+.

Additionally, although there was a decline in the number of people with no schooling between 2008 and 2016, the number of people with no schooling is still relatively high which tells us that poverty amongst households in the area could impact access to education. Ultimately poverty plays an important role in educational outcomes. According to the United Nations (UN), "children from the poorest households are four times more likely to be out of school than those of the richest households" (United Nations Development Programme, 2019).

Employment in Limpopo

The total labour force in Limpopo is 1.82 million people, with the labour force participation rate less than half at 48.7% (Statistics SA, 2018). Of those, 25.9% of people aged 15-24 were not in education, employment or training.

In the fourth quarter of 2018, South Africa experienced a 0.4% percentage point increase in employment (149 000 people) (Statistics SA, 2018). Of that, 59 000 of the employment was in Limpopo. The official unemployment rate for Limpopo in the third quarter of 2018 was 18.9% which was a 0.2% decrease from the previous year at the same given period. It improved even further in the fourth quarter of 2018 to 16.5% (Statistics SA, 2018). However, when considering the expanded unemployment rate, this figure jumps to 38.8%.



Despite the official unemployment rate in Limpopo being lower than other provinces, the expanded rate indicates a different situation, as it includes discouraged workers*. This is in line with other provinces, where the expanded rate is much higher than official figures.

The sectors that create the most employment is indicated in Table 5. The trade industry in Limpopo has experienced a spike in employment between 2017 and 2018, followed by employment in the mining industry.¹

Figure 12 : Q4 2018 Provincial Unemployment rates

Sector	Oct – Dec 2017	Oct – Dec 2018	Year-on-year change
Agriculture	136 000	138 000	2 000
Mining	92 000	106 000	14 000
Manufacturing	90 000	91 000	1 000
Utilities	11 000	15 000	4 000
Construction	154 000	146 000	-8 000
Trade	298 000	354 000	57 000
Transport	55 000	56 000	Less than 1 000
Finance	119 000	120 000	1 000
Community and Social Services	338 000	329 000	-9 000
Private households	123 000	120 000	-3 000

Table 5: Employment per industry in Limpopo (Statistics SA, 2018)

Employment in Sekhukhune

Since 2011 Sekhukhune has had the highest unemployment rate out of the five districts in Limpopo, with the unemployment rate steadily inclining since 2014. In 2016, the unemployment rate was at 30.8% (Limpopo Provincial Government: Provincial Treasury, 2018).

The main economic activity in the district is mining. In 2017 it was announced that Bokoni platinum mine located in Sekhukhune would be placed under care and maintenance, which resulted in 4 500 workers losing their jobs (Baloi, J, 2018). The mine has not yet resumed operations, impacting employment in the area.

Income levels in Limpopo and Sekhukhune

Based on the 2015 Limpopo General Household Survey, the median household income in Limpopo was R2 400 a month, compared to R3 260 nationally. Those residing in the former homeland areas earned R2 000, compared to the rest of the province who earned R3 500 per month. Furthermore, 84.1% of people in Sekhukhune earn less than R1 600 per month (Business Tech, 2016).

Like the rest of South Africa, Limpopo has high rates of income inequality. The provincial Gini Coefficient was recorded at 0.6, 0.03 points lower than the national average. Information released by the Institute of Race Relations (IRR) on the standards of living in municipalities indicates that Sekhukhune is one of the poorest municipalities in South Africa, with a substantial percentage of the population living below the poverty line with severe inequality as a problem.

Given that the main industries in the area that provide employment in Sekhukhune are trade and mining where people are employed in low skilled jobs, the above is an accurate reflection of the limited opportunities in the area

*A discouraged work-seeker is a person who was not employed during the reference period, wanted to work, was available to work/start a business but did not take active steps to find work during the last four weeks, provided that the main reason given for not seeking work was any of the following: no jobs available in the area; unable to find work requiring his/her skills; lost hope of finding any kind of work.

1.2.3 Economic activity

Gross Domestic Product (GDP) Limpopo and Sekhukhune

Limpopo had approximately 5.7 million residents, which accounts for 10% of South Africa's population. The population density of Limpopo is 46.1 km², the third highest after Gauteng and KwaZulu-Natal (South African Market Insights, 2019).

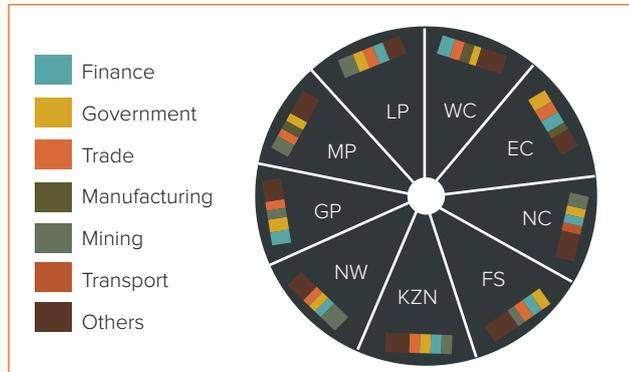


Figure 13: GDP, 4th quarter 2018

However, the province contributes just 7% of the country's GDP compared to Gauteng which contributes 34% of GDP and KwaZulu-Natal's 14% of the national GDP (Statistics SA, 2018). In Figure 13, the mining industry, followed by the 'Other' industry were the dominant industries in terms of contribution to GDP in Limpopo in 2018. Furthermore, Limpopo's mining output in 2018 contributed to a high proportion of the national mining output; coal mining in particular is concentrated in Limpopo (Statistics SA, 2018).

The growth in GDP has not been significant over the years, but has remained steady, mostly due to mining. In Sekhukhune, the mining sector is still the biggest contributor to growth followed by community services, then trade and finance. According to the Drafted Spatial Development Report produced by Sekhukhune, there are huge opportunities that lie within the mining sector in Sekhukhune (Sekhukhune District Municipality, 2018). Despite the closure of the Bokoni platinum mine, the mining sector is believed to be a key economic contributor to GDP in Sekhukhune, and there will be a focus on this sector right up till 2025. Furthermore, specific concentration of supplies and services to the mines is believed to be one of the key drivers of growth in the district.

1.2.4 Socio-economic factors

Poverty levels in Limpopo and Sekhukhune

Since 2001, Limpopo, along with Eastern Cape, has consistently remained one of the poorest provinces in the country. In a five-year period (2011 – 2015), the multi-dimensional poverty levels for Limpopo had increased from 10.1% to 11.5% (Statistics SA, 2017). This rate however differs from the Upper Bound Poverty Line where 72.4% of people in Limpopo were living below the Upper Bound Poverty Line (this refers to the food poverty line, plus the average amount derived from non-food items of households whose food expenditure is equal to the food poverty line) in 2015 (Statistics SA, 2017). This is quantified to people earning less than R1 183 per month. Slightly more than a tenth (12.9% or 205 432) of households in Limpopo had missed a meal over the same period (Limpopo Provincial Government: Provincial Treasury, 2018).

As discussed in Section 1.1, 79.2% individuals with no formal education live in poverty, compared to only 8.4 % of individuals who have a post-matric qualification. The research has found a strong link between levels of education and levels of poverty, with lower levels of education being closely related to poverty. Limpopo's Socio-economic Review and Outlook document makes reference to poverty in the context of Limpopo and states that, "poverty, unemployment and income inequality are consequences of a myriad of issues varying from,

low economic growth, limited access to higher learning education and petty wage levels" (Limpopo Provincial Government: Provincial Treasury, 2018).

The Sekhukhune Integrated Development Plan Review for 2018/2019 produced by Sekhukhune states that "the majority of Sekhukhune's population is young; unemployment is rife and the district consequently exhibits an extremely high dependency ratio (Sekhukhune District, 2018). A high number of the population is dependent on government grants in order to survive The Drafted Spatial Development Framework document also suggests that the lack of education in the district is a contributing factor to high levels of poverty (Sekhukhune District Municipality, 2018).

Crime statistics in Limpopo and Sekhukhune

Over the course of 2018, Limpopo reported 19 521 drug-related crimes and 5 661 cases of individuals driving under the influence of drugs and alcohol (Crime Stats SA, 2018). Drug-related crimes was the second highest type of crime reported after Community Reported Crimes (crimes against the person, contact-related crimes, crimes against property and other serious crimes (Crime Stats SA, 2018).

Similar to Limpopo, Sekhukhune has one the highest number of crimes related to driving under the influence of alcohol or drugs out of all the Districts in Limpopo (Crime Stats SA, 2018). There were 450 drug-related crimes reported in 2018, compared to 145 reported in 2012, and 150 crimes reported for driving under the influence in 2018 compared to 40 in 2012 (Crime Stats SA, 2018) The 2018 Crime Statistics indicates these type of crimes more than tripled in occurrence since 2012 (Crime Stats SA, 2018).

According to a policing dialogue held by the South African Human Rights Commission (SAHRC), it is estimated that "70% of the country's youth are more likely to be victims or perpetrators of assault, robbery and property theft than those over the age of 35" (Koyana, 2017). These crimes have been attributed to drugs and gangsterism, suggesting that high youth unemployment and drug abuse is a contributing factor to the high percentage of crimes committed by youth in South Africa.

As discussed earlier in the report, the link between alcohol and drug abuse and low education levels and unemployment is strong. Despite higher levels of employment in comparison to other provinces, income levels are still low in Limpopo. The cycle of education, unemployment, poverty and crime appears to be a factor in Limpopo and Sekhukhune, with significant cost implications.

It is important to recognise the cost implications of drug-related and alcohol-related crimes and the costs associated with treating drug and alcohol abuse that is incurred by the government. Although there isn't sufficient data to indicate the extent of government expenditure on drug and alcohol abuse treatment in Limpopo or Sekhukhune, it is known that the cost of drug and alcohol abuse in the country puts a "multi-billion-rand dent in the South African economy." According to a 2014 study in the South African Medical Journal (SAMJ), "the annual cost to the country of alcohol abuse alone, in terms of absenteeism, lost productivity, health and welfare costs and alcohol-related crime is estimated at up to 10% of Gross Domestic Product (GDP), or as much as R37.9 billion annually" (Zikali, 2018).

Therefore, the high number of drug-related and alcohol abuse crimes put a burden on government expenditure, particularly in rural areas, where there is a higher demand for government support.

Access to basic services in Limpopo

The provision of flush toilets, waste removal and access to paved roads are amongst some of the service delivery issues faced by Limpopo. A deficiency in the execution/implementation of development plans in the area, poor accountability and governance, and lack of planning and project management by the province are some of the reasons cited for poor service delivery (Khoza, 2017). This has led to destructive service delivery protests over the years that continue to affect communities.

In Limpopo, the proportion of households with access to electricity had increased from 87.3% in 2011 to 93% in 2016, with more homes being connected to the grid by the Department of Energy, as well as the increased use of renewable energy in the source of solar panels in the province (Department of Energy, n.d.).

In contrast, the proportion of households with access to piped water decreased to 80% (1 million) in 2016, from 83.6% (1.2 million) in 2011. This decrease was mostly due to maintenance as some municipalities were unable to maintain infrastructure which caused reliance on inconsistent water delivery services (Johnson, 2017). However, the number of households with access to a flush/chemical toilet increased from 322 112 in 2011 to 402 442 in 2016, a 24.9% increase. The Department of Water and Sanitation has prioritised flush toilets and the provision of sanitation facilities, according to the National Development Plan (Johnson, 2017). Despite this, schools in Limpopo still struggle with access to flush toilets. According to the Department of Education, “almost four out of every 10 schools (37%) had only pit toilets and 857 of the 1 360 schools in Limpopo had new sanitation facilities, but the pit toilets were still used” (Gous, 2018). Poor service delivery consequently impacts schools. In 2016, service delivery protests in Limpopo impacted more than 20 schools. The schools were set on fire, impacting the provision of teaching services and affecting the mid-year examinations of learners (Lubisi, 2018).

Access to basic services in Sekhukhune

Like Limpopo, poor service delivery in Sekhukhune has been a challenge for years. There have been regular protests due to lack of service delivery in the district. In 2016, violent protests erupted in Rotterdam village outside Giyani and Ntoane villages, and outside Bronkhorstpruit in Sekhukhune (Baloi, J, 2018).

Poor service delivery in Sekhukhune is a result of (Democratic Alliance MPL Assistance Network, 2015):

- The dispersed settlement structure of the district does not allow for adequate service provision;
- Extensive backlogs in former homeland areas due to poor governance and accountability; and
- Poverty that increases reliance on broader service delivery.

Housing, electricity and access to water

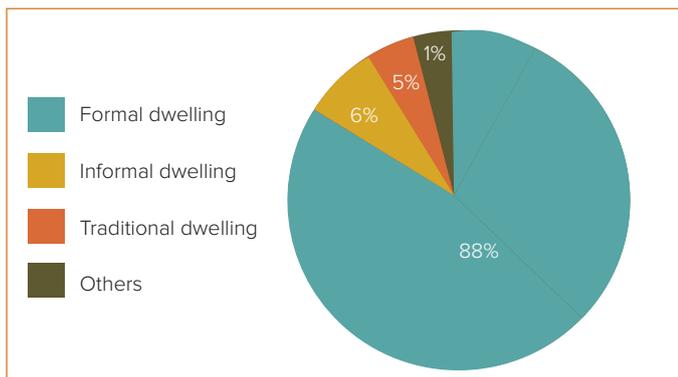


Figure 14: Type of dwelling in Sekhukhune (2016)

The number of people that live in formal dwellings in Sekhukhune increased in 2016, with 88% of people living in formal dwellings, higher than previous years (Statistics SA, 2016). However, the number of households with access to basic services was still below the national average. According to the 2016 Community Survey for Limpopo, the percentage of households that had access to basic services is (Statistics SA, 2016):

- Access to electricity: 92%
- Access to safe drinking water: 62%
- Access to refuse removal service: 10%
- Access to flush toilet: 8%

Schools in Sekhukhune also face the challenge of lack of access to flush toilets. According to the Kagiso Trust needs analysis that was conducted, in the Riba Cross area there are 3,013 learner toilets for 160,903 learners. This number includes pit and bucket toilets which are technically illegal in South Africa. Forty-six schools did not have any sort of toilet, with learners adopting other methods to relieve themselves.

1.2.5 National and provincial academic results analysis

To understand how Riba Cross performs academically in relation to Limpopo province, and how Limpopo performs in comparison nationally, a results analysis was conducted. Matric pass rates and the pass rates per subject were looked at. National and provincial results were used as a benchmark for pass rate targets for Riba Cross.

National School Certificate (NSC)/Matric Pass Rate

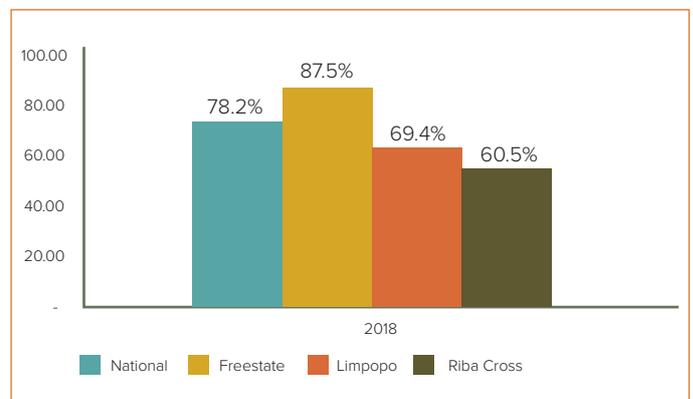


Figure 15: National Certificate/Matric Pass Rate (2018)

We plotted Riba Cross Matric results against Limpopo, Free State, and national results. Limpopo is behind its provincial peers as well as below the national average. Riba Cross in comparison, fares even lower than the Limpopo average. However, the pass rate in Limpopo did improve between 2016 and 2018 by 3.8%.

A comparative analysis of the NSC pass rates between 2016 and 2018 at a provincial level as depicted in Table 6 below, provides an insight into Limpopo’s performance compared to the other eight provinces in the country.

Sector	2016				2017				2018			
	Total Entered	Total Wrote	Total Attain	% Attain	Total Entered	Total Wrote	Total Attain	% Attain	Total Entered	Total Wrote	Total Attain	% Attain
Eastern Cape	92755	82902	49168	59,3	82257	67 648	43981	65,0	81 842	65 733	46393	70.6
Free State	28901	26786	23629	88,2	27723	25 130	21631	86.1	29 209	24 914	21806	87.5
Gauteng	112164	103829	88381	85,1	108522	97 284	82826	85.1	107 166	94 870	83406	87.9
KwaZulu Natal	169023	147648	98302	66,4	153125	124317	90589	72.9	151 166	116152	88485	76.2
Limpopo	110639	101807	63595	62,5	100041	83 228	54625	65.6	96 840	76 730	53254	69.4
Mpumalanga	60794	54251	41801	77,1	59500	48 483	36273	74.8	57 867	44 612	35225	79,0
North West	35403	32045	26448	82,5	35733	30 792	24462	79.4	34 718	29 061	23578	81.1
Northern Cape	11821	10041	7902	78,7	10519	8 735	6608	75.6	12 157	9 909	7264	73.3
Western Cape	53152	50869	43716	85,9	51735	48 867	40440	82.8	53 768	50 754	41350	81.5
National	674652	610178	442672	72,5	629155	534484	401435	75.1	624 733	512735	400761	78.2

Table 6: Comparison of NSC pass rates: 2016 – 2018 across provinces (Kagiso Trust, 2019)

When it comes to the 2018 NSC pass rates, Limpopo performed the worst amongst the nine provinces, with a pass rate of 69.4%, despite the 3.8% improvement between 2016 and 2018 (Kagiso Trust, 2019). This is still 9% below the national average.

National subject performance and pass rate Table 7 reflects the average pass rate per subject in 2018 at a national level, for Free State, Limpopo and Riba Cross. Limpopo's average performance for every subject was below the national rates and Riba Cross's performance in every subject was below the Limpopo provincial rate.

Subjects	National 2018 % Achieved	Free State 2018 % Achieved	Limpopo 2018 % Achieved	Riba Cross 2018% Achieved
Accounting	72.5%	82%	62%	45%
Agricultural science	69.9%	78%	-	59%
Business Studies	64.9%	71%	63%	52%
Economics	73.3%	78%	60%	48%
English 1st Addition L	97.2%	99%	-	94%
Geography	74.2%	85%	68%	60%
History	89.7%	-	88%	83%
Life Sciences	76.3%	-	71%	64%
Mathematical Literacy	72.5%	-	66%	56%
Mathematics	58%	74%	55%	47%

Table 7: Gateway subject 2018 average % achieved

Taking into consideration the gateway subjects (Accounting, Physical Science, Mathematics, Economics, Business Studies and English) required for tertiary education entrance, Limpopo and Riba Cross's Schools achieved less than 50% average in these subjects in 2018 (Kagiso Trust, 2019).

1.2.6 Findings relevant to this study

As demonstrated in the socio-economic analysis of Limpopo and Sekhukhune, the following aspects in Figure 16 are important for the

programme; as they represent the challenges young people face in rural areas on a daily basis:



Figure 16: Challenges that prevent youth from progressing

1.3 Best Practices/Benchmarking Study

A benchmarking exercise was conducted to assess the BNSDP model in comparison with best practice metrics as well as standard measurements of its peers and/or competitors. The aim of the benchmarking study is to determine potential best practice guidelines or learnings from similar initiatives. Ultimately, the findings of the SROI report should serve to adapt the programme design to align to best practice in education and/or to demonstrate thought leadership within the current model as demonstrated in areas such as the Free State where the model has successfully operated for more than 5 years. Two programmes/initiatives that are similar to the BNSDP and are focused around the development of schools in rural areas were chosen:

1. A local case study on the Care Support Teaching and Learning (CSTL) Programme; and
2. An international case study on the Global Partnership for Education (GPE) Programme.

The success factors, challenges and lessons learnt from both the case studies will be considered with regard to the BNSDP programme.

1.3.1 The Care Support Teaching and Learning (CSTL) Programme

The CSTL Programme provides an overarching framework for the initiation and expansion of care and support activities: activities that aim, in all instances, to improve education outcomes. CSTL does not

propose a “one-size-fits-all model”, and so the implementation of CSTL differs in every country and every context.

The success of CSTL is ultimately determined by increasing numbers of children and youth who are

- Enrolled at school at an appropriate age;
- Able to attend school regularly and complete their schooling; and
- Provided the opportunity and support to enable them to reach their full potential.

The CSTL programme is focused on addressing constraints in teaching and learning and uses comprehensive activities that aim to achieve educational outcomes in order to provide quality education to children (MIET Africa, n.d).

Like the BNSDP model CSTL focuses on:

- Buy in and ownership from government as a key component of the programme;
- Focus on strengthening and building partnerships for delivery; and
- Address challenges in schools from a whole school ‘holistic’ view.

The below table outlines the success, challenges and lessons learnt from the implementation of the CSTL programme across the SADC region.

Success Factors	
Partnerships	Collaboration between local, regional and national partners is imperative for providing service delivery that the programme/initiative requires. The partnerships should include partnerships with different sectors in order to meet the essential needs of the learners and to achieve the desired learning outcomes. Multi-sectoral partnerships are important as they improve the access to services and the utilisation of resources.
Community participation	It is essential to include the community as an important stakeholder as the buy-in of the community and ownership is important in strengthening the linkage between schools and civil society organisations.
	Community participation is particularly important as the community provides holistic support for the learners and are held accountable for the development of the learners, along with the government and NGOs. Community participation can be achieved through the establishment of partnerships/relationships between the schools and the members of the community.
	According to the CSTL Proposal document for the Swiss Agency for Development, “apart from creating a continuum of stability from school to home, the community provides the opportunity to address out-of-school children, while reaching a higher proportion of the vulnerable children and youth in the community.” In the areas where community partnerships have been successful, the community partnerships have been the most important elements contributing to the success and sustainability of the CSTL.

Technical Support	<p>The CSTL programme provided technical support sub-nationally, nationally and regionally. Technical support in programmes/initiatives similar to CSTLs can result in the following guidelines on (MIET Africa, n.d):</p> <ul style="list-style-type: none"> • how to establish schools as inclusive centres of learning care and support; • how to identify vulnerable children; and • the enablement of monitoring and evaluation (M&E) and task teams. <p>One of the key activities in the programme that was a success was the training of district officials, head teachers, teachers and community. The training gradually transformed the school into centres of care and support that address barriers to learning for all children.</p>
Learner involvement	Peer discussion groups should be held so that the learners are involved as partners in the interventions that are being implemented and can improve the quality of the education that they receive. This also ensured that learners took ownership for the quality of the education they received. Learners who were involved in the intervention, were more motivated and held their schools accountable.
Knowledge Management	The development of a knowledge management strategy was important for the exchanging of knowledge and the sharing of lessons learnt between provinces in each country and between countries. The purpose of a knowledge management plan was to facilitate the exchange of knowledge and experiences between stakeholders using tools and activities. An example of this was the hosting of annual sharing meetings, which allowed the sharing of good practices, and sharing of care and support materials to exchange with one another
Memorandum of Understanding (MOU)	Important with regard to partnerships was a formal MOU put in place so that each partner understood and committed to their role. The partners who are involved in the programme should be willing to share knowledge, resources and data. An MOU ensures that the partners are accountable for strong delivery of services to avoid challenges that could arise such as conflict and the lack of accountability.
Challenges	
Data collection	A challenge in the CSTL programme was low capacity, which negatively impacted data collection. Capacity for regular data collection is important and needs to be considered upfront. As an example, does the school have adequate skills and personnel that can conduct data collection regularly? The school needs to have a simplified data collection process and the instruments in place to allow for M&E. Schools should be provided with training on data collection and the type of data that will need to be collected needs to be clearly understood. Without adequate Monitoring and Evaluation, the success of programmes cannot be understood, gaps identified, and challenges addressed.

Table 8: Successes, challenges and lessons learnt from the CSTL programme/initiative

1.3.2 The Global Partnership for Education (GPE) Programme

The GPE programme, as developed by the Education Sector Strategic Plan, is a programme “to boost learning outcomes in basic education through continuous professional development of teachers, improved teacher supervision and management as well as strengthened evidence-based policy and strategic planning – having as key output indicators the Grade 7 pass rate and the Zimbabwe Early Learning

Assessment (ZELA) results” (Government of Zimbabwe: Ministry of Primary and Secondary Education, 2016). It has been largely funded by the Education Development Fund (EDF) as well as the Global Partnership for Education (GPE). The programme document lists the following as the success factors, challenges and lessons learnt throughout the support programme (Government of Zimbabwe: Ministry of Primary and Secondary Education, 2016):

Success Factors	
Partnerships	The programme has required a partnership with the Ministry of Primary and Secondary Education at a national and subnational level and partnerships with the Managing Entity and UNICEF. Its success is a result of capacity strengthening, team enthusiasm, sound Technical Working Group (TWG) membership drawn from a range of critical stakeholders and ECG members’ ability to problem solve and respond to implementation challenges.
Community participation	The programme required the assistance of the community and the parents in order to succeed, particularly to produce learning materials. This is where parents collected local raw materials such as cans, boxes, fabric etc. to support teachers by developing playing and reading resources for the learners at a minimal cost. This was a cost-effective response to school demand as the GPE funds could only cover some school level resources.
Joint teams	The close partnership between the GPE and UNICEF has contributed to the achievements of the GPE. This is due to the joint monitoring that has been undertaken together with the ECG (Education Coordination Group) members and UNICEF procuring equipment through the UNICEF procurement process as required. The biggest success factor has been the findings from the joint monitoring, spot checks and reviews which have been used to rectify issues and address any gaps in the programme.
Service provision	The GPE has been able to be prudent with their decisions based on evidence and capacity in MoPSE and in UNICEF, which has also contributed to the achievement of the programme targets. One such example was allowing the reallocation of the budget allocated to ‘Logistical Support Providers,’ and instead using the government as a service provider. This meant that all districts and clusters that were previously incompetent were now responsible for delivering quality education to the children of Zimbabwe. This led to effective results as district and cluster resource tutors took on the responsibility to train teachers, sensitise them on teacher professional standards, and provide guidance on the accompanying handbook and training manual for both primary and secondary teachers.

Assessment	Another aspect of success was the decision to use curriculum based, contextualised tests to determine Performance Lag Address Programme (PLAP) needs, rather than purchase and use the very expensive, WRAT (Wide Range Achievement Test) test originally proposed in the 2012 GPE programme document. It was also a good decision as it was found that the use of the WRAT was non-sustainable in Zimbabwe.
Challenges and Lessons Learnt	
Fund disbursement	One of the most significant challenges has been the disbursement of funds. The method had to be changed from distributing to all districts equally, to distributing more to the districts where there were more teachers per district and distributing according to the number of schools in each district for the material and resource portion of the disbursements made. District staff were encouraged to look at the size and nature of a school when allocating resources in order to do it in an equitable manner. Hence, the larger rural and satellite schools were given greater support with materials and resources than the urban schools. An in-house formula using school and district level data from EMIS was used to calculate district allocations. Large schools in high density suburbs of Harare and Bulawayo were also given special attention.
Procurement of goods and services	The procurement of goods and services presented a challenge for the Ministry of Primary and Secondary Education (MoPSE). UNICEF’s overall goal was to strengthen MoPSE’s structures and systems. Therefore, an effort was made to ensure that, to the extent possible, government structures and systems are used to procure goods and services. More frequently, serious delays were experienced especially when the upliftment is delayed because of bureaucratic processes in the Ministry and this incurs demurrage fines. Based on the challenges with procurement, a lesson learnt is that in cases that warranted it, UNICEF undertook procurement on behalf of MoPSE. This was done with MoPSE’s agreement. UNICEF also provided temporary storage for equipment when Ministry storage facilities proved to be inadequate or did not offer the required level of security in order to also eliminate the expense of fines.
Limited staff	There remain wide inequities based on socio-economic status; this translates into inequalities in the provision of education. Therefore, a further implementation challenge has been the limited and overstretched capacity of MoPSE staff. Many departments at national and district levels are severely understaffed and often staff members are carrying out the duties of multiple people resulting in major hindrances. Future programming must carefully assess the institutional capacity of MoPSE in order to support capacity development as a core strategy. The next phase of the programme takes the education sector’s human resource needs into consideration in the current sector plan process.
Information systems	One of the most successful interventions supported by EDF and GPE is the strengthening of data generation and management systems. MoPSE now enjoys an Education Management Information System (EMIS) that generates a comprehensive set of quality data, and a promising Teacher Development Information System (TDIS) requiring further development. It is now necessary to create the capacity and the appetite for fuller utilisation of the available information to guide policy development, planning and decision-making processes. In addition, the current system of reporting from the districts, using a reporting schedule with a drop-down menu has seen the efficient collection of information and data from the districts and has reduced the time spent in analysing each report and recording achievement data.

Table 9: Successes, challenges and lessons learnt from the GPE programme

Both case studies have highlighted the importance of partnerships and community participation as significant success factors in a school development programme. Partnerships and community participation provide resources needed and contributes to achieving the desired outcomes of the programme. A common challenge faced in related programmes, as highlighted in both case studies, is accessing and gathering data, with specific reference to the capacity, processes and tools in place for data collection.

Based on the above, the BNSDP programme has taken into consideration the challenges and lessons learnt that have been faced by similar initiatives, but where there are gaps these should be addressed before implementation.

SECTION 2: SROI STUDY

2.1 SROI approach and methodology

A forecast SROI study was conducted to estimate the potential impact of the programme, in monetary terms, that will be experienced by the intervention population of 255 schools, an average of 172 267 learners, 5 355 teachers and 255 principals. The calculations in a forecast SROI are projection based. It gives a measure of how much social value will be created by a project under conditions of activities meeting their unintended outcomes.

The forecast SROI will:

- Be useful for the planning of the programme in Limpopo and adjusting activities if required;

- Determine how their investment will maximise impact;
- Establish the basis for a monitoring and evaluation framework by identifying what should be measured once the project is commissioned; and
- Provide a basis for the data required for the outcomes.

The SROI methodology measures the change an intervention has on the stakeholders that are relevant to the intervention, taking into consideration the social, economic and environmental impacts that occur in monetary terms.

2.1.1 Methodology

The SROI methodology entails six key stages:

1. Establishing scope and identification key stakeholders

Outline clear boundaries if which the SROI analysis will cover and identify the stakeholders that will be involved in the process.

2. Mapping outcomes

Developing the ToC and impact map from the engagement with stakeholders in order to show the relationship between the inputs, outputs and outcomes.

3. Evidencing outcomes and giving them value

Source evidence/data to indicate whether the outcomes have occurred and value them.



4. Establishing impact

Outcomes are valued in monetary terms and the aspects of change that would have happened anyway or are a result of other factors are eliminated from consideration.

5. Calculating the SROI

Adding up the positive and subtracting the negatives. A comparison is then done between the result and the investment. A sensitivity test on the results can be done at this stage.

6. Reporting, using and embedding

Sharing the findings with stakeholders and verifying the report.

Figure 17: SROI methodology

2.1.2 SROI principles

There are guiding principles that will be followed during the SROI methodology:

1. **Involve stakeholders:** the involvement of stakeholders to inform what is being measured and how it will be measured. The stakeholder engagement assists in deriving a social value which is based on the stakeholder's perspective on what value they will be receiving;
2. **Understand what changes:** evidence and evaluate the change that is created for stakeholders as a result of the intervention and
3. **Valuing what really matters:** understand the value of the change for stakeholders based on the relative importance of different outcomes;
4. **Only include what is material:** stakeholders should be able to draw reasonable conclusions about impact. This entails determining what evidence and information must be included to give a fair and true picture;
5. **Do not overclaim:** claiming only the value that the intervention is responsible for creating;
6. **Transparency:** the analysis is based on trust and honesty; and
7. **Validity and reliability:** independent assurance is conducted by a credible and qualified third

2.1.3 Benefits of an SROI

- Is a method for understanding, measuring and reporting on the value created by a programme;

- Uses stakeholder engagement, research and common accounting and investment appraisal methods;
- Creates an index that compares monetised outcomes to the investment required to generate them;
- Builds upon the logic of cost-benefit analysis; and
- Is designed to inform practical decision-making, focused on optimising the initiatives for social and economic impact

2.2 Scope and limitations

2.2.1 Scope of the SROI

The SROI assessment will serve to validate "district whole school development" education model in terms of its uniqueness, effectiveness and sustainability by confirming the future value realised by the BNSDP beneficiaries (schools and communities) beyond the monetary investment.

The BNSDP was piloted in the Free State and the impact of the programme was positive. Consequently, the project will be extended to Limpopo Province. The scope and sample that the SROI will focus on are 255 schools in the Riba Cross located in the Tubatse Local Municipality and the potential impact will be calculated for these 255 schools.

The outcome of the SROI assessment will inform the implementation of the BNSDP Tubatse Local Municipality programme as well as future Kagiso Trust programmes in alignment with the underlying principles of development models.

The SROI assessment report will also serve as documentation of the thought leadership perspective of Kagiso Trust strategic approach to interventions for 'overcoming poverty. In this case, within the education sector. The report will be shared as a tool that can be used by role players in the education fraternity towards adoption and/or adaptation of sustainable and impactful education programmes.

2.2.2 Theory of Change

To ascertain the social and economic value of the BNSDP programme, it is necessary to understand how the programme leads to change from activity to outcome. The Theory of Change (ToC) is a comprehensive description and illustration of social change. It indicates how a desired change is expected to occur. In addition, it provides a platform on which to measure the impact achieved once the intervention has been completed.

The steps involved in creating a ToC include:

- Identifying a long-term goal (impact);
- Conducting backwards mapping to identify the preconditions required to achieve the goal (impact);
- Identifying interventions that the initiative will perform to create the preconditions; and
- Identifying the possible outcomes that will lead to the impact; and
- Understanding the outside influences and causal mechanism that will contribute to the success of the initiative, listing these as assumptions.

It is common for programme initiatives to evaluate the outputs generated, such as the number of training sessions conducted. The SROI analysis looks beyond the outputs to understand how these outputs have generated outcomes, and how these outcomes have changed the lives of the people affected.

As the programme affects a number of various stakeholders like learners, teachers, school leadership and the community, it was important to depict the logical linkages between the programme activities and the results they aimed to produce - not only for the learners who are the key beneficiaries, but for secondary beneficiaries, including principals, parents and the SGB. This is formally depicted in an impact map.

Evidently, the overall objective for the BNSDP programme is to improve educational outcomes, which will lead to a reduction in poverty. As a theory of change articulates the activities that must take place to reach those outcomes, some of the activities that would need to take place to reach the objective would include mobilising the community, developing leaders, and providing exit support to learners. These activities will lead to various outcomes which in turn feeds into the overall objective. A ToC will therefore assist Kagiso Trust see what activities need to take place to lead to the desired outcome. A ToC is also a living framework and can therefore be adjusted accordingly if anything changes.

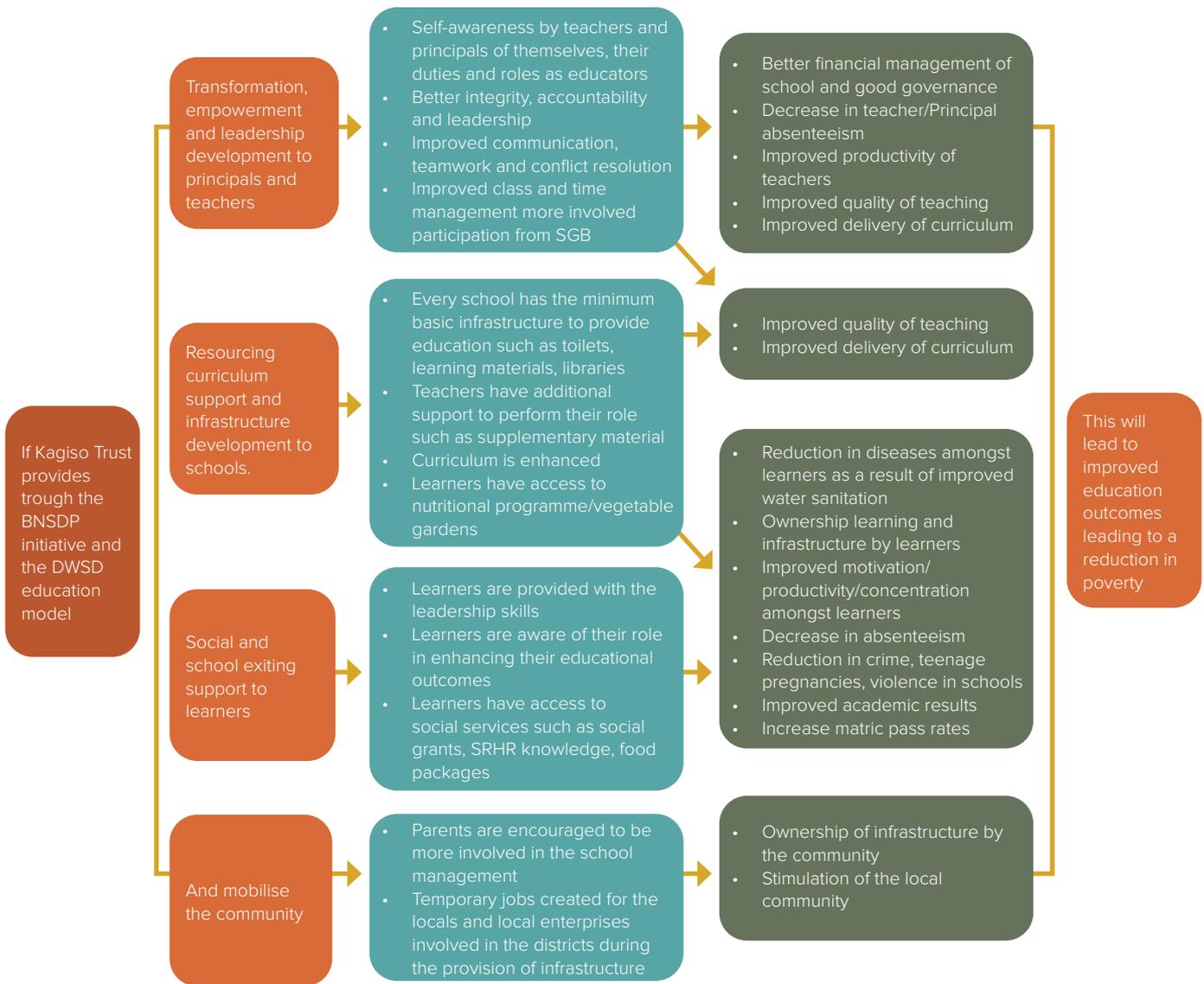


Figure 18: Theory of change

2.2.3 Limitations to the study

Below is a list of the general limitations that were beyond the control of this study:

Limitations	
Timeframes	This study was completed within a tight budget. This resulted in a limited ability to engage multiple focus groups or to explore alternative data collection methodologies, such as one-on-one interviews or home immersions.
	The timing of the stakeholder engagement was challenging, as access to the learners was during school time, and to limit disruptions only 1 hour was allocated with stakeholders. This limited the level of engagement with stakeholders.
Theory of Change	As no ToC was present, the study team had to develop one for the purpose of the analysis and to identify what they programme hoped to achieve for learners, teachers and principals.
Baseline data	There was very limited to no baseline data available against which to compare the future outcomes.
Targets	The extent to which an outcome is expected to increase, or decrease was not specified, and secondary data based on similar interventions had to be used to determine what change should be experienced as no targets were set by the programme.
Sampling methodologies	Access was limited to 9 schools as opposed to the 20 originally expected due to delays in access to the schools, then public holidays that occurred during stakeholder engagement
	The study team had to utilise the SGB as a quasi-group representing parents as they did not have access to parents. The parents within the SGB were unable to separate their roles as parents and members to fully provide insight into this stakeholder group.
Stakeholder engagement	The time of day and duration of the focus group sessions limited the extent to which deeper, underlying issues could be discussed. A structured discussion guide was used to gather feedback and responses during these discussions. Furthermore, sessions were conducted in English and then verbally translated into Xhosa. Responses from the stakeholders were verbally translated back into English and captured in English. This has left room for certain concepts to get "lost in translation".
Data access	Schools were unable to provide school data such as pregnancy, absenteeism, dropout, progression and matric pass rates. Where they could it was written down by teachers and the integrity of the data could not be verified.
Current data	For both the contextual analysis and SROI study current data was a challenge to find. In some instances, the earliest data was more than 5 years old.
Surveys	Learner surveys were administered by teachers, and although the surveys were simplified to reduce misinterpretation of questions, even at a high school level, learners struggled to understand the questions as was evident in the discrepancy in answers. Those data points were removed from the results.

Table 10: List of limitations

SECTION 3: STAKEHOLDERS

3.1 Stakeholder engagement

Stakeholder engagement is a critical component of the SROI methodology. Key steps in the process include:

1. Identifying potential stakeholders directly influenced by the programme, such as the learners at the schools that the intervention will be impacting;
2. Identifying and mapping stakeholders that may indirectly benefit from the programme, such as the wider community and the Department of Education;
3. Subsequent to the mapping process, considering the materiality of change they may experience and rationalising which stakeholders should be included in the study;
4. Determining the most appropriate engagement methodology and calculating sample sizes; and
5. Applying every effort to achieve desired sample sizes within the contextual boundaries and realities

This SROI analysis is based on direct stakeholder engagement and is forecast for the next five years. Secondary research was conducted to support assumptions and targets set for the SROI analysis.

3.1.1 Stakeholder identification and mapping

The following five groups of stakeholders were jointly agreed upon as “material” for the purposes of this study:

- Learners;
- Teachers;

- Principals;
- SGB;
- Department of Education; and
- Community.

These groups were the focus of the stakeholder engagement processes to provide evidence of the change created by the BNSDP’s District Whole School Development education model. The relevance of each of the stakeholder groups above (those in the spheres of control and influence) was considered by evaluating their level of involvement in the BNSDP’s District Whole School Development education model. Those stakeholder groups that are materially affected by the programme, i.e. the primary beneficiaries of the programme, would generally always be included in an SROI study.

Indirect beneficiaries of the programme, for example SGBs, Department of Education and the wider community, were also explored in the SROI study. However, the materiality of the change that these groups experience determined whether they were included or not. Furthermore, for those stakeholder groups involved in implementing the programme, for example Kagiso Trust and the Department of Education, it is important to determine the materiality of the social value derived for each group beyond their contractual obligations (i.e. what they would be paid for). This rationale has been included for each of the identified stakeholder groups.

Stakeholder Group	Included/Excluded	Rationale for inclusion/exclusion
Learners	Included	The learners are a key beneficiary of the BNSDP. Any changes that affect other stakeholders will and should affect the learners. They will experience a change in their educational outcomes as a result of the programme such as improved learning, an increase in their school performance /results, safety, increased motivation, improved leadership skills and a reduction in risky behavior.
Teachers	Included	Teachers are an important and a key beneficiary of the BNSDP and are a target of the programme activities. They will contribute to the impact of the change in the schools through better governance, improved leadership skills, increased content knowledge, improved time management, increased morale and reduced absenteeism and late-coming.
Principals	Included	The principals have been included as a key stakeholder as they are key targets of the programme activities. The change in leadership and management skills amongst principals will result in better management of the school and improve the quality of education for learners.
SGB	Not included	The SGB were not included as key stakeholders as they only provide support to BNSDP programme. They were engaged to validate information.
Community	Included	The community are secondary beneficiaries of the programme and will benefit from the outcome of the programme and have been included. The intervention includes activities such as the Resilience Network which requires the community involvement in addressing the socio-economic issues. Another reason for including the community is that the programme will create employment opportunities for the community members through the provision of infrastructure. The parents of the learners will benefit from the visual programme that the intervention will provide as it will ease the financial burden on parents as caregivers.
Department of Education	Included	The Department of Education are partners and support the implementation of the programme. The district officials will also benefit from the programme as they will receive additional support through the district empowerment and leadership workshops that will be provided to them. Therefore, the DOE has been included.

Table 11: Stakeholder inclusion and exclusion rationale

3.1.2 Sampling process

The KT team responsible for the implementation of the BNSDP facilitated all stakeholder engagement, therefore respondent access was based on existing relationships with the schools in Riba Cross. They also contacted and set-up all interviews with the stakeholders.

Using statistical methods, the sample size for each stakeholder group was calculated using a 95% confidence level and 5 confidence intervals. The disaggregated sample sizes for each stakeholder group that was engaged is shown in Table 12.

Stakeholder Group	Sample population	Actual sample engaged with
Learners	<ul style="list-style-type: none"> The learner population is 255 schools with an average of 172 267 learners; Of the 255 schools the sample size was 10 schools (5 primary and 5 secondary) and 390 learners; The sample at the 5 primary schools was 75 learners between Grade 5 and 7 through FGDs and 85 via surveys; and The sample at the 5 secondary schools was 75 learners between grades 8 and 10 and 75 learners between grades 11-12 via FGDs and 85 via surveys; 	<ul style="list-style-type: none"> 9 schools engaged 391 learners in total FGD: 211 learners Survey: 180 learners Primary School: 144 learners Secondary School: 247 learners
Teachers	<ul style="list-style-type: none"> The teacher population is +- 5 355 teachers that are employed at the 255 schools (an average of 21 teachers per school); and The sample was 10 teachers per 10 schools through FGDs (100 in total) 	<ul style="list-style-type: none"> 9 schools 90 teachers engaged
Principals	<ul style="list-style-type: none"> The principal population is 255 principals employed at the 255 schools; and The sample was a principal per school through face-to-face interviews (5 schools) and 10 principals through an FGD (15 in total) 	<ul style="list-style-type: none"> 5 schools 16 principals engaged during the focus group discussion 5 principals engaged during face-to-face interview
SGB	<ul style="list-style-type: none"> The population is 255 SGBs at the 255 schools; and The sample was 3 SGBs through FGDs 	<ul style="list-style-type: none"> 4 SGBs engaged
Department of Education	<ul style="list-style-type: none"> The population was 2 Circuit Managers and 1 District Manager. The sample was 2 circuit managers and 1 District Manager 	<ul style="list-style-type: none"> 2 Circuit Managers engaged.

Table 12: Sample population vs sample engaged

3.1.3 Sampling parameters

- Initial fieldwork time was 10 days and 2 schools per day for a total of 20 schools;
- Due to time constraints (access to schools, in between public holidays), fieldwork was reduced to 5 days and 9 schools;
- From the Department of Education, we were only able to engage with 2 circuit managers and were not able to engage with the district manager as the individual was not available;
- We were only able to interview 4 primary schools as opposed to 5; and
- We were unable to spend more than 60 minutes with each stakeholder group due to time constraints.

3.1.4 Stakeholder engagement methodology

The primary manner of engagement across the stakeholder groups was qualitatively through FGDs and face-to-face interviews. The secondary manner of engagement across the stakeholder groups was

done quantitatively through surveys.

Focus group discussions (FGDs): The FGDs were planned and managed jointly by the BNSDP team, the schools and IQbusiness. The FGDs were held on the school premises, during the mornings and afternoons for a duration of 60 minutes. It was also the intention to ensure that stakeholders did not have to forego school, teaching or other activities in order to engage in the process.

Face-to-face interviews: The face-to-face interviews were conducted with principals at the schools visited and were arranged by Kagiso Trust.

Surveys: The surveys were handed out by the schools to a selection of +-15 learners per school. The surveys were developed prior to the stakeholder engagement by IQbusiness.

SECTION 4: KEY FINDINGS

4.1 Mapping and evidencing outcomes

The information gathered through the stakeholder engagement was analysed to identify recurring themes and alignment to the programme's ToC. It was then translated into the impact map that constitutes a key tool of the SROI analysis, as it is the working document on which calculations are performed.

The impact map outlines the inputs, outputs, outcomes, indicators, financial proxies and economic modelling for each stakeholder group, with the aim to understand the extent of the change experienced prior to determining the social return on investment value. The involvement of the stakeholders ensures that the outcomes that matter to those who are directly affected will be appropriately measured and valued. All findings are then cross-referenced with best practice and desk research.

In valuing the experienced change, it is important to note that the SROI approach does not aim to monetise all planned outcomes, but rather identifies and monetises the change experienced by the stakeholders. This approach may not align exactly to the programme log frame but

is rather complementary to the log frame. For ease of reference, the impact map has been divided and summarised in the subsequent sections.

4.1.1 Identifying inputs, outputs and verifying outcomes

As the programme had not yet begun, stakeholders were unable to provide information with regards to their involvement, time, or monetary input into the programme. It was determined from the previous programme implementations that as it is a school-based programme, there would be no input costs for stakeholders.

- Both financial and non-financial costs and benefits were enquired to ensure that tangible as well as nontangible costs and benefits were considered; and
- Future activities in relation to the BNSDP's education model verified with the programme implementors to capture any unanticipated activities that may not have been identified when the ToC was developed. The table below summarises the input values and activities for each stakeholder group.

Stakeholder Group	Input value	Summary of high-level activities
Learners	No material input - RO No material input - RO	<ul style="list-style-type: none"> • After-school and Saturday classes • Career guidance sessions • Resilience network programme • Sports tournaments • Examination preparation classes • Fourth Industrial Revolution (4IR) awareness and competition • BNSDP Sport Tournament logistics- winners prizes, sports ground fee, catering, transport for learners, sports kits • Literacy competition- reading/spelling Bee, storytelling/ • Learner motivation sessions
Teachers	No material input - RO	<ul style="list-style-type: none"> • Retreat • SMT leadership support • Subject focus support • Lead teacher capacitation • ICT in schools • Develop communities of practice (COPs)
Principals	No material input - RO	<ul style="list-style-type: none"> • Retreat • Instructional leadership programme
SGB	No material input - RO	<ul style="list-style-type: none"> • Instructional leadership programme
Community	No material input - RO	<ul style="list-style-type: none"> • Resilience network programme • Visual programme
Department of Education	R200 000 000	<ul style="list-style-type: none"> • District empowerment workshop • District leadership workshop

Table 13: Stakeholder input values

4.1.2 Identifying outcomes

This section contains the outcomes which describe the change experienced by the stakeholders as a result of the activity. Outcomes go beyond just evidencing what the stakeholders will be involved in but delves deep into understanding what change they will experience because of that specific activity. This allows for the programme to better understand which activities are contributing to and creating the most impact. For each result, a set of indicators were identified to provide a means of measuring the extent to which the expected change will take place.

It was important to identify and forecast the direct impact of the programme/intervention both from a stakeholder perspective and

within the context of the programme. In an SROI study, only those outcomes that can be evidenced by stakeholders can be included when calculating the programmes overall impact and associated value.

During stakeholder engagement, stakeholders were asked what current challenges they face at the school, any other additional socio-economic challenges that they experience, and what changes they might experience in their lives as a result of the intervention addressing those challenges. Open-ended questions, based on the programme's anticipated outcomes, were used to uncover the potential benefits in order to determine the forecasted material change.

Stakeholder outcomes

Learners

Learners are the primary beneficiaries of the BNSDP, and as such most outcomes evidenced were for this stakeholder group. The outcomes for the learners start from year one and are expected to last over the five-year duration of the programme and beyond. The short-term outcomes for the learners focus on self-awareness, building leadership skills and providing opportunities to learners leading to changes in behaviour and improved competencies, knowledge and skills of the learners. The long-term outcomes are centred around the changes in the academic performance of the learners. These were applied to both primary and secondary learners as both groups evidenced the same challenges and changes.

Outcomes include the following:

Outcome	Evidence
<p>Decrease in at risk behaviour as a result of improved self-awareness, leadership skills and future prospects</p>	<p>Importance of outcome</p> <ul style="list-style-type: none"> • Risky behaviour is one of the strongest predictors of poor educational outcomes. Risky behaviour has been identified as behaviour that harms both the individual and society at large. In the context of the programme it has been confined to teenage pregnancy, bullying, and drug and alcohol abuse. • Teenage pregnancy puts young girls behind in school and at a disadvantage to their peers. Teenagers that fall pregnant struggle to afford the costs associated with a child and most of them drop out of school. Every year, 100 000 + young girls fall pregnant in South Africa, a trend that has not seen a decrease over the past decade despite numerous mitigation efforts. • Drug abuse, gangsterism and criminal activities all place a heavy burden on state resources as the system (prisons, rehabilitation centres, hospitals) tries to address and reduce its impact on the economy. • Bullying in schools is significant and is pandemic across all South African provinces. This negatively affects the school environment and ultimately academic results. According to the South African College of Applied Psychology (SACAP), 57% of students in South Africa have reported to have been bullied at some point in secondary school.⁷³ <p>Evidence</p> <ul style="list-style-type: none"> • A common theme that was identified by all stakeholders (learners, principals and teachers) was that of risky behaviour amongst learners specifically high rates of teenage pregnancy, drug and alcohol abuse, bullying and violence. • 41% of surveyed learners said they had experienced some sort of bullying/abuse in the past year that affected their ability to learn or want to come to school. • 100% of the secondary schools said that teenage pregnancy was an issue in their school/community. • Lack of activities that are available at and outside school for learners to participate in was cited as a cause of risky behaviour. This leads to negative behaviour as a form of distraction. Limited activities also limited the opportunities for ownership, leadership and feelings of belonging. • The BNSDP covers activities that include social and school support for learners. These activities focus on providing learners with leadership skills through after-school activities. Additionally, these activities will make learners more self-aware of their decisions and help them to develop leadership skills; and • With better teacher and principal management skills and the transformation of the school environment, learners will be provided with a school that encourages and supports pro social behaviour and addresses challenges in the school system such as early pregnancies, bullying etc.
<p>Improved acquisition of defined knowledge and competencies as a result of improved school environment, learning mechanisms, infrastructure and quality of teaching</p>	<p>Importance of outcome</p> <ul style="list-style-type: none"> • Studies conducted reveal that after five years of schooling <ul style="list-style-type: none"> - 50% of South African pupils cannot do basic calculations - 27% can't read - 60% of grade 1-6 Mathematics teachers failed to pass tests for Mathematics at the grade level • State schools, particularly those in rural areas, lack basic school infrastructure (desks, textbooks, libraries etc.). • Teachers have limited guidance and support and the quality of teaching is not on par with other developing nations such as Zimbabwe, Kenya and Swaziland. • Teachers and learners do not have supplementary material to use in classrooms, and usually as many as four learners share a desk and textbook. • New pedagogies in teaching have also not been introduced or adopted by schools and teachers. This hinders a learner's ability to acquire new knowledge, ultimately negatively impacting their academic performance. • All the above aspects result in high rates of absenteeism and dropout rates. <p>Evidence</p> <ul style="list-style-type: none"> • Teachers and principals mentioned that learners have difficulties in understanding the content of the curriculum • Learners who struggle academically fall even further behind than their peers and are unable to keep up. • Due to high number of learners in classes, teachers are unable to provide individual attention to learners which further impacts their prospects and performance. • Schools mentioned that limited learning resources e.g. science labs and equipment, insufficient textbooks made it difficult for learners to grasp the concepts being taught. • Learners said that teachers don't attend classes and they were provided with limited direction and support when required • Improving the educational outcomes of learners is the overall objective/goal of the BNSDP through: <ul style="list-style-type: none"> - Increasing teacher content knowledge and skills, - Providing basic infrastructure to schools, - Improving the distribution of resources in schools, and - Better supporting underperforming learners

Outcome	Evidence
Improvement in the matriculation pass rate	<p>Importance of outcome</p> <ul style="list-style-type: none"> • Although South Africa has seen an improvement in matric results, from 62% to 78% in the past decade, the quality of the pass rates is still not adequate to allow matriculants to gain a quality tertiary education. • The actual matric pass rate however may be far lower than what is projected, considering the extreme number of dropouts between grade 1 and grade 12. • The number of matriculants who write Mathematics is small and the quality not acceptable. Less than 50% of the matric final exam writers write Mathematics as a subject, and it is consistently the lowest performing subject. • The poor outcomes of the education sector have a direct negative impact on the economy, with learners not having the necessary skills and qualifications to be absorbed into the labour market, and the labour market not having the right skills and qualifications to grow the economy. • Higher education institutions require 80% and above for programmes in commerce, engineering, science, health sciences, but only 2.6% of learners pass with a distinction (80% or above). • Poor educational outcomes and limited education are contributing factors to poverty and crime, thus continuing the vicious cycle of inequality in the country. <p>Evidence</p> <ul style="list-style-type: none"> • All schools engaged discussed the dire state of their academic results, particularly the matric results. It was mentioned that learners have been performing worse in matric year on year. • The BNSDP will improve the educational outcomes from a primary level all the way through to secondary level which will have a direct impact on matric results.
Access to safe and clean toilet facilities	<p>Importance of outcome</p> <ul style="list-style-type: none"> • Access to basic services such as safe sanitation at schools is the right of every child. The government has made a commitment to improve access to flush toilets for schools in rural areas; however, many of the schools still use pit toilets, lack proper sanitation facilities and supplies. In 2018, a 5-year-old girl fell into a pit toilet and drowned. This wasn't the first incident of its kind. • The provision of adequate and clean sanitation facilities is a challenge faced by under-resourced schools across South Africa. This is due to a combination of limited service delivery, lack of funds and unequal distribution of funds. • Inadequate sanitation has health, safety and psychological consequences and affects the quality of life of children. <ul style="list-style-type: none"> - It claims the lives of approximately 1.5 million children under the age of five who die each year from diarrhoea. - Contributes to hygiene-related diseases - Causes 272 million schools days missed every year due to diarrhoea. - Prevents girls' right to education as girls are reluctant to continue their schooling when toilets and washing facilities are not private, safe, clean, or simply not available. <p>Evidence</p> <ul style="list-style-type: none"> • A needs analysis conducted by the Kagiso Trust found that: <ul style="list-style-type: none"> • 9 schools did not have flush toilets, • During the school visits, inadequate toilet facilities that were not clean, nor safe for the learners were observed at 75% of schools. <ul style="list-style-type: none"> - At one of the schools visited, there was no tap for learners to wash their hands, - All the schools visited did not have soap for the learners to wash their hands after going to the toilet, - In some schools' toilets are located far away from the classrooms and teachers. Learners interviewed mentioned feeling unsafe walking to toilets that were isolated or far away. Younger learners in primary school mentioned being afraid of falling into the pit toilets. Besides the health implications, this can also result in trauma for learners. • One of the key aspects of the BNSDP is the provision of basic infrastructure for schools which will result in access to cleaner and safer toilets for learners

Table 14: Evidence of outcomes - learners

Teachers

Teachers are one of five key stakeholders in the BNSDP. They directly contribute to the educational outcomes of learners by:

- Playing a vital role in the lives of learners by educating learners placed in their care;
- Creating a warm and safe classroom environment that facilitates learning;
- Being role models for young people, fostering positive social behaviour;
- Mentoring learners and encouraging them to be their best, listening to the needs of learners and assisting them to take ownership of their lives; and
- Protecting learners from harm and being able to identify signs of trouble/abuse/mistreatment.

The main activities of the programme such as the retreat and workshops are directed at the teachers, recognising that teachers are the most critical aspect of improving educational outcomes. This will lead to an improvement in the skills, capacity, morale, motivation and safety of teachers.

Outcome	Evidence
<p>Increased sense of purpose amongst teachers resulting in an improvement in their behaviour and accountability</p>	<p>Importance of outcome</p> <ul style="list-style-type: none"> • It is widely acknowledged that improving the quality of teaching is essential in overcoming the education crisis. • Professionalism in the teaching sector has decreased with limited accountability for poor educational outcomes and professional teaching standards that are not adhered to. • Low morale and motivation, leading to high rates of absenteeism amongst teachers, is affecting the quality of education that learners receive <p>- An estimated 10% of teachers are absent on any given day in schools in South Africa. Teacher absenteeism increased from 8% in 2018 to 10% in 2019, suggesting that the situation is worsening. The high absenteeism ate amongst teachers constitutes an average of 11% of teaching time lost per teacher due to absenteeism. This affects learners as they miss out on lessons, and their educational outcomes are compromised.</p> <ul style="list-style-type: none"> • Finding a common goal and vision to overcome the current education crisis is at the heart of overcoming challenges schools face. Teachers finding a sense of purpose in the work they do and taking responsibility for the role they play is fundamental. <p>Evidence</p> <ul style="list-style-type: none"> • All 9 schools interviewed identified teacher absenteeism, and low teacher morale and motivation as a problem at their schools. Principals at these schools felt that the majority of teachers lack a sense of purpose in their roles. - Due to this lack of a sense of purpose amongst teachers 70% of them experienced low morale and motivation. - 27% of learners surveyed said that teachers being absent was an issue at their school • One of the key activities of the BNSDP is the retreat. The retreat focuses on helping teachers with the following: <ul style="list-style-type: none"> - Increasing their accountability; - Regaining a sense of purpose as teachers; and - Improving the motivation and morale of teachers. • The retreat will result in a change in the teachers' behaviour as they become more accountable and motivated in their role as teachers, leading to a reduction in absenteeism amongst teachers, and an improved sense of belonging and purpose.
<p>Improved safety of teachers as a result of improved learner behaviour</p>	<p>Importance of outcome</p> <ul style="list-style-type: none"> • Crime and violence have become a common feature of many South African schools. Over the years, an increasing number of violent incidents against teachers by learners have occurred in schools across the country. • An estimated 22% of teachers in schools in South Africa feel that schools are unsafe, and students often come to school armed, with many teachers resigning due to the unsafe environment. • School safety is critical for a conducive teaching and therefore learning environment. The government has been trying to put a stop to violence in schools over the years as it is a threat to achieving the desired educational outcomes in schools. <p>Evidence</p> <ul style="list-style-type: none"> • From our FGDs with teachers, we found that 70% of teachers feel unsafe on school premises. Furthermore, all the teachers at the 5 secondary schools interviewed admitted they feared learners and their safety at school; • Unruly behaviour in classrooms and issues of intimidation, bullying and violence were cited as the main reason for teachers feeling unsafe at school. • Although the BNSDP will not address all aspects of security, it will however address the learners' attitudes and behaviour. Behavioural issues amongst learners is commonly associated with their socio-economic circumstances. Through the learner motivation workshops and the resilience network, learners will learn how to deal with their anger and will improve their self-awareness. By addressing these learner challenges, we expect to see a change in the behaviour of learners and a reduction in negative social behaviour, making teachers feel safer at school. Overall, a better school environment that is also facilitated by teachers and principals will contribute to improved behaviour.

Outcome	Evidence
<p>Improved productivity as a result of better time management (implementation of better teacher planning, classroom management)</p>	<p>Importance of outcome</p> <ul style="list-style-type: none"> • According to the Department of Education more than 60% of schools do not complete the annual national curriculum. • Although South African learners spend more classroom time than other countries, on average schools complete about 50% of the curriculum. • Teacher incompetence has been blamed for poor curriculum coverage, coupled with a heavy curriculum load and teacher absenteeism. • Teacher productivity is another factor that affects learner performance, with low productivity blamed on administrative tasks. • Teachers in South Africa report spending as much as 40% of their time on administrative tasks such as creating lesson plans, marking papers etc. This slowed their teaching down significantly and made it difficult for them to keep up with the curriculum. Although all teachers are responsible for administrative tasks, teachers who teach in a rural environment lack modern technology, therefore a large part of their administrative tasks include paperwork. These teachers struggle with limited support and support materials that are required for them to fulfil their role. <p>Evidence</p> <ul style="list-style-type: none"> • From our engagement with teachers we found that only 40% of teachers felt they are as effective as they should be; • One of the challenges that teachers identified in conducting their day-to-day tasks are planning and time management; • Teachers identified that due to inefficient planning systems (lack of the use of technology) in place at the schools, more time is spent on administrative tasks. This takes away from the core duties and responsibilities as teachers and consequently, the productivity of teachers. • The BNSDP provides ICT training in schools for teachers which will give them the skills and access to modern technology that is needed for better administrative planning, time management and classroom management. The learners will benefit from this as teachers will be more productive and have more time to teach in the classroom. • The programme also supports teachers in creating more effective lesson plans and building their teaching capacity which will all result in more effective delivery of the curriculum.
<p>Improved knowledge, skills and resources for teachers leading to better curriculum delivery</p>	<p>Importance of outcome</p> <ul style="list-style-type: none"> • Mediocre teacher performance, underqualified teachers and poor teacher training and learning are problematic issues in the education system in South Africa, with thousands of South African learners taught by teachers who are not sufficiently skilled in the subjects allocated to them. • Teachers lack sufficient knowledge and training on the content they are teaching. Most teachers in rural areas are non-specialists and have to teach subjects that they do not have enough knowledge on. As an example, Mathematics is one the subjects that teachers struggle with as there is a shortage of specialist Mathematics teachers. • Another factor that contributes to this is that under-resourced schools struggle to attract and retain better qualified teachers. • Teacher training colleges do not provide adequate practical skills for teachers, and learning is largely theory based. Teacher development and the role and competence of universities in preparing teachers in teaching basic classroom practice and didactics has been strongly suggested to improve teaching abilities. • Government has indicated that teacher capacitation is a priority area as high learning outcomes at schools can only be achieved once schools raise the skills and the depth of content knowledge that teachers have. <p>Evidence</p> <ul style="list-style-type: none"> • During our engagement most teachers (approximately 80%) revealed they needed additional training and workshops in order to develop themselves and feel more capacitated in their profession. The workshops that teachers currently receive are provided by the DoE. Teachers believe that these workshops are not aligned to what they need to learn and do little to upskill them in their profession. Additionally, it was emphasised that curriculum advisors often provide workshops on languages such as English and there are not enough workshops on Mathematics and Science. • The BNSDP will provide subject focus support workshops and teacher capacitation workshops for teachers that will increase the knowledge, skills and professional development of teachers so that they are able to better deliver on the curriculum.

Table 15: Evidence of outcomes for teachers

Principals

The role of a principal extends further than managing the performance and running a school – a principal is the leader of the school hence being a key stakeholder in this process. Principals directly impact the educational outcomes of learners and are vital in making schools effective. Functioning schools are schools that have a good leader, with principals who focus on teamwork, commitment and passion. These principals have a vision for the school and demonstrate curriculum leadership.

Principals are responsible for:

- Shaping a vision of academic success for all students by being responsible for establishing a schoolwide vision of commitment to high standards and the success of all learners, and not just be managers of schools;
- Creating a climate that supports education and allows both adults and children to put learning at the centre of their daily activities. This is characterized by basics like safety and orderliness, supportive and responsive attitude toward learners and creating and instilling a sense of community with teachers;
- Cultivating leadership in others by inspiring and building respect within their faculty. Good leadership improves both teacher motivation and work settings which in turn fortifies classroom instruction; and
- Engaging parents and the community and using relationships and partnerships to address challenges the school face and making parents more accountable for their children’s learning outcomes.

Outcome	Evidence
Increased accountability of principals	<p>Importance of outcome</p> <ul style="list-style-type: none"> • Principals are accountable for the challenges the schools face such as learner and teacher behaviour, parental involvement, learner educational outcomes, safety at the school and curriculum delivery. • Principals are more importantly accountable for the decisions they make and the failure and success of the schools educational outcomes. Underperforming principals who are not accountable for the schools performance create a culture of impunity amongst all stakeholders within the schools. • However, principals lack sufficient support to address these challenges, which results in an increase in stress amongst principals and inadequate management of the school. • Lack of cohesiveness amongst teachers and principals in schools add to the challenge of building an effective school environment. • A large proportion of a principal’s time is spent on administrative tasks. A challenge cited amongst principals is that principals lack balance when it comes to the effort and time that is spent on school-wide activities and the time spent on instructional activities. The consequence of this is that principals are unable to spend enough time on building relationships with the community and the parents of the learners. <p>Evidence</p> <ul style="list-style-type: none"> • Interviews with principals found that only 50% of principals are involved in after-school activities and community engagement; • 80% of principals reported that they experience chronic stress for which they receive no support; • At two of the schools interviewed principals were not aware of some of the learner and teacher challenges. • The BNSDP will provide a retreat for principals that is focused on transforming performance in schools by driving accountability. Ongoing support will ensure they are continuously capacitated. • Furthermore, the retreat aims to change the culture within schools for the better and encourage a fostering collaborative environment. This will mean that principals dedicate more time to fostering better relationships with teachers, the Department of Education, the community and parents. This will directly impact teachers and learners who will feel more supported as a result of increased involvement of the principal, parents and the community.
Improved leadership, confidence and empowerment of principals	<p>Importance of outcome</p> <ul style="list-style-type: none"> • Changes in the governance of schools in South Africa have left principals unprepared for their new role as 'chief executive officers' • Principals are oft times unaware of their leadership functions and the skills required to be leaders. • Principals are responsible for the day-to-day functions of the school as leaders. However, principals face great challenges in their professions. These challenges include external factors (e.g. legislation, departmental policies), school structures (e.g. for maintaining standards and budgets), interpersonal processes (i.e. relationships with teachers, students and parents), and personal factors (i.e. professional activities and lifestyle) that impact their ability to effectively lead the school. • Consequently, the insufficient leadership capability within schools contributes to the shortfall in the education system in schools in South Africa. <p>Evidence</p> <ul style="list-style-type: none"> • All of the 22 principals interviewed expressed that they did not receive enough leadership training and stated that they require more leadership training. • Additionally, in the FGDs with the teachers, the teachers mentioned that they needed more support from the principals at the schools. • The retreat that will be provided by the BNSDP is focused on empowering principals through the provision of leadership and management skills for principals. • In addition, the programme entails Instructional Leadership workshops to improve the leadership skills of principals.

Table 16: Evidence of outcomes for principals

Department of Education

As co-implementers of the programme, the DOE will contribute to the changes that will be experienced by identified stakeholders. Additionally, the DOE will also benefit from the changes of the programme. District officials (district and circuit managers) who influence the performance of the schools will directly benefit as they are recipients of programme activities. District officials have an important role as they ensure good management, governance, administration and curriculum delivery at the schools.

District officials are responsible for:

- Planning: collecting school data and analysing it to inform planning. They also help schools put together their development plans and school improvement plans;
- Support: providing education institutions with support and assisting in creating an enabling environment that is aligned with education policies and laws. District officials are responsible for helping educators and school principals improve the quality of teachers and learning at schools. This is achieved through school visits, classroom observation, consultation, cluster meetings, suitable feedback reports and other means;
- Oversight and accountability: District officials are responsible for holding the schools and principals accountable for the school's performance, as well as taking accountability for the performance of schools. It is important that they understand the roles, responsibilities and functions that their job entails; and
- Public engagement: engaging and involving the community whilst upholding transparency during these engagements.

The BNSDP will provide additional support to district officials through empowerment workshops, which will assist them in the execution of their duties. The duties and responsibilities of district officials positively impact school leadership and the performance of the schools.

Outcome	Evidence
Increase in the district official's (district and circuit) capacity, coordination and support to the schools	<p>Importance of outcome</p> <ul style="list-style-type: none"> • District officials are seen as instructional leaders who are responsible for improving the capacity of teachers and principals at schools. • District officials however are usually spread thin in their allocation of duties by being responsible for a number of schools, some of which are located in remote areas, thus making it difficult to oversee them. • This impacts principals, teachers and the quality of learning at the schools as they are reliant on district officials for support and improvement of the school. • The discussion in the contextual analysis on the challenges in the education system in South Africa, found that the incapacity of districts to provide adequate support was a challenge that learners, teachers and principals are affected by. The result is poor support for principals in particular, and poor delivery of the curriculum material for learners. • The BNSDP programme provides activities such as empowerment and leadership workshops for district officials which will result in more assistance (increased capacity, coordination and support) <p>Evidence</p> <ul style="list-style-type: none"> • Interviews with the principals and teachers revealed that they would like more support from the department in managing and improving the school. • The SGBs engaged with supported these remarks, as some felt the underperforming schools were inadequately supported by the district, whereas those that performed well were given more attention.

Table 17: Evidence of outcomes for the Department of Education

Community

The benefits of improved educational outcomes on communities are consequential, although most of the impact will be experienced in the long term. In the short term, the benefits that will be experienced have been included to demonstrate the impact beyond just the schools.

An intention of The BNSDP model is to support local economic growth in so far as possible by:

- Utilising skills that are in the local community;
- Employing locals (parents) in the building of school infrastructure;
- Sourcing materials from the local area; and
- Using local suppliers.

Additionally, the programme supports social development through the provision of:

- School supplies such as uniforms;
- Eyecare screening and provision of glasses; and
- Food packages to those households of learners that are considered vulnerable.

Outcome	Evidence
Reduction in the burden on family members to provide care of their children (glasses, feeding scheme, school uniforms etc.)	<p>Importance of outcome</p> <ul style="list-style-type: none"> Parents of learners in less wealthier communities are unable to carry the costs of basic supplies for their children such as school uniforms and spectacles. Lack of access to eye care and spectacles place school going children at a severe disadvantage. Vision impairment impedes the learning of approximately 6 out of 10 children, which adversely affects their educational outcomes. These learners are unable to read what is on the board, are embarrassed to mention they cannot see and usually fall behind in class, failing the subject or dropping out altogether. <p>Evidence</p> <ul style="list-style-type: none"> Based on the surveys, a large portion of learner parents are unemployed or there is only one person employed in the family. Additionally, even those parents that are employed struggle financially. Provision of eye care and school supplies will decrease the financial burden on caregivers/parents of learners.
Increase in the circular flow of economic activity in Sekhukhune District	<p>Importance of outcome</p> <ul style="list-style-type: none"> Community members in rural areas with high unemployment, struggle to find opportunities to generate income. Through the provision of infrastructure at schools, there is an opportunity for the community members to obtain employment from the building of infrastructure at schools. The wider community and economy in Sekhukhune District (Riba Cross included) will benefit from the economic opportunities that are presented as a result of the BNSDP Whole Schools Development Programme. This will lead to an increase in economic activity in the area. <p>Evidence</p> <ul style="list-style-type: none"> The BNSDP has stated that the entire infrastructure budget will be used for sourcing materials, supplies and labour from the local community; and During the five-year duration of the BNSDP, there will be an inflow of economic activity and income that is injected into the economy as a result of the programme.

Table 18: Evidence of outcomes for the community

4.1.3 Identifying indicators

Indicators for each stakeholder outcome were developed to ascertain the extent to which an outcome will occur. It is important to accurately define and describe all outcomes and indicators in the design phase of a programme. This reduces potential ambiguity or lack of clarity in understanding exactly what the programme must achieve to effect positive change, or how success will be measured.

The indicators in Table 19 were identified based on three aspects:

- Stakeholder engagement and information provided by stakeholders;
- Secondary research; and
- Changes that had occurred as a result of the programme in Free State Province.

Indicators were created based on common challenges and issues that were raised by stakeholders. This was then supported by research. Additionally, the Specific, Measurable, Achievable, Relevant and Timebound (SMART) process was used to establish indicators that will verify whether an outcome will be realised and to what extent.

- Specific:** assessing whether the indicator is specific enough to measure the outcome and is specific to the stakeholders. As an example, did most schools state that teenage pregnancy is a challenge that schools face with learners?
- Measurable:** determining whether the indicator is measurable and not just including an indicator that is easy to measure. Taking into consideration whether we will have quantitative information from stakeholders in the future to establish the “number of exclusions.” Is it possible to measure the indicator within the scope that was set and with the resources that are available?
- Achievable:** determining whether the indicator is realistic and whether it will tell us if the outcome has been realised in the future. Are there going to be activities in the programme that will directly or indirectly address teenage pregnancy? Do we think that the programme will be able to reduce the number of teenage pregnancies at the schools in the future?
- Relevant:** measuring only what actually matters and what is appropriate to measure. The use of indicators that are relevant to stakeholders. How relevant is the indicator and can it be reasonably measured in the future?
- Time-bound:** establishing whether the “number of exclusions” the indicator is measuring can be achievable within a five-year period of the intervention?

Calculating indicator quantities

The following process was applied when calculating indicator quantities:

- We first needed to determine the baseline of the indicator in the intervention group in order to understand the change that will happen and the number of people that will benefit from this change.
- We ascertained the baseline for our sample size through a survey and FGD;
 - Where we could not determine the baseline percentage, extensive secondary research was undertaken to determine a baseline including secondary research for Limpopo or national data; and
 - Percentages were then extrapolated across the population size for learners, teachers, principals and district officials based on a statistically proven sample size.
- To determine the change that would occur for each indicator, we had to identify the targets that were to be achieved.
- In most cases the indicator was not applicable to the whole population, and we had to calculate who would experience this change from the population group;

- E.g. difference in the number of teenage pregnancies- this was only applied to the estimated number of teenagers that are likely to be pregnant in schools based on research;
- In cases where targets were not yet determined by Kagiso Trust, credible and relevant secondary research was utilised based on similar interventions; and
- Where secondary research was used, baseline and targets were adjusted taking into the consideration the context and area.
- Indicator quantities are based on the difference in the number of people that will experience the change before and after the intervention and NOT the total number of people that experience the change after the intervention.
- Calculating the total number would be double counting as it would be including those that the intervention did not affect.

Stakeholder	Outcome	Indicator description	Indicator quantity	Indicator quantity calculation
Learners	Decrease in at risk behaviour as a result of improved self-awareness, leadership skills and future prospects	School pregnancy rates (Difference in the number of teenage pregnancies before and after intervention)	500	<p>In the absence of data concerning pregnancy rates in the study area, the indicator value calculation for the change in teen pregnancy is worked out by;</p> <p>Establishing the Baseline (Actual); The total number of pregnant students in Riba Cross; Worked out by; multiplying the teenage pregnancy rate according to the Provincial Education Department (2011) in the Greater Sekhukhune area (16%) by the female student population size in the secondary schools in the study area (28 431) (4 549 girls pregnant)</p> <p>From (Forecast); The forecasted number of teenage pregnancies that are prevented over the five-year period of the intervention; The Ministry of Health's target pregnancy rate is 5% in the medium term. We have thus forecast that over the five-year period of the intervention, there will be an 11% reduction in teenage pregnancies.</p> <p>As a result (Change); There would be 500 fewer pregnancies over the five-year period of the intervention- (4549*11%)</p>
		Number of incidents of bullying, violent behaviour and drug and alcohol abuse amongst learners (difference before and after intervention)	19 776	<p>The indicator value calculation for change in the rate of bullying is derived by;</p> <p>Establishing the Baseline (Actual); The total number of students who experience bullying in Riba Cross; Worked out by; multiplying the current bullying rate (41% or 157 of the 387 students that responded they experience bullying) by the student population size in the study area (172 267) (70 629 learners have experienced bullying)</p> <p>From (Forecast); The forecasted number of students that are benefiting from not being bullied over the five-year period of the intervention; Based on UNESCO's global study on prevalence of bullying in schools that found the average bullying rate to be 13% among the 10 countries with the lowest rates. We have thus forecast that over the five-year period of the intervention, the incidents of bullying will reduce by 28% (from 41% to 13%.)</p> <p>As a result (Change); There would be 19 776 fewer reported incidences of bullying over the five-year period of the intervention - (41% of 172 267) *28%</p>

Stakeholder	Outcome	Indicator description	Indicator quantity	Indicator quantity calculation
Learners	Improved acquisition of defined knowledge and competencies as a result of improved school environment, learning mechanisms, infrastructure and quality of teaching	Completion rates (Difference in the number of learners within each grade that are completing their grade since the inception of the intervention)	20 137	<p>We have calculated the average number of learners in grade 5 to 7 to be 16 406 per grade and in grade 8 to 11 to be 11 484 learners per grade.</p> <p>Establishing the Baseline (Actual); The pass rates for each grade from the 2016 Final Needs Analysis for Riba Cross were applied for each grade. This gives us an idea of the "current situation" regarding pass rates.</p> <p>From (Forecast); The District's Whole Schools Development Programme has provided us with a 30% target increase. We are therefore assuming that each grade will experience a 30% increase in completion rates (applied to each grade this amounts to 20 475 learners) over the 5-year period of the project. However, we need to subtract the number of learners that are likely to become pregnant and drop-out of school to avoid double counting the benefit. Of the 20 475 learners, 6 064 would be in Grade 10 and 11 and since 99% of pregnancies affect this age group, we use it as our estimate. There are approximately 52% of females in grade 10 and 11 (52% of 6 064), which is 3 153 female learners. If the pregnancy rate is 16%, (16% of 3 153) then 504 learners are likely to be pregnant. As 67% of pregnant learners do not return to school, therefore 338 of the learners would have actually dropped-out due to pregnancy (67% of 504).</p> <p>As a result (Change); $20\,475 - 338 = 20\,137$ more learners will complete the grade over the five-year period of the intervention, (excluding teenage pregnancies that lead to dropouts).</p>
		Absenteeism rates (number difference before and after intervention)	276	<p>Establishing the Baseline (Actual); The total number of students who are absent on any given day in Riba Cross;</p> <p>Worked out by; multiplying the absenteeism rate 8% (derived from the higher bound of the national absenteeism rate among learners) by the total study population size of 172 267 (13 781 learners)</p> <p>From (Forecast); The forecasted number of students that are absent on any given day in Riba Cross over a five-year period is calculated as a '2%' reduction from the students that were absent in the baseline year.</p> <p>As a result (Change); We are projecting 276 fewer learners being absent on any given day over the five-year period of the intervention, (8% of 172 267) *2%.</p> <p>(The actual absenteeism numbers for the schools may be higher than the national rate).</p>

Stakeholder	Outcome	Indicator description	Indicator quantity	Indicator quantity calculation
Learners		Dropout rates (before and after intervention)	2 404	<p>Establishing the Baseline (Actual); The total number of learner dropouts in Riba Cross schools;</p> <p>Worked out by; multiplying the average dropout rate 46.2% (derived from Department of Education stats in Limpopo) multiplied by the total number of learners in grade 10-12 in Riba Cross (34 452) (15 917 learners dropped out between grade 10 and 12)</p> <p>From (Forecast); Based on the target provided by the District's Whole Schools Development Programme, it is forecasted that the number for learner drop-outs will reduce by 16% over the five-year period of the intervention.</p> <p>As a result (Change); We are projecting 2 547 fewer dropouts over the five-year period of the intervention, (15 917*16%).</p>
Learners	Improvement in the Matriculation pass rate	Number of new learners that passed with a Matric Higher Certificate pass (after the intervention)	126	<p>The indicator value calculation for change in higher certificate pass rate is derived by;</p> <p>Establishing the Baseline (Actual); The total number of higher certificate passes in Riba Cross schools;</p> <p>Worked out by; multiplying the average higher certificate pass rate which is 22% (as sourced from the Matric Results Analysis Report for Riba Cross) multiplied by the total number of matric learners sitting for exams (11 484) (2 526 learners passed with a HCS)</p> <p>From (Forecast); We forecast a 5% increase in Higher Certificate passes over the five-year period of the intervention from 22% to 27% (27% derived from District Whole Schools Development Programme)</p> <p>As a result (Change); We are projecting 126 more higher certificate passes per year over the five-year period of the intervention- (2 526*5%).</p>
		Number of learners that passed with a Matric Diploma pass	126	<p>The indicator value calculation for change in diploma pass rate is derived by;</p> <p>Establishing the Baseline (Actual); The total number of diploma passes in Riba Cross schools;</p> <p>Worked out by multiplying the average diploma pass rate which is 22% (as sourced from the Matric Results Analysis Report for Riba Cross) multiplied by the total number of matric learners sitting for exams (11 484) (2526 learners passed with a diploma).</p> <p>From (Forecast); We forecast a 5% increase in diploma passes over the five-year period of the intervention from 22% to 27% (27% derived from District Whole Schools Development Programme)</p> <p>As a result (Change); We are projecting 126 more diploma passes per year over the five-year period of the intervention (2 526 *5%).</p>

Stakeholder	Outcome	Indicator description	Indicator quantity	Indicator quantity calculation
Learners		Number of learners that passed matric with a Bachelors pass	195	<p>The indicator value calculation for change in Bachelor level passes is derived by;</p> <p>Establishing the Baseline (Actual); The total number of Bachelor level passes in Riba Cross schools;</p> <p>Worked out by; multiplying the bachelor pass rate which is 17% (as sourced from the Riba Cross Matric Results of 2018) multiplied by the total number of matric learners sitting for exams in the study area (11 484) (1 952 learners are passing with a bachelors)</p> <p>From (Forecast); We forecast an 10% increase in Bachelor passes over the five-year period of the intervention from 17% to 27% (27% derived from the comparative analysis of Free State target pass rate in the BNSDP project)</p> <p>As a result (Change); We are projecting 195 more Bachelor passes per year over the five-year period of the intervention (1 952*10%)</p>
Learners	Access to safe and clean toilet facilities	Number of incidents of diarrhoea amongst learners as a result of schools with sufficient sanitation facilities to meet the needs of learners (water, soap and flushing toilet)	22 739	<p>The indicator value calculation for change in access to safe sanitation facilities is derived by;</p> <p>Subtracting (Actual); The total number of children that are susceptible to diarrhoea as a result of a lack of wash facilities and soap in Riba Cross schools;</p> <p>Worked out by; multiplying the diarrhoea prevalence rate as a result of not having access to soap 33% (derived from the stakeholder engagements that showed that all 9 of the interviewed schools did not have adequate soap for bathrooms) multiplied by the total number of learners in the study area (172 267) (56 848 learners experience diarrhoea)</p> <p>From (Forecast); Improved handwashing techniques and access to soap, reduces the incidence of diarrhoea by 40%.</p> <p>As a result (Change); We are projecting 22 739 fewer learners experiencing diarrhoea over the five-year period of the intervention (56 848*40%)</p>
Teachers	Increased sense of purpose amongst teachers resulting in an improvement in their behaviour and accountability	Number of teachers that increase their morale and motivation	1 874	<p>The indicator value calculation for change in teacher morale and motivation is derived by;</p> <p>Establishing (Actual); The total number of teachers that are experiencing low morale across all 255 schools is 70%;</p> <p>70% of 5 355 teachers is 3 748 who are experiencing low morale.</p> <p>From (Forecast); As interventions create a spike in morale and motivation, we forecast a 50% decrease in the number of teachers that experience low morale and motivation (from 70% to 20%)</p> <p>As a result (Change); We are projecting 1 874 more teachers who are now motivated over the five-year period of the intervention (3 748*50%)</p>

Stakeholder	Outcome	Indicator description	Indicator quantity	Indicator quantity calculation
Teachers		Number of teachers that are not absent and late from school as a result of improved morale and motivation after the intervention	255	<p>The indicator value calculation for change in teacher absenteeism is derived by;</p> <p>Establishing (Actual); The number of teachers that are absent from school on an average day in the 255 schools;</p> <p>Worked out by; multiplying the rate of teachers absenteeism 10% (derived from 2017 statistics in the Limpopo province) multiplied by the total number of teachers per school (21) (On average 2 teachers are absent per day per school)</p> <p>From (Forecast); We forecast a 5% reduction difference in the number of teachers that are absent on any given as a result of the intervention in the 255 schools This is based on the 5% benchmarking target as per the SADC region rates.</p> <p>As a result (Change); A 5% reduction will lead to 5% fewer teachers being absent on any given day / or 1 teacher per day per school. Across the 255 schools we therefore project that 255 fewer teachers will be absent on any given day over the five-year period of the intervention.</p>
Teachers	Improved safety of teachers as a result of improved learner behaviour Improved safety of teachers as a result of improved learner behaviour	Number of teachers that feel safe at school and therefore less stressed (difference)	1 312	<p>The indicator value calculation for change in teacher safety is derived by;</p> <p>Establishing (Actual); The total number of teachers that feel unsafe on school premises in the 255 schools;</p> <p>Worked out by; multiplying the rate of teachers who feel unsafe on the school premises (70%), established during the stakeholder engagements, multiplied by 5 355 teachers in the entire study area which is 3 748 teachers.</p> <p>From (Forecast); The forecast is a 35% reduction in the number teachers that will feel unsafe as a result of the intervention.</p> <p>As a result (Change); We are projecting that 1 312 fewer teachers will feel unsafe at school over the five period of the intervention (3 748*35%)</p>
Teachers	Improved productivity as a result of better time management (implementation of better teacher planning, classroom management)	Number of teachers that have curriculum coverage as a result of being more effective	321	<p>The indicator value calculation for change in teacher productivity is derived by;</p> <p>Establishing (Actual); The total number of teachers that feel they are effective is 60% (established during the stakeholder engagements in the 9 sample schools - 90 teachers), multiplied by 5 355 teachers in the entire study area (3 213 teachers feel they can be more effective)</p> <p>From (Forecast); We forecast a 10% increase in the number teachers that will feel more effective over the five-year period of the intervention</p> <p>As a result (Change); We therefore project 321 more teachers feeling effective over a five-year period (3 213*10%)</p>

Stakeholder	Outcome	Indicator description	Indicator quantity	Indicator quantity calculation
Teachers		Number of hours saved per week by teachers on teaching tasks	7 497	<p>The indicator value calculation for change in time saved by teachers on administrative tasks is worked out by;</p> <p>Establishing (Actual); The total teacher hours spent on administrative tasks amongst all the teachers at all the schools in Riba Cross;</p> <p>Worked out by; multiplying the proportion of time teachers spend on administrative tasks, 40% (14 hours per week of a 35-hour work week) multiplied by the total number of teachers (5 355), which is 74 970.</p> <p>From (Forecast); The forecast hours spent on administrative tasks over the five year period of the intervention is a reduction from 40% to 30% and is based on the average hours spent on administrative tasks in schools in urban areas (target after 5 years is 10% where technology hastens tasks that are paper based in rural areas)</p> <p>As a result (Change); We are projecting 7 497 fewer hours spent on administrative tasks per week across the study area over the five-year period of the intervention (74 970 total teacher hours*10%)</p>
Teachers	Improved knowledge, skills and resources for teachers leading to better curriculum delivery	Number of teachers that feel more capacitated in their profession	1 714	<p>The indicator value calculation for change in teachers that feel more capacitated is worked out by;</p> <p>Establishing (Actual); The total number of teachers that feel adequately capacitated in Riba Cross;</p> <p>Worked out by; multiplying the proportion of teachers that feel that they are not adequately capacitated which is 80% (based on stakeholder engagements with 9 schools - 90 teachers) by the total number of teachers in the study area (5 355) (4 284 teachers do not feel capacitated)</p> <p>From (Forecast); We forecast a 40% decrease in the number of teachers that will feel capacitated from 80% to 40% over the five-year period of the intervention (benchmarked on a similar intervention carried out in Kwa-Zulu Natal and the Free State province).</p> <p>As a result (Change); We are projecting 1 714 more teachers will feel capacitated over the five-year period of the intervention (4 284*40%)</p>
Principals	Increased accountability of principals	Number of principals who are giving their time to after school activities, building relationships within the community, with parents	51	<p>The indicator value calculation for change in principals is worked out by;</p> <p>Establishing (Actual); The total number of principals that are appropriately accountable to the broader community in Riba Cross;</p> <p>Worked out by; multiplying the proportion of principals that said they are involved in after school activities and community engagement which is 50% (based on the stakeholder engagements with school principals from 9 schools - 21 principals) by the total number of principals in the 255 schools (128 principals are actively engaged in building their schools)</p> <p>From (Forecast); We forecast a 40% increase from 50% to</p>

Stakeholder	Outcome	Indicator description	Indicator quantity	Indicator quantity calculation
				<p>90% the number of principals that show increased accountability in the school and community</p> <p>As a result (Change); We are thus projecting 51 more principals that will demonstrate more accountability in the school and community over the five-year period of the intervention (128*40%)</p>
Principals	Increased accountability of principals	Number of principals that report less stress	82	<p>The indicator value calculation for change in principals that experience stress is calculated by;</p> <p>Establishing (Actual); The total number of principals that experience stress in the schools concerned in the study in Riba Cross was 80%, based on responses received in the stakeholder engagements) multiplied by the total number of principals in the study area (255) (204 principals are stressed)</p> <p>From (Forecast); We forecast a 40% reduction in the number of principals that experience stress over the five-year period of the intervention.</p> <p>As a result (Change); We are thus forecasting 82 fewer principals experiencing decreased stress levels over the five-year period of the intervention (204 *40%</p>
Principals	Improved leadership, confidence and empowerment of principals	Number of school principals that have improved their leadership skills	217	<p>The indicator value calculation for change in principals that need leadership skills is calculated by;</p> <p>Establishing (Actual); 100% of principals (based on stakeholder engagements with 21 principals) feel they can improve their leadership skills (255 principals across the total population).</p> <p>From (Forecast); We forecast that 85% of the principals will experience improved leadership skills over the five-year period of the intervention (based on a benchmark study conducted by the Public Service Commission (PSC) at a national level)</p> <p>As a result (Change); We are thus forecasting 217 principals will demonstrate increased leadership skills over the five-year period of the intervention (255*85%)</p>
Department of Education	Increase in the district officials (district and circuit) capacity, coordination and support to the schools	Number of schools that are receiving what they need on time	255	<p>The indicator value calculation for the change in the number of schools that are receiving what they need on time (textbooks, teaching material etc.);</p> <p>Establishing (Actual); All the schools (based on stakeholder engagements with 21 principals and 90 teachers feel that they do not receive what they need on time (255 schools across the total population).</p> <p>From (Forecast); We forecast that all of the schools over the five-year period of the intervention will receive what they need on time (textbooks, teaching material etc.)</p> <p>As a result (Change); We are thus forecasting 255 schools will receive what they need on time (textbooks, teaching material etc.) over the five-year period of the intervention (*80%)</p>

Stakeholder	Outcome	Indicator description	Indicator quantity	Indicator quantity calculation
Community	Reduction in the burden on family members to provide care for their children (glasses, feeding scheme, school uniforms etc.)	Number of learners that are being provided reading glasses, school uniforms and food in school	1	The Whole Schools Development Programme will provide glasses, a feeding scheme, school uniforms etc. for the children. It has not yet been determined how many learners will benefit from the provision of these items, so we are using a unit quantity of 1.
Community	Increase in the circular flow of economic activity in Sekhukhune District	Sourcing of goods, services and people for infrastructure development	1	The circular flow of economic activity states that when people generate an income (businesses or individuals) they spend money on goods and services within and outside of their community and this flows in a continuous circle- this means a continual circular movement of money and goods in the economy. The concept of the circular flow of income is a simplification which attempts to illustrate the flow of money and goods from households to business enterprise and back to households. We are using this indicator because of the temporary jobs created for the locals and local enterprises involved in the districts during the provision of infrastructure to schools. We know from the BNSDP Programme in the Free State, the actual spend on infrastructure development was 50% of the total budget. Therefore, we know that the programme will provide opportunities to locals and local enterprises involved in infrastructure development, people will be employed and can therefore spend money leading to an improvement in the local economy and contributes to an increase in GDP.

Table 19: Indicator quantities

4.1.4 Financial proxies

To establish the value of an impact, the SROI methodology uses financial proxies to assign a financial value to a non-financial outcome. Financial proxies are monetary values that have been identified for each outcome so that they can be analysed. This enables the ability to sum, in a single unit, all the financial and non-financial benefits arising from a programme or intervention. It is particularly important to identify a financial proxy for those social outcomes that would not naturally have a market price. Financial proxies help to determine how significant an outcome is.

The most complex part of any SROI is attributing values to outcomes as it relies on a measure of subjectivity. It is an intensive process and although financial proxies are well developed for European and UK contexts, they are limited for African contexts. The key question asked when developing proxies is, "How much is this outcome worth to the stakeholder?" In the SROI process, understanding value from an individual perspective is integral to the validity of the analysis. The value that we get will be different for different people in different situations. Thus, the consulting team used both stakeholder information, secondary research and existing proxies to adapt the values to a local context as accurately as possible.

Validation sessions were held with KT leadership responsible for BNSDP, to confirm all financial proxies used. As this was a forecast SROI, stakeholders were not always clear what value they attached to an outcome and their input was carefully applied. A number of approaches were used to develop the financial proxies. In some instances, the financial proxy calculations were straight forward. However, in other instances techniques needed to be applied for things that were more difficult to value. The following techniques were used:

- **Revealed preference:** this technique was used to develop financial proxies based on market-related prices. It takes into consideration how a person would spend money and how much a person would realistically spend. As an example, reduced stress can be valued by the cost savings of treating stress. The market value will be the cost of visiting a GP for stress-related illnesses, considering the lowest GP visit cost, given that the stakeholders are likely to spend the least amount;
- **Hedonic pricing:** this technique was used to build up a value using market values and considered other factors. As an example, the average cost of raising a child. This cost is based on several research studies that factor in various inputs/costs that go into the calculation of the average cost of raising a child;
- **Market comparisons:** we used this technique to compare market values and to derive a value as a result of the change. E.g. difference in potential salaries based on the level of education a person has; and
- **Research:** extensive research was undertaken to identify financial proxies from academic research and studies that focus on similar outcomes to determine the financial proxies. E.g. other SROI studies that measure the same or similar outcomes.

Financial proxies were tested with a dedicated delivery excellence team our and the client team to ensure that the proxies are a good reflection of the value of the change that stakeholders will experience in monetary terms.

It is important to note that in the process of developing financial proxies, it is the value to the stakeholder we are measuring. Irrespective of whether the stakeholder can afford it or not, they will still derive benefit.

The following assumptions were made while identifying the financial proxies:

- Financial proxies are chosen to reflect the associated value that a stakeholder derives from an outcome. As far as possible, financial proxies were chosen for this study that are material and applicable in the Sekhukhune/Riba Cross context;
- Financial proxy values have been annualised to represent the associated value over one full year;
- Some indicators were utilised across more than one stakeholder group, financial proxies may differ given their relevance to each group;
- The financial proxies take into consideration the stakeholder’s circumstances, context and area that they live in. Certain adjustments were made so that values were not overstated or too high; and
- All financial proxies and values were verified with the Whole Schools Development Programme team to determine applicability and to verify the values.



Figure 20: Mobile classroom at a school that is without sufficient classrooms

The financial proxies for outcomes including a rationale for why they were chosen for this study, are detailed in Table 20.

Stakeholder	Evidenced outcomes	Indicator descriptions	Quantity	Financial proxy	Value in currency	Rationale
Learners	Decrease in at risk behaviour as a result of improved self-awareness, leadership skills and future prospects	School pregnancy rates (Difference in the number of teenage pregnancies before and after intervention)	62%	Cost saving of raising a child per annum	R5 568	The effects of teenage pregnancy have mental, health and financial implications. Young women are not ready to raise a child, and young mothers suffer more than older mothers with depression and mental health issues. There are also other consequences with raising a child for young mothers such as missed schooling and being behind peers. Many young women don't go back and finish their schooling. In South Africa, only an estimated one-third of teenage mothers return to school, which is relatively low compared to other countries. This leads to lower job prospects. Teenage girls that fall pregnant in school struggle financially, as social grants are not sufficient to take care of the child. Many are reliant on caregivers to provide for their upkeep, which places an extra financial burden on households. The average cost to raise a child per annum has been calculated at R90 000 for a middle-income earner in South Africa. The major costs that are involved in raising a child are: education, clothing and pastime activities. In South Africa, the lower-middle-income cost per month on average is R25 000. If the average cost to raise a child per annum has been calculated at R90 000 for a middle-income earner, this would equate to R7 500 per month which is 29%. To equate this to a lower-middle-income earner, you would take 29% of R25 000. However, information released by The Institute of Race Relations (IRR) in 2016 on the standards of living in municipalities, indicates that Sekhukhune is one of the poorest municipalities in South Africa. Furthermore, 84.1% of people in Sekhukhune earn less than R1 600 per month.

Stakeholder	Evidenced outcomes	Indicator descriptions	Quantity	Financial proxy	Value in currency	Rationale
Learners						The survey results from the learners revealed that there is an average of 4 people per household and only an average of 1 person in the household is employed. This translates to one salary per household so we can only take the salary of one person to calculate the proportion that would be spent on raising a child. Therefore, we have taken 29% of R1 600 per month as the cost of raising a child in Sekhukhune, which is R464 per child per month and in total R 5 568 per child per annum.
Learners				Cost saving of raising a child per annum	R15 963	Teenage girls that fall pregnant in school are found to repeat the year as they miss out on critical aspects of schooling and subsequently perform poorly in examinations. The proxy has therefore been calculated as the cost (saving) of not repeating a school year. Although learners in Riba Cross do not pay for education, recent research by Old Mutual indicates that if a learner repeats a year at a state school, it could cost the government an estimated R15 963 per learner – salaries, books, school maintenance, etc
Learners	Decrease in at risk behaviour as a result of improved self-awareness, leadership skills and future prospects	Number of incidents of bullying, violent behaviour and drug and alcohol abuse amongst learners (difference before and after intervention)	19 776	Value of better mental health as a result of less bullying and violence in schools	R600	Learners mentioned they fear going to school or speaking out at school as a result of bullying. School violence can have physical, emotional, psycho-social, and academic repercussions. Low self-esteem, social isolation from peers and depressive symptoms can result from victimization (UNESCO, 2017; Burton & Leoschut, 2013). Depressive symptoms, in turn, may further hinder the learner’s ability to perform academically and to engage in positive social interactions (Burton & Leoschut, 2013). Following the incident/s, victims often experience decreased motivation and may struggle to concentrate at school. Learners may miss classes and sometimes even drop out of school, in order to avoid revictimization and/or because of their academic struggles (UNESCO, 2017; Burton & Leoschut, 2013). These academic repercussions, consequently, negatively impact on the learners’ long term academic and career potential (UNESCO, 2017). Further, this experience of violence can increase the risk of learners subsequently engaging in crime and violence (Burton & Leoschut, 2013). With regards to bullying, bullying at schools increases the risk for the victim experiencing other forms of violence. A safer school environment would lead to better emotional outcomes for learners. We have used the minimum cost of counselling sessions that in the absence of the intervention would be used to address psychological issues. The lowest cost is R50 per hour. We assumed that a child would potentially go to the counsellor once a month. Therefore, it would cost R50 x 12 = R600 per child per annum to visit a counsellor.

Stakeholder	Evidenced outcomes	Indicator descriptions	Quantity	Financial proxy	Value in currency	Rationale
Learners		Completion rates (Difference in the number of learners within each grade that are completing their grade since the inception of the intervention)	20 137	Cost savings of repeating a school year	R15 963	The repetition rate (RR) of Grade 10s is 22.5% and 20,5% for Grade 11 (percentage of households that stated that they have a child repeating these grades). A reduction in the number of learners that fail a grade, would mean an avoidance in the cost of a learner repeating the grade (another year of schooling) if the learner did not pass. Although we know that the learners of the school in Riba Cross do not pay for education, recent research by Old Mutual indicates that if a learner repeats a year at a state school, it could cost the government an estimated R15 963 per child in 2019 for education goods – salaries, books, school maintenance, etc.
Learners	Improved acquisition of defined knowledge and competencies as a result of improved school environment, learning mechanisms, infrastructure and quality of teaching	Absenteeism rates (number difference before and after intervention)	276	Value of reduced absenteeism (Cost of extra tuition)	R4 447	Being absent from school places kids at a disadvantage to their peers. Chronic absenteeism leads to learners being behind in learning. Research shows that learners that are often absent from school have poor academic performance. Furthermore, a learner's perception of the school that they attend also influences absenteeism. Additionally, these learners found it hard to progress academically in the school system. Interviews with the schools in Riba Cross, particularly the secondary schools revealed that if learners need additional help to perform better, teachers provide the extra tuition at the school. Learners who are absent from school fall behind in class and would require extra classes to catch up on the missed work (on average 4 classes a month) (Cost of an extra class has been calculated at R92,65 a class) $(R92,65 \times 4 \times 12) = R 4 447$
Learners		Dropout rates (before and after intervention)	2 404	Salary opportunity for a person with Grade 12 with a Senior Certificate	R59 724	International studies have found that irregular school attendance may lead to a learner dropping out leading to a lower earning potential. A person who has earned their Matric Certificate can expect almost double the salary than someone who has an incomplete high school career (and more than double those who have dropped out before that). This emphasizes the importance of completing school and Grade 12 and obtaining at least a Senior Certificate pass. The gross income per month for a learner with Grade 12 with a Senior Certificate is R4 977 per month. The proxy has been calculated as the salary opportunity of someone that has passed Grade 12 $R4 977 \times 12 = R59 724$ per annum for a learner that passes Grade 12.
	Improvement in the matriculation pass rate	Number of new learners that passed with a Matric Higher Certificate pass (after the intervention)	126	Difference in the salary potential for a Grade 12 Higher Certificate and Senior Certificate	R40 188	A person who passes matric with a Senior Certificate would earn R59 724 per annum, and a person who passes with a Higher Certificate would earn R99 912. The financial proxy has been calculated as the different earning potential between someone who has passed matric with a Higher Certificate and goes on to obtain a certificate from a TVET or other institution vs someone

Stakeholder	Evidenced outcomes	Indicator descriptions	Quantity	Financial proxy	Value in currency	Rationale
Learners						who has only passed matric with a Senior Certificate. This is calculated as $R99\ 912 - R59\ 724 = R40\ 188$ per annum
Learners		Number of learners that passed with a Matric Diploma pass	126	Difference in the salary potential of a Grade 12 Diploma and Higher Certificate	R60 624	Tertiary education proves to be the key to earning a better salary. Passing Matric with a Diploma pass means that a learner has the opportunity to go on and study a Diploma at a tertiary level. They can also earn a higher salary than a learner who just passes Matric with a Higher Certificate pass and gets a Certificate from a TVET or other institution. The average gross income per month for a person who passes with Grade 12 with a Higher Certificate pass and goes on to obtain a Certificate at a TVET or institution is R8 326. Given that we want to see the difference in the salary potential of a Grade 12 that passes Matric with a Diploma pass and a Grade 12 that passes Matric with a Higher Certificate pass, we looked at the average gross income per month for a person who passes with Grade 12 with a Diploma pass and obtains a Diploma at a tertiary level is R13 378, per annum that is R160 536 compared to a person who passes Matric with a Higher Certificate pass and goes on to obtain a Certificate at a college of some sort which is R8 326 per month, per annum this is R99 912. The difference in earnings is therefore, $R160\ 536 - R99\ 912 = R60\ 624$. A person who passed Matric with a Diploma pass and obtained a Diploma at a tertiary level would earn R60 624 more per annum than a person who passed Matric with a Higher Certificate pass and only obtains a Certificate.
Learners	Decrease in at risk behaviour as a result of improved self-awareness, leadership skills and future prospects	Number of learners that passed matric with a Bachelors pass	195	Difference in the salary potential of a Grade 12 Bachelors Pass and Diploma	R60 359	Tertiary education proves to be the key to earning a better salary. Access to tertiary education would mean that learners have the opportunity to study further and obtain a job that pays a higher salary. Passing matric with a Bachelors pass means that a learner has the opportunity to go on and study for a Bachelors' Degree and earn a higher salary than a learner who just passes matric with a Diploma pass and obtains a Diploma at a tertiary level. The average gross income per month for a person who passes with Grade 12 with a Bachelor and obtains a Bachelor's Degree is R21 527. Given that we want to see the difference in the salary potential of a Grade 12 that passes Matric with a Diploma pass and a Grade 12 that passes Matric with a Bachelors pass, we looked at the average gross income per month for a person who passes with a Bachelors pass and obtains a Bachelor's Degree which is R21 527, per annum that is R258 324. To compare this to a person who passes Matric with a Diploma pass and obtains a Diploma of some sort which is R13 378 per month, per annum, this is R160 536. The difference in earnings is, therefore $R258\ 324 - R160\ 536 = R97\ 788$.

Stakeholder	Evidenced outcomes	Indicator descriptions	Quantity	Financial proxy	Value in currency	Rationale
						A person who passed Matric with a Bachelors degree and obtains a Bachelors Degree would earn R97 788 more per annum than a person who passed Matric with a Diploma and obtains a Diploma at a tertiary level. Less tax that will be imposed on the R258 324, the difference in salaries will then be R97 788-R37 429= R60 359.
Learners	Access to safe and clean toilet facilities	Number of incidents of diarrhoea amongst learners as a result of schools with sufficient sanitation facilities to meet the needs of learners (water, soap and flushing toilet)	22 739	Cost of treating bacterial diseases such as chronic diarrhoea	R3 000	Bacterial/parasitical diseases lead to chronic diarrhoea which leads to malnutrition. The Effect of Handwashing at Recommended Times with Water Alone and With Soap on Child Diarrhoea in Rural Bangladesh: An observational study indicates that diarrhoea generally lasts for 48 hours. Zinc tablets can treat chronic diarrhoea over the long term, as anti-diarrhoea tablets such as Loperamide are risky in particular with those who have other diseases and prevent malnutrition from occurring. The cost of treating bacterial diseases is taken as the cost of zinc tablets over 6 months in the year (R500 X 6) = R3 000 per annum.
Teachers	Increased sense of purpose amongst teachers resulting in an improvement in their behaviour and accountability	Number of teachers who increase their morale and motivation	1 874	Productivity benefit	R17 700	South African workers were found to have the greatest amount of unproductive time at 41.8% out of a pool of countries that included but were not limited to; Brazil, India, China Russia and Australia (Proudfoot Consulting Report 2008). The average high school teacher's salary per annum is R177 000 per annum. More engaged employees are 100% more productive and return 100% of their salary. The benefits to the school of employee engagement is calculated by taking the averaged per annum salary of teachers (R177 000 at all levels) and multiplying it by 10% to get the ultimate value (R17 700). Engaged employees yield 10% more of their salaries (highly engaged employees yield 20% more of their salaries)
Teachers		Number of teachers that are not absent and late from school as a result of improved morale and motivation after the intervention	255	Benefit of decreased absenteeism	R39 750	Teacher absenteeism is a national concern, with teacher absenteeism increasing. Across all high schools, learners mentioned that their teachers are late to class or do not pitch up at all. Besides the negative implications of learners not getting access to teaching, it is also a financial burden with schools paying teachers who are not present. Absenteeism costs companies approximately \$2650 per person per annum (2650 multiplied by the current exchange rate of R15)
Teachers	Improved safety of teachers as a result of improved learner behaviour	Number of teachers that feel safe at school and therefore less stressed (difference)	1 312	Value of feeling less stressed (difference in cost of healthcare for the average person and someone who has stress related illnesses)	R3 150	Teachers' working conditions are becoming more demanding and multifaceted which affects their mental health. Teaching in South African schools is regarded as highly stressful due to a lack of resources, fear of violence, overcrowding, and ever-increasing substance abuse among learners (Daniels & Strauss, 2010). In addition, South African public schools are troubled by a shortage of skilled

Stakeholder	Evidenced outcomes	Indicator descriptions	Quantity	Financial proxy	Value in currency	Rationale
Teachers						personnel, high workload, limited promotion opportunities, insufficient colleague support and inadequate financial support. These factors in themselves can influence teachers' mental health (Prinsloo & Nesor, 2007) and contribute to low morale (Hendricks, 2009). The average yearly GP visit is 2.5 visits, whereas someone who is stressed falls sick more often and will visit the GP on average 9.5 times a year. The average cost of a GP consultation is 450. The financial proxy value is calculated by subtracting the average cost of a GP visit (2,5*450) from the cost of a GP visit to treat stress illnesses (9.5*450)- (2.5*450).
Teachers		Number of teachers that have curriculum coverage as a result of being more effective	321	Difference in salary for a teacher and a salary one level above (value of being promoted at work)	R50 000	Teachers who are more motivated and engaged in school experience higher levels of productivity and ultimately effectiveness. This results in career growth (promotion). Teachers from the stakeholder group mentioned they are seeking promotion and higher salary opportunities. The financial proxy is calculated as the difference in earning potential for a starting salary and a level above (Starting salary for teaching is R177 000 and one level above is R227 000). The difference is therefore, R50 000.
Teachers	Improved productivity as a result of better time management (implementation of better teacher planning, classroom management)	Number of hours saved per week by teachers on teaching tasks	7 497	Benefit of time saving	R5 448	The sheer volume of tests that teachers are tasked with administering and preparing students for is enormously time-consuming. 52% of teachers surveyed said they spend too much time on testing and test prep. The average teacher now reports spending about 30 percent of their work time on testing-related tasks, including preparing students, proctoring, and reviewing results of standardized tests. The stakeholder interviews with the schools in Riba Cross revealed that the teachers spent a lot of time on administrative tasks such as marking and planning due to poor systems in place. Given that teachers spend an average of 30% of their time on administrative tasks oppose to teaching, means that this is technically time wasted due to ineffective systems. Of the 40% of time spent on administrative related tasks, we can assume that the intervention will improve the efficiency of administration, therefore reducing it by 10%. Teachers work 7 hours of the day and the average salary per hour of a high school teacher is R92.65. In total, there are 42 school weeks per year. If teachers spend an average of 30% their work time on testing-related tasks, including preparing students, proctoring, and reviewing results of standardized tests, then the calculation of the savings on the additional time spent is as follows: $(14*0,1) *92.65*42= R5 448$ per teacher per annum.

Stakeholder	Evidenced outcomes	Indicator descriptions	Quantity	Financial proxy	Value in currency	Rationale
Teachers	Improved knowledge, skills and resources for teachers leading to better curriculum delivery	Number of teachers that feel more capacitated in their profession	1 714	Cost savings of improve professional development	R8 568	<p>Teachers need professional development courses and continuous training to improve their teaching skills. An article on the importance of training teachers discusses the need for good quality teachers to have a good quality education system. The article further discusses the traits of a good quality teacher. A good teacher has sound content knowledge, is capable of simultaneously making multiple decisions, able to plan and is very emotionally intelligent. Good teacher training programmes have strict selection criteria and provide rigorous training that includes extended in-classroom practice that continues years after the teacher has qualified. The financial proxy was developed based on the breakdown of the budget for Limpopo. The budget allocations we have used are: Cost of School Retreats + Cost of Educator Development Baseline + Cost of Educator Development ICT in schools + Cost of Educator Development communities of practice (COPs) / 5 355 teachers across the 255 schools.</p> <p>$R42\ 508\ 800 + R510\ 000 + R2\ 042\ 810 + R820\ 240.50 / 5\ 355 = R8\ 568$ per teacher is the cost of improving the professional development of teachers over the five years of the intervention. We have not included the cost of Lead Teacher Capacitation in this calculation as this is only for Mathematics, Physics & Accounting Lead Teachers (experts), this cost is included in the calculation of the Benefit of Leadership Development for Principals.</p>
Principals	Increased accountability of principals	Number of principals who are giving their time to after school activities, building relationships within the community, with parents	51	Productivity benefit	R40 529	<p>Principals find it challenging dealing with teacher and learner issues. A study on the identification of shortcomings in the managerial skills of principals in a district assumed that higher levels of personal commitment to organisational goals and greater capacities for accomplishing those goals result in extra effort and subsequent greater productivity amongst principals. A role of a principal is to be accountable for the challenges the school faces; therefore, principals with reduced accountability and commitment fail to deal with challenges and can be regarded as less productive. South African workers were found to have the greatest amount of unproductive time at 41.8% out of a pool of countries that included but were not limited to; Brazil, India, China Russia and Australia (Proudfoot Consulting Report 2008). The average high school principals' salary per annum is R405 029 per annum. Engaged employers are 100% productive and return 10% of their salary. The benefits to the school of employee engagement is calculated by taking the average per annum salary (R405 029 at all levels) and multiplying it by 10% (R40 529).</p>

Stakeholder	Evidenced outcomes	Indicator descriptions	Quantity	Financial proxy	Value in currency	Rationale
Principals	Increased accountability of principals	Number of principals that report less stress	82	Benefit of reduced stress	R3 150	<p>Poor parental involvement is a major challenge that principals face, as the stakeholder interviews revealed that many of the schools felt that the parents were not involved enough in the learners educational outcomes. A study on the management of parent involvement at selected secondary school in a district revealed that "apart from the pressing demands on educators' time and energy, a lack of interest and support by management in terms of parent involvement may inhibit educators from extending themselves to family members of learners. Both active and inactive parents identified poor communication between school and home as one of the challenges to parent involvement at schools. Moles (1993:34) holds the view that "schools tend to communicate with disadvantaged parents mainly when their children find themselves in some kind of trouble. This paints a negative attitude towards parent involvement by schools which would instill a negative association with the school amongst parents who, in turn, could result in their negation of parent involvement." (Also see Section 2.6.2). The effects of this can lead to negative implications on the health of principals. The average yearly GP visit is 2.5 visits, whereas someone who is stressed falls sick more often and will visit the GP on average 9.5 times a year. The average cost of a GP consultation is 450. The proxy value is calculated by subtracting the average cost of a GP visit (2,5*450) from the cost of a GP visit to treat stress illnesses (9,5*450)- (2,5*450)</p>
Principals	Improved leadership, confidence and empowerment of principals	Number of school principals that have improved their leadership skills	217	Benefit of Leadership Development	R8 883	<p>School principals require additional leadership and management skills to improve management of the school. This is evidenced by the interviews with the principals who said that they needed more training on leadership and management. Furthermore, studies show that "the workload of school principals is becoming increasingly unmanageable and many principals, especially those in secondary schools, don't find time to attend to their leadership task nor do they fully comprehend it. They are faced with situations which require new and improved skills, knowledge and attitudes in order to cope with the wide range of demands and changes." (Mestry & Grobler, 2004:127). In an ever-changing world, it would be unrealistic to expect all principals to be professionally equipped for their management task. It is expected of competent principals to manage increasingly complex and wide-ranging tasks. The financial proxy was developed based on the breakdown of the budget for Limpopo.</p>

Stakeholder	Evidenced outcomes	Indicator descriptions	Quantity	Financial proxy	Value in currency	Rationale
Principals						<p>The budget allocations we have used are:</p> <p>Cost of School Retreats + Cost of Instructional Leadership Development Programme + Cost of Educator Development Baseline + Cost of Educator Development ICT in schools + Cost of Educator Development communities of practice (COPs) + Cost of Lead Teach Capacitation / 255 / 30 (further assuming 30 principals). $R42\,508\,800 + R21\,254\,400 + R820\,240.50 + R510\,000 + R2\,042\,810 + R820\,240.50 / 255$ =R8 883 per principal is the cost of improving the leadership skills and development of principals over five years of the intervention.</p>
Department of Education	Increase in the district official's (district and circuit) capacity, coordination and support to the schools	Number of schools that are receiving what they need on time	255	Value of district officials time given to schools	R372 109	<p>There are four circuit managers in Riba Cross that visit each school 4 times a year. The circuit managers spend 100% of their time focusing on the performance of schools. One District Manager takes care of Riba Cross and spends an estimated average of 25% of their time focusing on the performance of schools. A normal working year consists of 52 weeks, and on average a working week consists of 40 hours per week. Therefore, on average there are 2 080 hours in a typical work year. District managers spend 520 hours per year focusing on the performance of schools (25% x 2 080) and circuit managers spend the full 2 080 hours per year focusing on schools. In terms of salary, the salary used for a district official and circuit manager is R350 220 (salary of an Education Programme Manager). We are forecasting that the intervention will result in a 25% increase in the time given to schools by district managers and circuit managers.</p> <p>The financial proxy is calculated as: District Managers- $(25\% \times 350\,220) \times 25\% = R21\,889$ Circuit Managers- $(350\,220 \times 25\%) \times 4 = R350\,220$ =R372 109 value of an increase in the District Officials time given to schools over the five years of the intervention.</p>

Stakeholder	Evidenced outcomes	Indicator descriptions	Quantity	Financial proxy	Value in currency	Rationale
Community	Reduction in the burden on family members to provide care for their children (glasses, feeding scheme, school uniforms etc.)	Number of learners that are being provided reading glasses, school uniforms and food in school	1	Savings to families on the provision of care and supplies for their children	R10 693 429	The total visual programme cost is R11 026 154; this cost includes training logistics of care givers (68 in total trained), screening of learners (68 276 in total screened). In the absence of the breakdown of these costs, we are assuming a conservative 3% of the total visual programme costs are logistic costs and are subtracting it from the R11 026 154. This gives us R330 725 that will be subtracted from the R11 026 154. The financial proxy calculation is: R11 024 154 – R330 725= R10 693 429 savings to families on the provision of care and supplies for their children over the five years of the intervention
Community	Increase in the circular flow of economic activity in Sekhukhune District	Sourcing of goods, services and people for infrastructure development	1	Value of expenditure	R434 061 336	<p>The multiplier effect is commonly used to measure/value the circular flow of economic activity. Every time there is an injection of new demand into the circular flow, there is likely to be a multiplier effect. This is because an injection of extra income leads to more spending, which creates more income, and so on. The multiplier effect refers to the increase in final income arising from any new injection of spending.</p> <p>The size of the multiplier depends upon household's marginal decisions to spend, called the Marginal Propensity to Consume (MPC), or to save, which is called the Marginal Propensity to Save (MPS). It is important to remember that when income is spent, this spending becomes someone else's income, and so on. Marginal propensities show the proportion of extra income allocated to particular activities. The multiplier effect states that individuals spend 80% of their income therefore their MPC is 0.8 (standard in various research documents/articles). The following general formula to calculate the multiplier uses marginal propensities, as follows: $1/1-MPC$ Hence, if consumers spend 0.8 and save 0.2 of every R1 of extra income, the multiplier will be: $1/1-0.5$ $= 1/0.5$ $= 2$ Hence, the multiplier is 2, which means that every R1 of new income generates R2 of extra income. The Whole Districts Schools Programme of Limpopo has a budget of R217 030 668 for infrastructure. Of this amount, the entire amount of R217 030 668 will be used on sourcing material and labour from within the district. Therefore, the multiplier effect will be calculated as R217 030 668 x 2 = R434 061 336 Thus, this will be the extra income effect on the economy as a result of the intervention.</p>

Table 20: Financial proxies

4.2 Establishing and calculating impact

4.2.1 Outcome start

The outcome start establishes when we expect the stakeholders to start experiencing change as a result of the programme. This can differ from outcome to outcome, and from stakeholder to stakeholder. There are two outcome starting periods that we have used:

Outcome period 1= outcome starts in period of activity

Outcome period 2= outcome starts in period after activity

4.2.2 Outcome duration

The duration of the outcome or the benefit period identifies how long the outcome will last after the intervention ends. With regard to outcome durations, some outcomes will last longer than others, and some are dependent on whether the activity will continue. The duration of the outcomes is between 1 to 5 years. We limit the duration

at 5 years, as outcomes beyond 5 years are usually influenced by a range of factors outside of the programme control. The longer the intervention, the less influence a programme has on it. All the outcomes that have been identified have been modelled on 5 years.

4.2.3 Discounting factors

To consider the impact of an intervention we have to consider only those changes that can be directly attributed to the implementing organisation. It is necessary to critique the changes, removing those changes or parts of the changes that which will not be produced by this programme, so that the organisation only claims what it has created itself as a social impact. Therefore, we apply four discounting factors: deadweight, displacement, attribution and drop-off. The combined percentages are deducted from the total impact value created.

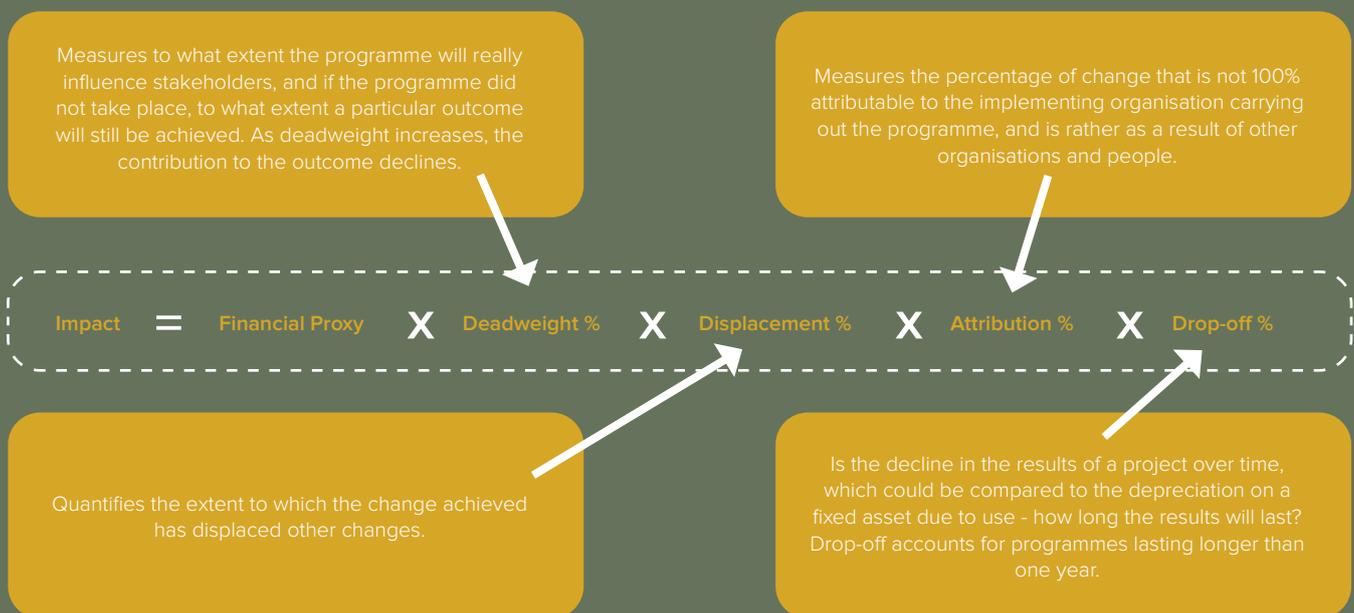


Figure 21: Relationship between discounting factors

By measuring and accounting for the discounting factors: deadweight and displacement, attribution and drop-off, one is able to ascertain the degree of impact the programme has had. Applying discount factors requires analysing and determining how much of the results is due to

other factors – as this is cannot be an exact science; percentages are structured on a scale that goes from lowest to highest in terms of the influence of the project on the result obtained.

Discount percentage	0%	25%	50%	75%
Deadweight	Where the result would not have been achieved had the activity not been carried out	Where the result would have been achieved but to a limited degree	Where the result would have occurred, in part	Where the result would have occurred anyway
Displacement	The result has not displaced any other result	The result has displaced another result, in a limited way	The result has displaced another result partially	The result has displaced another result to a significant degree
Attribution	The change is completely as a result of the organisation	Other organisations or people had some minor role in generating the results	Other organisations or people played an important role in generating the results	Other organisations or people have played a significant role in generating the results
Drop off	The result lasts for the entire period of time	The result falls by 25% yearly from the second year	The result falls by 50% yearly from the second year	The result falls by 75% yearly from the second year

Table 21: Discounting factors sliding scale

4.2.4 Assumptions

Deadweight

- The deadweight percentages for the BNSDP’s District Whole School Development education model varied as secondary research was used in combination with the sliding scale to determine the discount percentages;
- In cases where secondary research provided insights into trends applicable to the outcomes that reduce the impact the programme has, those percentages based on research were applied. As an example, there is a slight trend of decline in teenage pregnancy in South Africa, therefore a deadweight of 10% was assigned;
- The same is applicable to pass rates, the Needs Analysis Report showed a slight increase in pass rates in Grade 10 and 11, therefore a 10% deadweight was applied;
- Taking into account provincial data, the matric pass rates in Limpopo are increasing. The deadweight was applied in accordance with the percentage increase in pass rates (13%- Senior Certificate, 34%- Higher Certificate, 29%- Diploma Certificate, 35%- Bachelor Certificate);
- Awareness of the importance of sanitation and access to it is slightly increasing, and since there would have been a slight increase in access to sanitation, a 15% deadweight was applied;
- The workshops that the DOE provides for teachers and principals were factored in when calculating the deadweight for the outcomes and a 25% deadweight was applied. The same 25% deadweight was applied to principals who also contribute to the outcomes; and
- Research has shown that there is an increase in economic activity in Sekhukhune, therefore a 25% deadweight was applied.

Displacement

- The displacement rate is 0% for all outcomes because the programme would not directly replace any activity relating to the outcomes identified.

Attribution

- The sliding scale was used. Additionally, some information from stakeholders provided an indication as to who else is contributing to the outcomes outside of the programme. Secondary research and qualitative reasoning were applied. In most cases, it was found that the DOE has programmes in place that contribute to some of the outcomes identified;
- For most of the stakeholders and the outcomes identified, a conservative 25% attribution was assigned;

Drop-off

- Some secondary research and information from the stakeholder interviews were used to determine the drop-off; and
- The sliding scale was used to determine the likelihood of a certain discount percentage of drop-off for the outcomes. All of the outcomes, except two, have been assigned a conservative 25% drop-off after the five-year duration of the programme. The drop-off of 25% was assigned primarily due to external factors and changes that will impact the outcome. E.g. socio-economic factors, employment turnover, behavioural factors and the positive change as a result of the outcome declining over time.

Stakeholder	Evidenced outcomes	Indicator descriptions	Quantity	Financial proxy	Deadweight	Attribution	Drop-off	Impact
Learners	Decrease in at risk behaviour as a result of improved self-awareness, leadership skills and future prospects	School pregnancy rates (Difference in the number of teenage pregnancies before and after intervention)	500	R5 568	10%	25%	25%	R1 880 644
			500	R15 963	10%	25%	25%	R5 391 653
		Number of incidents of bullying, violent behaviour and drug and alcohol abuse amongst learners (difference before and after intervention)	19 776	R600	0%	25%	25%	R8 899 296
Learners	Improved acquisition of defined knowledge and competencies as a result of improved school environment, learning mechanisms, infrastructure and quality of teaching	Completion rates (Difference in the number of learners within each grade that are completing their grade since the inception of the intervention)	20 137	R15 963	10%	25%	25%	R216 978 012
		Absenteeism rates (number difference before and after intervention)	276	R4 447	0%	25%	25%	R919 325
		Dropout rates (before and after intervention)	2 404	R59 724	13%	25%	25%	R93 681 095

Stakeholder	Evidenced outcomes	Indicator descriptions	Quantity	Financial proxy	Deadweight	Attribution	Drop-off	Impact
Learners	Improvement in the matriculation pass rate	Number of new learners that passed with a Matric Higher Certificate pass (after the intervention)	126	R40 188	34%	25%	25%	R2 513 068
		Number of learners that passed with a Matric Diploma pass	126	R60 624	29%	25%	25%	R4 078 185
		Number of learners that passed with a Matric Diploma pass	195	R60 359	35%	25%	25%	R5 744 809
	Access to safe and clean toilet facilities	Number of incidents of diarrhoea amongst learners as a result of schools with sufficient sanitation facilities to meet the needs of learners (water, soap and flushing toilet)	22 739	R3 000	15%	25%	25%	R43 488 720
Teachers	Increased sense of purpose amongst teachers resulting in an improvement in their behaviour and accountability	Number of teachers that increase their morale and motivation	1 874	R17 700	10%	0%	25%	R29 856 803
		Number of teachers that are not absent and late from school as a result of improved morale and motivation after the intervention	255	R39 750	0%	25%	25%	R7 602 188
	Improved safety of teachers as a result of improved learner	Number of teachers that feel safe at school and therefore less stressed (difference)	1 312	R3 150	0%	25%	25%	R3 099 541
Teachers	Improved productivity as a result of better time management (implementation of better teacher planning, classroom management)	Number of hours saved per week by teachers on teaching tasks	321	R50 000	0%	10%	25%	R14 458 500
		Number of hours saved per week by teachers on teaching tasks	7 497	R5 448	0%	10%	25%	R36 758 076
	Improved knowledge, skills and resources for teachers leading to better curriculum delivery	Number of teachers that feel more capacitated in their profession	1 714	R8 568	25%	25%	25%	R8 258 733

Stakeholder	Evidenced outcomes	Indicator descriptions	Quantity	Financial proxy	Deadweight	Attribution	Drop-off	Impact
Principals	Increased accountability of principals	Number of principals who are giving their time to after school activities, building relationships within the community, with parents	51	R40 529	25%	25%	25%	R1 162 676
		Number of principals that report less stress	82	R3 150	25%	25%	25%	R144 585
Principals	Improved leadership, confidence and empowerment of principals	Number of school principals that have improved their leadership skills	217	R8 883	50%	0%	50%	R962 717
Department of Education	Increase in the district official's (district and circuit) capacity, coordination and support to the schools	Number of schools that are receiving what they need on time	255	R372 109	10%	0%	15%	R85 398 958
Community	Reduction in the burden on family members to provide care for their children (glasses, feeding scheme, school uniforms etc.)	Number of learners that are being provided reading glasses, school uniforms and food in school	1	R10 693 429	0%	0%	0%	R10 693 429
	Increase in the circular flow of economic activity in Sekhukhune District	Sourcing of goods, services and people for infrastructure development	1	R434 061 336	25%	25%	50%	R244 159 502

Table 22: Monetary values of impact

4.3 Social return of the Kagiso Trust BNSDP

SROI is about identifying the value of change as identified and experienced by stakeholders. The SROI ratio is generated through qualitative, quantitative and financial information. The ratio is calculated by dividing the value created by the impact of the programme by the value of the investment and total monetised inputs from all stakeholders.

It should be noted that, irrespective of a high or low ratio, the process followed in determining the SROI allows practitioners to determine how the greatest impact can be achieved for the overall programme

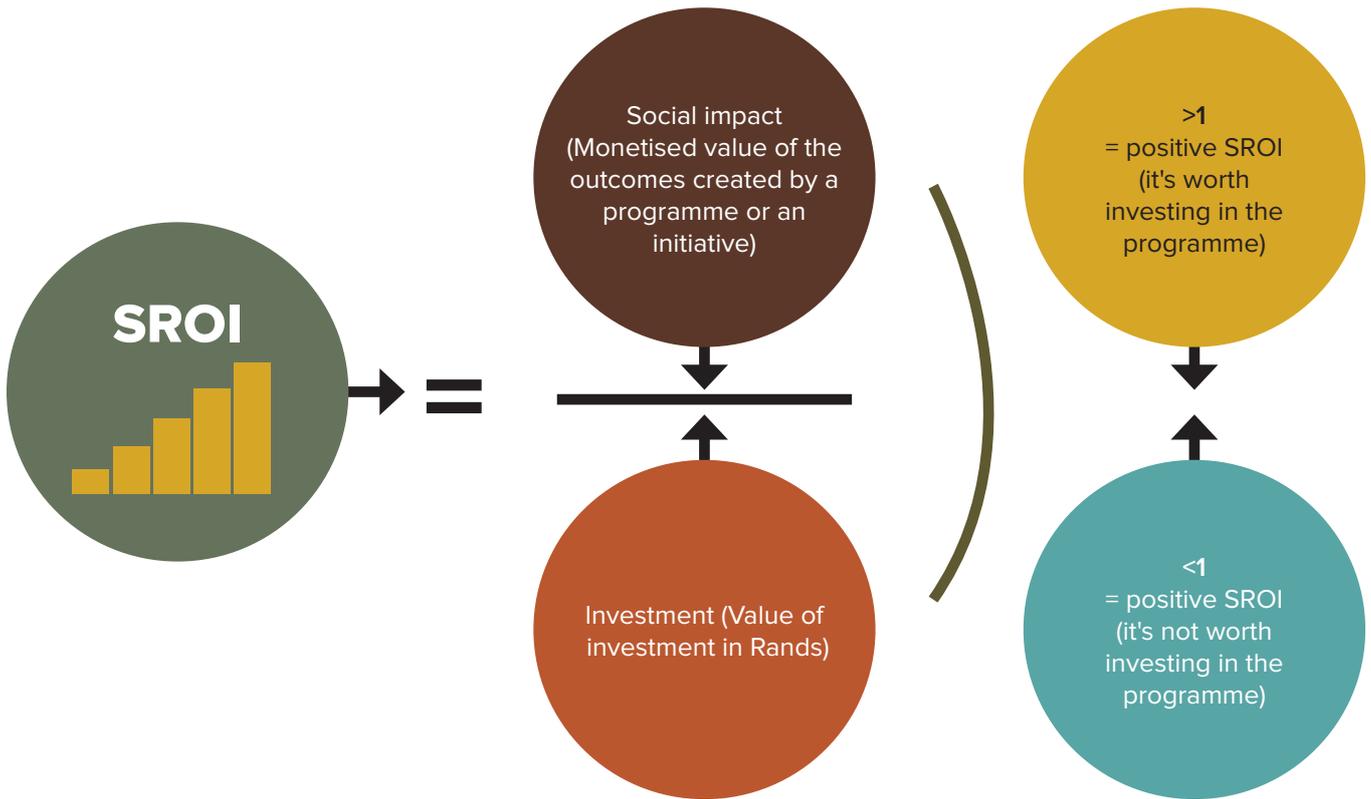


Figure 22: Calculating the SROI

4.3.1 Kagiso Trust BNSDP investment

The above stakeholder groups will not incur any costs associated with the BNSDP initiative. Kagiso Trust and the Department of Education as co-implementing partners raised the financial investment required to fund the programme. These costs are considered when calculating the programme’s overall impact value.

The investment in to the BNSDP for the implementation of the District Whole School Development education model was made by Kagiso Trust and The Department of Education. The total investment for the programme is R400 000 000, which is to be spent over the five-year duration of the project.

Input cost	Value	Rationale
Total input value (investment)	R400 000 000	Total input over five years (Kagiso Trust and Department of Education)

Table 23: Investment and operational costs

4.3.2 Parameters pertaining to the Impact Map

When projecting value into the future, it is necessary to account for the fact that the monetary value used will be worth less in the future. To achieve this, the Present Value (PV) has been calculated using an annual discount rate. When valuing traditional investments, various risk premiums are typically added to the risk-free rate to determine a required rate of return on the initial investment, which is then used to provide a risk adjusted PV of expected returns.

The PV for this analysis is based on a discount rate of 5%. This rate was applied to all future values after Year 2. Prior to calculating the PV, the social value created by the BNSDP initiative was an amount of R826 130 514. The PV created for the programme, over five years is R2 613 936 038. Thus, when dividing the adjusted social value by the total investment, the resultant ratio is 1:6.53, meaning that for every R1 invested, there is a social return of R6.53.

$$\text{SROI Ratio} = \frac{\text{PV of social value created}}{\text{Value of total investments}} = \frac{\text{R 2 613 936 038}}{\text{R400 000 000}} = \text{R6.53}$$

Figure 23: SROI Ratio

The final forecasted SROI ratio of 1:6.53 is a significant return on investment and demonstrates that the forecasted social return achieved through the programme will deliver positive value for stakeholders in the future.

4.3.3 Impact created per stakeholder group

The total monetary value of the impact created by the BNSDP initiative is R826 130 514 in the first year and R2 613 936 038 over five years.

The total impact created for each stakeholder group is represented graphically in Figure 24 below.

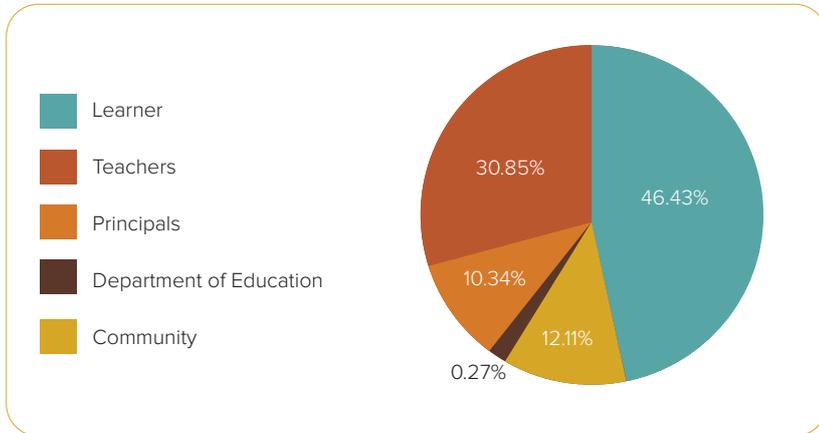


Figure 24: Impact value across stakeholders

A significant proportion of value generated is derived by the community; this is because the full R217 030 668 investment in infrastructure will be indirectly invested in the local economy through the purchasing of building supplies, building materials and sourcing labour from the local community. Through the multiplier effect concept, which is value changing hands within economies which generates more value, the total impact for the community is enhanced.

The value for learners is projected to be where the greatest impact will be derived. As the goal of the programme is to improve educational outcomes, which in itself has varying social benefits, this is expected. Table 24 depicts value per stakeholder group and outcomes to identify which outcomes create the most impact.

Stakeholder	Total impact value	Analysis
Learners	R383 574 807	<ul style="list-style-type: none"> Decrease in at risk behaviour Improved acquisition of defined knowledge and competencies Improvement in the matriculation pass rate Access to safe and clean toilet facilities
Teachers	R100 033 840	<ul style="list-style-type: none"> Increase in sense of purpose amongst teachers Improved safety of teachers Improved productivity and time management of teachers Improved knowledge, skills and resources of teachers

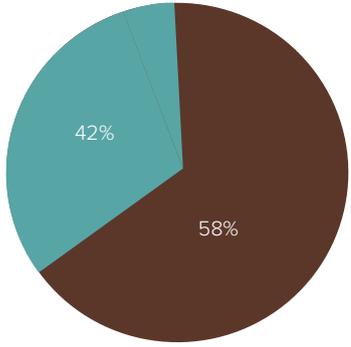
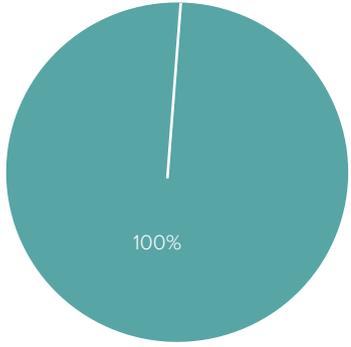
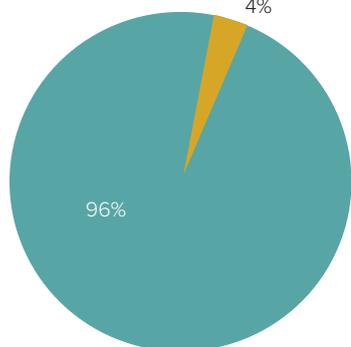
Stakeholder	Total impact value	Analysis
Principals	R2 269 978	<ul style="list-style-type: none"> Increased accountability of principals (58%) Improved leadership, confidence and empowerment of principals (42%) 
Department of Education	R85 398 958	<ul style="list-style-type: none"> Increase in district official's (district and circuit) capacity, coordination and support to the schools (100%) 
Community	R254 852 931	<ul style="list-style-type: none"> Reduction in the burden on family members to provide care for their children (4%) Increase in the circular flow of economic activity in Sekhukhune District (96%) 

Table 24: Analysis of impact value per stakeholder group

Learners

The outcome with the largest value (81.23% of total learner value) that will be realised is “Improved acquisition of defined knowledge and competencies as a result of an improved school environment, learning mechanisms, infrastructure and quality of teaching”. This outcome is important because improving learner knowledge and competencies will reduce learner absenteeism and assist learners in progressing through each grade. Consequently, an improvement in absenteeism amongst learners, and increasing the number of learners that complete each grade, will lead to more learners finishing their schooling. Improving the knowledge and competencies of learners will result in Outcome 2, which is an improvement in the matriculation pass rates, thus providing better tertiary and employment opportunities for learners in the future.

Teachers

The outcome that will yield the greatest value (51.2% of total teacher value) is “Improved productivity as a result of better time management (implementation of better teacher planning, classroom management)”. Of the four teacher outcomes, this one is the most important because teacher productivity and time management have been cited as one

of the biggest teacher challenges in South Africa. A study released in July 2019 by the Teaching and Learning International Survey (TALIS) research survey by the Basic Education Department has stated that in South African schools, “66% of classroom time is spent on actual teaching and learning in South Africa, compared to 78% in other countries. The outcome means that teachers will improve their time management and increase their productive time. This is due to more effective administrative planning and management which will save time and enable teachers to have improved curriculum coverage. This will have a direct effect on learner educational outcomes.

Principals

The two key outcomes for principals will both derive relatively the same amount of value. “Increased accountability of principals” derives 57.59% of value and “Improved leadership, confidence and empowerment of principals” derives 42.41% of value.

Increasing accountability of principals derives the most value because principals who are more accountable will dedicate more time to improving the school, the results of the school, and relationships with the key stakeholders of the school (learners, teachers, parents, SGB and the community). By taking ownership and direct responsibility

of the school, principals will have an effect on the entire school eco system.

The outcome improvement in leadership, confidence and empowerment of principals derives significant value because it leads to principals improving their leadership skills and management of the school. A principal that possesses effective leadership skills can improve the performance of the school.

Department of Education

“Increase in district official's (district and circuit) capacity, coordination and support to the schools” is a significant outcome as a result of the programme. This is because district officials are responsible for instructional leadership at schools and for the delivery of teaching and learning materials provided to schools. Principals, teachers and SGBs are all provided with the support they require. Increasing the capacity of district officials will lead to an improvement of the school environment, teaching, learning and performance of learners.

Community

The outcome, “Increase in the circular flow of economic activity in Sekhukhune District” contributes to 95.80% of the total community value derived. In smaller rural districts, people are reliant on labour intensive occupations such as construction for employment opportunities. This outcome is particularly important as it is achieved through stimulating the local economy by purchasing goods and services, and sourcing people from the local economy. This leads to an increase in economic growth in the area.

4.3.4 Sensitivity analysis

In calculating the SROI, certain judgements were made, and despite

rigorous data collection, analysis and calculation, the SROI ratio is still an estimate of true value to the stakeholders and thus prone to error. A sensitivity analysis is conducted to determine the extent to which these judgements influenced the final ratio. The sensitivity analysis helps to determine which judgements have most effect on the results of the SROI, showing a range of value created. The sensitivity analysis plays a similar role in SROI, as it is used for identifying a range of uncertainty in economic measures.

To decide which judgements to test, two key questions were considered:

- How much evidence is there to justify our judgement? The less evidence available, the more important it is to test; and
- How much does it affect the final result? The greater the impact, the more important it is to test.
- Judgements that were tested and reported in this sensitivity analysis are shown in Table 19 and relate to:
 - Quantity (targets): some of the targets are reduced to the original targets which were based on secondary and primary research;
 - Financial proxies: the value of the investment is reduced (divided by 4). This takes into consideration that not all suppliers, materials and labour may be sourced from the local economy;
 - Attribution, Drop-off and Deadweight: the percentages are increased to take into consideration other influences; and
 - Duration: duration of outcomes reduced from 5 years to 2 to 3 years based on secondary research.

Variable	Baseline case	Sensitivity Analysis	SROI Ratio
Quantity: (targets)	The targets across all stakeholder indicators were originally based on secondary research. The targets were adjusted based on the Whole Schools Development Programme's contribution	Targets were reduced to the original conservative percentages	4.48:1
Financial Proxies	The entire infrastructure budget was stated to be allocated to local investment (labour, suppliers and materials)	Adjusted the financial proxy- “value of expenditure”, as the whole infrastructure budget was allocated to sourcing suppliers, materials and labour from the local economy. The total value of expenditure was divided by 4- in case not all suppliers, materials and labour will be sourced by the local economy.	5.72:1
Deadweight	Majority of the deadweight for all stakeholders ranged between 0% to 15%. This was based on a combination of secondary research and stakeholder engagement	Increased the deadweight that were 0% to 25%- deadweight for all stakeholders	5.63:1
Attribution	We adjusted what was 0% to 25% and what was 25% to 50% across all stakeholder groups	25% to 50% - Assume other organisations and people have a greater influence	4.55:1
Duration	The baseline duration was based on the programme being implemented over 5 years; therefore, the outcomes duration would last for five years	Adjusted to between 2 to 3 years, taking into consideration the last 2 to 3 years of the programme will focus on infrastructure	4.95:1
Drop-off	A conservative 25% drop-off was given to all stakeholder groups	Drop-off increased to 50% with a judgement that there may be an even higher drop-off due to external factors	5.33:1
All variables tested			1.39:1

Table 19: Sensitivity analysis on identified variables



As with any financial modelling, it is expected that any changes in the variables would result in changes to the SROI ratio. This sensitivity analysis is a useful indicator of which variable(s) have the most significant impact on the ratio. The most sensitive is the first variable, the quantity (targets) assumption for all outcomes for stakeholders. This indicates the importance of having achievable targets in place. In all scenarios tested the SROI ratio remains above 1:1, indicating that the social value forecast to be created is likely to be greater than the

investment forecast to be made in the BNSDP initiative. It will be important to collect data related to the most sensitive variables to ensure that these assumptions are robust and monitor any departures from the baseline judgements to ensure that the programme is creating the expected level of social return on investment.

SECTION 5: CONCLUSION

Based on the study findings, we anticipate the programme will produce positive results for the direct beneficiaries/stakeholders of the programme (learners, teachers, principals, district officials and the community at large). There is sufficient evidence based on implementation in other provinces, through stakeholder engagement, and extensive secondary research that the outcomes identified will be achieved and will vastly improve the prospects of learners, enhance the entire schooling system and ultimately improve economic growth in the province over the long term.

The intent of this analysis was to measure what impact the education interventions can have, not just on the individuals who are directly receiving the intervention, but for the entire country. The contextual analysis provided the evidence that poor educational outcomes cause significant damage to a nation, and that by improving education in South Africa, we can lift people out of poverty, reduce crime and improve the GDP of the country. The social capital that the programme aims to create in all participants, fostering accountability and renewing a sense of purpose in the education profession, will enable the schools to challenge the notion of success and build better schools.

The social return on investment analysis presented clearly demonstrates the potential for this programme to create social value. The forecasted result of 6.53:1 was calculated using stakeholder consultation, research and through sensitivity analyses. Adhering to the principle of avoiding overclaiming ensures that this result represents the minimum value that the program creates over the course of five years. An investment of R400 000 over five years creates R2 613 936 038 of present value, resulting in an indicative SROI ratio of 6.53:1. That is, for the equivalent of every R1 invested in the schools R6.53 is returned in social value. Although we modelled the impact over five years, it is likely that this investment will produce benefits for individuals that would last in perpetuity (or at least for a number of years).

This report is not an analysis of the design of the BNSDP initiative, but rather focuses on understanding the impact the programme will have on stakeholders. This forecast SROI analysis should be considered as a benchmark for the measurement of impact and value creation to be achieved by BNSDP in the future and for other interventions. It also provides insight into the type of data that should be captured in order to monitor and continuously measure the social impact and value creation to all stakeholders, and to ensure that the programme does create the impact it set out to achieve.

There is one key consideration to the forecast SROI analysis conducted:

1. **Learners are the end beneficiaries of the programme activities.** All positive results that will be experienced by this stakeholder group is to a large extent as a result of other stakeholders. Therefore, if one or all stakeholder groups (teachers/principals/DoE) do not experience positive change (if the programme does not achieve the objectives with these stakeholders to the extent required) then this will impede the learners' achievement of their objectives. There is a significant dependency factor in the programme amongst all stakeholders. In order for learners to improve their educational outcomes and ultimately their prospects, other stakeholder outcomes need to be managed and constantly monitored, adjusted and improved.

SECTION 6: RECOMMENDATIONS

Category	Findings	Recommendations
Monitoring and Evaluation (M&E)	<p>Baseline and Targets</p> <p>A baseline study has not been conducted on the programme, nor have targets of success been set. This means that, when conducting a SROI, it is hard to gauge to what extent the programme will meet its objectives. To evaluate the success of a programme, one needs a starting point to assess the level of improvement.</p> <p>Although a result and needs analysis was conducted for Riba Cross, the targets were identified with the KT's BNSDP team for the purpose of this study. However, many of the indicators required the use of secondary research to identify targets for the programme.</p> <p>Targets are imperative for M&E and measurement of the impact of the programme. In the absence of accurate targets for each of the five years that the programme will run for, it will be difficult to accurately evaluate the programme in the future.</p>	<p>A baseline study should be conducted that includes a control group. It is advised that the study be conducted within potential communities, prior to project commencement. It is proposed that a control group be identified to establish the current status quo and to determine what would happen 'anyway' regardless or in absence of a programme intervention. This baseline would then be applied in conjunction with community participatory engagement to develop realistic annual targets for monitoring and evaluation processes.</p> <p>Baseline and targets need to be established for academic results, dropout rates, absenteeism, completion rates etc.</p>
	<p>M&E framework</p> <p>One of the key issues organisations face when trying to account for impact is not having an M&E framework in place to monitor and track the progress of the programme on a regular basis. Without an M&E framework in place, the change envisioned through the ToC and SROI cannot be tracked or accurately measured. And if impact cannot be understood, changes cannot be applied.</p>	<p>An M&E framework should be developed prior to implementation that includes a logical framework and M&E plan. It needs to clearly define who will be responsible for collecting data, how they will collect the data and how often they will collect it. Clear protocols for reporting need to be established. Training should be provided to those staff collecting data to ensure it is accurately done limiting data unreliability. Processes and systems for data collection should be put in place.</p> <p>Identified outcomes and indicators through this forecast analysis should guide discussions with Kagiso Trust's management and staff to agree on an evaluation framework to track and monitor achieved outcomes.</p>
Data access and quality	<p>School data</p> <p>A number of schools interviewed manually track learner data such as dropout rates and academic results of learners;</p> <p>In some cases, a few schools did not capture some of the data that is needed for the programme to track the change that will occur;</p> <p>None of the schools interviewed had an effective, nor accurate, data system in place;</p> <p>The government utilises its own data system to track school data- the Education Management Information System (EMIS). However, we could not access the data from this system, due to government's subscription to the database being expired. This created a limitation to the SROI study as we didn't have baseline data and had to utilise secondary research.</p>	<p>The use of a separate (automated) system to collect entry data poses a problem. However, without regular access to the EMIS system, some tool will be required to collect data. It is recommended that collection of data using these two tools is embedded in daily operations for the implementing team. Doing so will facilitate the ongoing monitoring of the BNSDP's social performance.</p> <p>Ownership of data tracking, collecting and reporting has to be determined (i.e. will the schools take responsibility or the implementing team).</p>
Community Involvement	<p>Parents</p> <p>Limited parental involvement is a major challenge schools faced, particularly secondary schools. Teachers and principals feel that parents do not take enough initiative or responsibility for the educational outcomes of learners. The two main reasons for a lack of parental involvement are the lack of interest from parents, and language barriers that deny parents the opportunity to assist with their children's schoolwork.</p>	<p>The programme should consider how to involve parents by integrating a parent programme into one of the existing activities.</p>

Category	Findings	Recommendations
Community Involvement	<p>Community members</p> <p>The community plays a key role in the education system. During the interviews with SGB members, it was stated that more community involvement would enable schools to provide after-school activities for learners. A number of the schools are unable to provide these activities for the learners because SGB members do not have enough capacity, and teachers are not always willing to champion these activities. SGB members stated that volunteers from the community would enable afterschool activities for learners.</p>	<p>More engagement between the schools and the community should be explored. Community members could assist schools in a number of ways such as volunteering their time and resources to after-school activities for learners or setting up a community policing forum that will address violence and bullying that happens to children after school. Incentives should be considered so that community members are encouraged to volunteer and help with extra-curricular activities. Incentivisation does not need to be monetary.</p>
Partnerships	<p>Building partnerships</p> <p>Realistically, the programme will not be able to address everything that a school needs, however gaps in the eco-system could negatively affect the achievement of objectives.</p>	<p>To ensure the programme sustains itself after the 5 years, and areas that the BNSDP do not cover are not ignored, key partnerships should be explored to see how other organisations can complement and support the programme. E.g. churches providing a space for learners to receive after-school/weekend classes to help with their work, or sourcing unemployed university graduates from the area and province to teach learners after-school or over the weekend and paying them a stipend, or partnering with organisations that provide sanitary pads to girls in schools.</p>
	<p>Mines</p> <p>The mines are seen as employment opportunities for many people in Limpopo. As such each year a number of male learners leave school to go and work at mines during periods of high demand for low skilled labour. These learners that go and work at the mines do not generally return to school.</p>	<p>This discussion should be had between Kagiso Trust, DoE and the mines to see how they can potentially limit this activity and commit to not hiring learners that have not completed their matric. There could be a strategy to incentivise learners to complete their schooling in order to obtain employment at mines.</p>
Health and sanitation	<p>Female health</p> <p>Approximately 30% of teenage girls do not attend school when they are menstruating because of lack of access to sanitary pads. The effect this has on their schooling career puts them at a disadvantage to their male peers. This should not be overlooked.</p> <p>Sanitation in bathrooms</p> <p>The provision of running water and toilets without the provision of soap will not decrease diarrhoeal incidences. Most schools do not have soap for learners to wash their hands after utilising the bathroom.</p>	<p>Should consider building partnerships with organisations that look at providing sanitary wear for girls in schools.</p>

Category	Findings	Recommendations
School safety	<p>Safety</p> <p>Safety is a major concern in schools, and this affects learner outputs. The programme does not address safety directly and this could affect the achievement of outcomes.</p>	<p>To tackle abuse against teachers, which is displayed by learners and sometimes community members, there needs to be engagement with parents. Parents need to be in partnership regarding learner discipline.</p> <p>The creation of a forum/group that tackles violence in schools could be another way to address safety issues. This should include the involvement of key stakeholders within schools and outside the schools. The forum/group could include some of the following stakeholders- educators, SGBs, learner representative council, school security personnel, South African Police Service, local ward councillors, social workers and Community Police Forums (CPFs). The forum/group will promote ownership amongst stakeholders involved, and provide cohesive solutions to safety issues at schools;</p> <p>In the Western Cape province, many schools have adopted a Mindset Change programme to deal with bullying. The programme is focused on changing the negative attitudes of learners into positive attitudes. The BNSDP Whole Schools Development Programme should consider a similar intervention to reduce abusive and violent behaviour demonstrated by some learners.</p> <p>Toilets should be built close to the classrooms, to ensure that teachers can supervise learners' visits to the toilet. This will reduce the number of incidents that occur by the toilets.</p>
Socio-economic challenges	<p>The contextual analysis found that Riba Cross has a relatively high teenage pregnancy rate at 16%. This was also evidenced through stakeholder interviews which revealed that teenage pregnancy is prevalent in the schools visited. One cause of high teenage pregnancy is learners being lured by workers in the area for money.</p> <p>Other socio-economic challenges such as poverty, child-headed households and other negative external factors came up frequently during the interviews. Principals, teachers and SGB members stated that these issues negatively impact the academic performance and behaviour of learners. Although the Department of Education and district officials do send social workers to deal with learners that are experiencing difficulties or trauma, not enough is being done to help learners deal with these challenges.</p>	<p>Lack of social services/support for learners cannot be addressed directly through the BNSDP initiative. The resilience network that the programme includes, partially assists with addressing some of these challenges. However, it is recommended that district officials arrange for more frequent visits from social workers to schools.</p>
Policy Change	<p>Kagiso Trust has developed a reputation as being a strategic partner to government in supporting their education initiatives through world class programmes. One critical aspect in the education system at a policy level affects learner outcomes.</p> <p>Transition from Home language to English</p> <p>The transition from learning all subjects until Grade 4 in their home language, to learning all seven subjects in Grade 5 in English is placing learners at a distinct disadvantage.</p>	<p>Unless changes are made at a policy level, learners will continue to struggle academically despite interventions aimed at improving the education system. Where Kagiso Trust can, they should consider lobbying government to address this challenge.</p>
Subject development	<p>Subject Matter Expertise</p> <p>Sourcing teachers with the right skills and qualifications for specific subjects such as Physical Science, Mathematics, Accounting etc. is a challenge for the Riba Cross schools. Some teachers are teaching subjects such as Physical Science when they are not qualified to teach it.</p>	<p>If learners are to improve their educational outcomes, schools require not only better motivated teachers but better qualified teachers. Leadership without skills development will achieve limited success. Kagiso Trust should consider how they could introduce a subject development component into the programme design/ activities.</p>

Figure 25: Recommendations

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