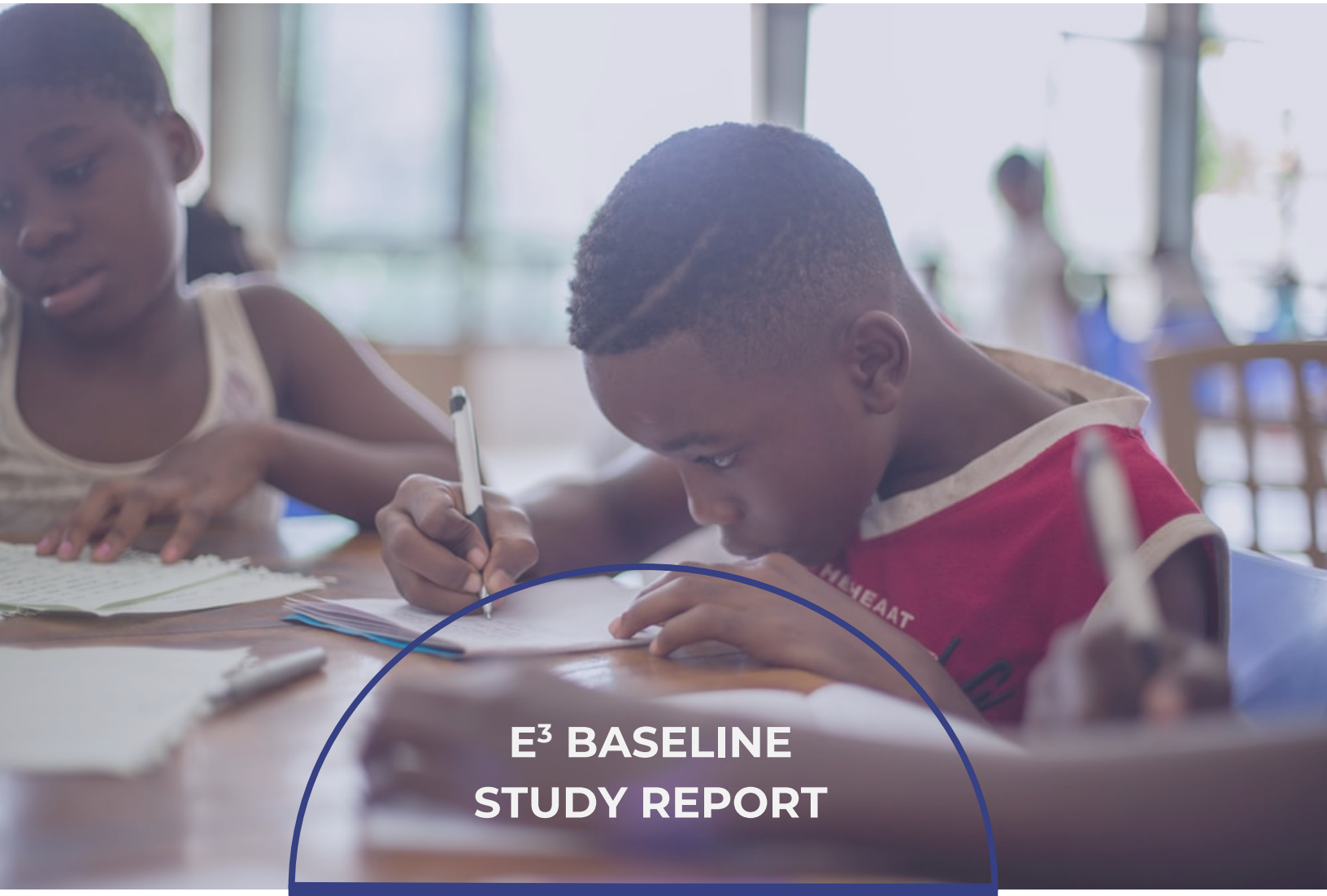

E³ BASELINE STUDY REPORT

2019

LEARN TO SUCCEED

Contributors: Ayanda Mtanyana, Jerusha Govender, Khotso Tsotsotso, Zinhle Mkhabela, Rama Raphalalani, Teboho Letuka, and Andrew Mulaudzi – through partnership between New Leaders Foundation and Data Innovator.

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LIST OF ABBREVIATIONS AND ACRONYMS

ATP	Annual Teaching Plan
CAPS	National Assessment Curriculum Statement
DBE	Department of Basic Education
E³	Entrepreneurship, Employability and Education
EC	Eastern Cape
FS	Free State
GP	Gauteng
KZN	Kwa-Zulu Natal
LP	Limpopo
MP	Mpumalanga
NC	Northern Cape
NDP	National Development Plan
NW	North West
PBL	Project Based Learning
PLM/s	Progressive Learning Methodology/ies
ToC	Theory of Change
WC	Western Cape

EXECUTIVE SUMMARY

The Entrepreneurship, Employability and Education (E^3) in Schools programme was developed with the goal to produce learners who are ready to embrace a new and complex world and contribute meaningfully to South Africa's socio-economic growth. The 2019 – 2021 Pilot Phase of the E^3 programme is testing the E^3 approach and core intervention mechanisms by rolling out the E^3 Learning Model and progressive learning methodologies (PLMs), more specifically project-based learning (PBL), in a sample of schools. The baseline study is part of this process, answering questions on:

- the current educator **readiness** with regards to their implementation of PLMs;
- the potential enabling and hinderance **factors in implementing** PLMs;
- educators' **understanding** of what PLMs are;
- and whether educators **buy into** that these PLMs are needed for the future-proofing South African learners.

THE RESEARCH STEPS

The purpose and focus of the baseline study are critical to inform how the programme is designed appropriately. The study was therefore conducted in a manner that ensures rigorous data collection and an optimal inclusion of stakeholders across all provinces. This said, the E^3 programme is a demonstration of the Department of Basic Education's (DBE's) commitment to the National Development Plan (NDP); whereas the approach applied by the baseline study depicts the extent to which the department places value on participatory processes to learning and decision-making. The study approach is also in alignment with the 2019-2020 DBE Annual Performance Plan and the value placed on national systemic evaluations, diagnostic and summative

assessments; and supports the National Education Evaluation and Development Unit (NEEDU) role in driving improvement in schools grounded in evidence.

This baseline report provides the **lessons and recommendations** on the context and implementation of E^3 as informed by the study findings.

The lessons from the baseline can be grouped based on **contextual** factors and **implementation** aspects to consider in the programme scale-up. The findings point towards the need to strengthen activities targeting institutional changes, the holistic programme package and communication strategies.

Context Lessons	**Process Lessons**
• **Lesson 1.** Educators bring a considerable level of teaching experience. • **Lesson 2.** Educators' poor subject knowledge, and high number of subjects and grades taught by a single educator will influence ability to implement PBL effectively. • **Lesson 3.** Educator respondents see their role as facilitating learner-led involvement in the classroom, however, most are still bound by "in-the-box-thinking" in their teaching approach. • **Lesson 4.** School and classroom factors such as classroom size, time constraints, and a perceived lack of resources hinder the implementation of PBL. • **Lesson 5.** There are multiple extramural activities organized by schools and external organizations which complement E^3 efforts.	• **Lesson 1.** The current understanding of E^3 is limited. • **Lesson 2.** Knowledge of PBL is limited. • **Lesson 3.** Educators felt that the E^3 training in particular did not adequately prepare them for classroom implementation. • **Lesson 4.** Understanding the educator context and providing adequate support is needed to manage the rapid E^3 implementation and roll-out. • **Lesson 5.** Failure to clearly and timeously communicate E3 plans, roles and requirements hampers effective implementation.

The key recommendations from the study fall within four strategic priority areas, namely:

1. Improve stakeholder communication and improve programme-focus on deepening E^3 institutionalisation within the education system;

2. Improve basic understanding of E^3 concepts among educators and education managers;
3. Improve training and communication efficiency through the use of technology; and
4. Improve training effectiveness by strengthening andragogy[1] in the delivery of the E^3 training.

The study provides an understanding that there is limited knowledge of PLMs, and PBL in particular, in the current context and there are multiple areas, which must be strategically supported, to elevate the success of the programme. This baseline will provide insights, as the programme progresses, to determine the changes in educator and school readiness with respect to applying PLMs, programme implementation and context.

[1] The method and practice of teaching adult learners.

INTRODUCTION

Due to historical and contextual challenges, South Africa's education system continues to fail to develop school leavers with the requisite competencies to succeed in a rapidly changing world. There is widespread consensus that the way in which learners are taught in South African schools fails to develop school leavers with the cognitive, emotional and social competencies to live full lives and contribute meaningfully to the country's well-being as active social, political and economic agents. Although some strides have been made towards the progressive realisation of the right to basic education for all in the post-Apartheid era, schools in the public education system continue to face significant challenges. The economic prospects of graduates from the system also continue to look bleak, as the ailing economy struggles to create new jobs. This continues to be a major risk to South Africa's ability to remain globally competitive and responsive to the new challenges and opportunities presented by the 21st century. The schooling system needs to produce learners who are ready to embrace a new and complex world for South Africa to grow economically, and to prosper as a world class African country.

E³—SHIFTING THE STATUS QUO

Launched by the Department of Basic Education (DBE) in 2018, the Entrepreneurship, Employability and Education (E³) in Schools programme is an initiative that seeks to change the education status quo. E³ seeks to activate 21st century teaching and learning in South African classrooms and develop entrepreneurial, solution-seeking mindsets by introducing project-based learning (PBL) as a progressive learning methodology (PLM), and embedding it in the basic education curriculum. Through empowering educators to implement PBL in every lesson to facilitate active and critical learning, E³ wants to ensure that learners exiting the school system have the skills necessary to hold down jobs in the modern economy and that they are globally competitive and responsive to the new challenges and opportunities presented by the 21st century.

As a system-change initiative, E³ recognises the role of the DBE and other institutional stakeholders and mechanisms, the schooling environment, and the surrounding

ecosystem as critical to lasting educational transformation. By leveraging all of these, E^3 intends to ultimately impact all learners in the schooling system to ensure that:

- 100% of school learners remain engaged and complete their schooling; and
- 100% of these school leavers are equipped with the skills to:
    - become entrepreneurs in the future (**ENTREPRENEURSHIP**);
    - get a job (**EMPLOYABILITY**); or
    - successfully study further (**EDUCATION**) (or a combination of all these).

E^3 PROGRAMME DESIGN

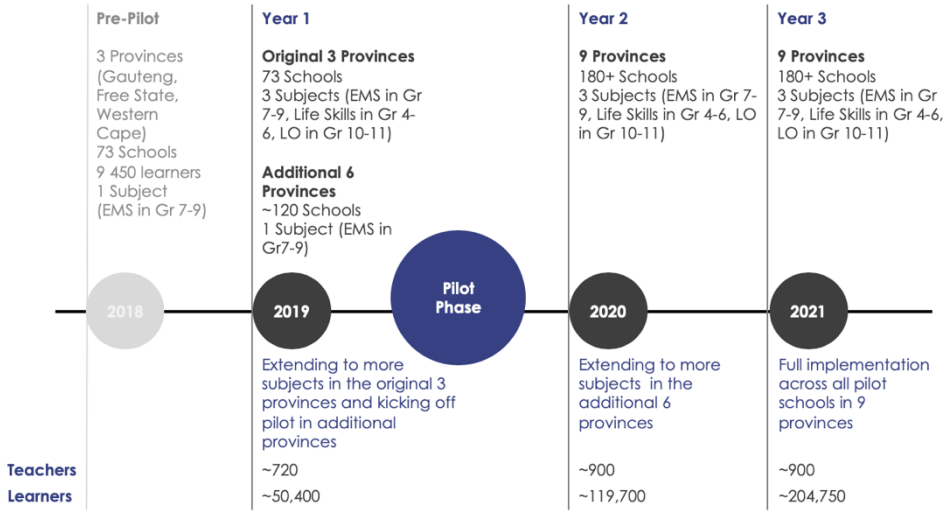
E^3 is designed as a multi-year, multi-stage initiative, which is in line with South Africa's National Development Plan (NDP). E^3 plans to progressively roll out PBL as a methodology in all subjects, in all schools and in all nine provinces by 2030 to achieve its ultimate objective of reaching more than 15 million learners in the basic education system.

A detailed Theory of Change (ToC) was developed by the implementing team, which outlines E^3's intervention mechanisms, the causal pathways to change and key indicators. The ToC is attached, **marked Annexure A**. The current ToC acknowledges the multiple and layered stakeholders, mechanisms and factors that contribute to lasting educational transformation, and it also focuses on three core intervention mechanisms, namely:

1. **training** provincial master trainers to train educators;
2. providing **educator development and support**; and
3. **transforming teaching and learning** in the classroom.

E^3 is still in its design phase where these core intervention and rollout mechanisms are being designed and piloted for efficacy. Following the pre-pilot, which was implemented in three provinces in 2018, a three-year national pilot was launched at the beginning of 2019, which has begun rolling out E^3's PBL methodology in Gr 4-6 Life Skills (LS), Gr 7-9 Economic and Management Sciences (EMS) and Gr 10-11 Life Orientation (LO) across 180+ schools in 9 provinces (**Figure 1**).

Figure 1: 2019 launched the three-year E³ National Pilot[2]



THE ROLE OF M&E AND THE 2019 BASELINE STUDY

The role of the Monitoring and Evaluation (M&E) workstream in E³ is to support the programme to clearly define the change that is intended, test theories and assumptions on how change would be achieved in the South African context and to gather evidence against this intended change along casual pathways—from implementation to results—for the purposes of learning.

The pilot and ongoing M&E processes therefore intend to test aspects of, and provide adequate evidence on, the following:

- the **implementation** of the programme;
- the **effectiveness of training** and skills transfer;
- the **quality of teaching and learning** taking place; and
- the **changes in learners'** knowledge, skills, attitudes and values.

[2] Figure 1 represents the plan for National Pilot Rollout as it was at the beginning of 2018. This rollout plan has since changed as a result of the changing context of Department of Basic Education policy and implementation.

From a longer-term perspective, M&E will also test the impact of entrepreneurship in schools on **schooling and post-school outcomes**.

As the programme began its progressive national roll-out in 2019, the M&E team led the implementation of a **baseline study**, which intends to establish a starting point for implementation, against which to monitor and assess progress and effectiveness.

In an effort to build a strong evidence base for the assessment of E³'s core intervention mechanisms, for the initial pilot year, the baseline study has focused specifically on understanding the school and classroom context, as well as what is in place, in order to be able to implement the E³ programme effectively.

PROJECT CONTEXT: IMPLEMENTATION OVERVIEW

The baseline study was conducted alongside ongoing programme implementation due to the staggered nature of E^3 roll-out. As depicted in **Figure 1**, the goal for 2019 implementation was to onboard 6 additional provinces, which would pilot PBL methodologies in EMS, as well as to extend the pilot to two additional subjects in the original three pre-pilot provinces, namely Life Skills and Life Orientation. By providing an overview of 2019 implementation and what took place, this section seeks to contextualise the implementation of the baseline study, along with its findings and lessons.

CORE INTERVENTION ACTIVITIES

The core process of E^3 implementation in 2019 consisted of **four key activities**, namely:

These activities are described in greater detail below.

School Selection

The 2019 pilot planned to roll out to 20+ schools (10+ primary schools and 10+ secondary schools) in each of the 9 provinces in SA (i.e. a total of 180+ schools).

Each province was given the mandate to select its own schools. There was, however, an overwhelmingly positive response from the provinces, which resulted in many provinces selecting more schools than the required 20 per province. As a result, **332 schools** (as opposed to 180) were selected to participate in the pilot. **Figure 2** below shows the distribution of participating pilot schools per province.

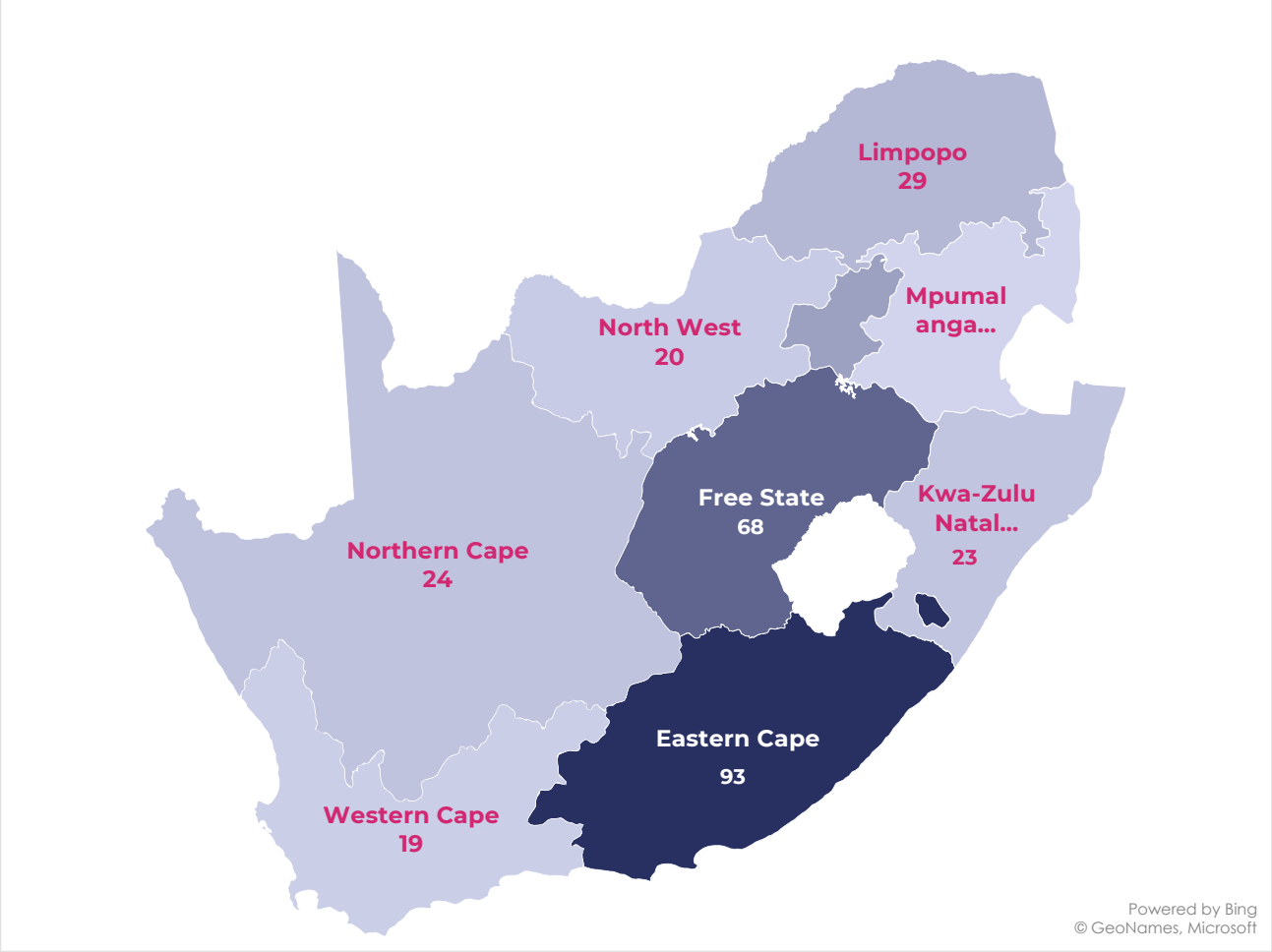
The criteria for school selection also differed across the provinces. Some of the criteria used by provinces included **school performance** (e.g. selecting underperforming schools/districts for intervention), **school location** (e.g. selecting schools in the outskirts or in very rural areas that do not ordinarily receive support from service providers due to their remote locations) and **school matching** (e.g. matching secondary schools with their feeder primary schools).

Since individual provinces held the mandate for school selection and applied different selection criteria based on their context, the parameters for school selection were not consistent across provinces. Each province selected a different number of schools based on their own considerations, which meant that pilot schools were not distributed equally across provinces, as originally intended. **Eastern Cape** had the largest number of pilot schools, with **93 schools** being selected to participate in the pilot. This was followed by the **Free State**, with a total number of **68 schools**. **Gauteng** had the third highest number of schools, with **40 schools** being selected to participate in the pilot.

Mpumalanga and the **Western Cape** both originally selected 20 schools; however, both provinces reported that less than 20 schools actually implemented E^3 in 2019. With a total number of **16 schools**, Mpumalanga had the lowest number of participating schools; whilst **Western Cape** had **19 schools**.

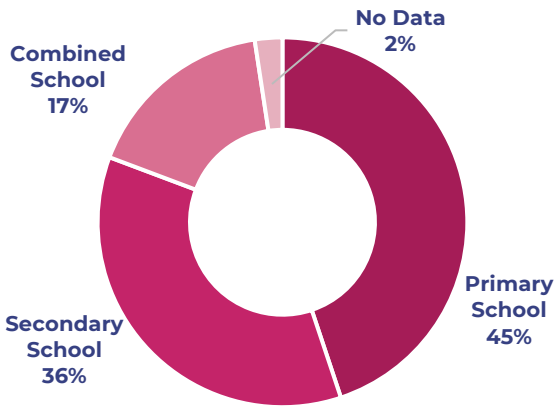
Figure 2: 332 schools were selected to participate in the 2019 E³ Pilot

As provinces had the autonomy to decide the parameters and criteria for school selection for the 2019 pilot, these were not consistent across provinces. As a result, 332 schools were selected to participate in the pilot (as opposed to the 180 that was planned). These schools were not equally distributed across provinces.



The original roll-out plan had also intended for E³ to be implemented in an equal number of primary and secondary schools, so that there would be an equal distribution of pilot schools by phase. Although the parameters and criteria applied for school selection were not consistent across provinces, there was still an almost-even split between primary and secondary schools amongst the 332 schools that were selected.

Figure 3: There was an almost-even split between primary and secondary schools amongst the 332 pilot schools



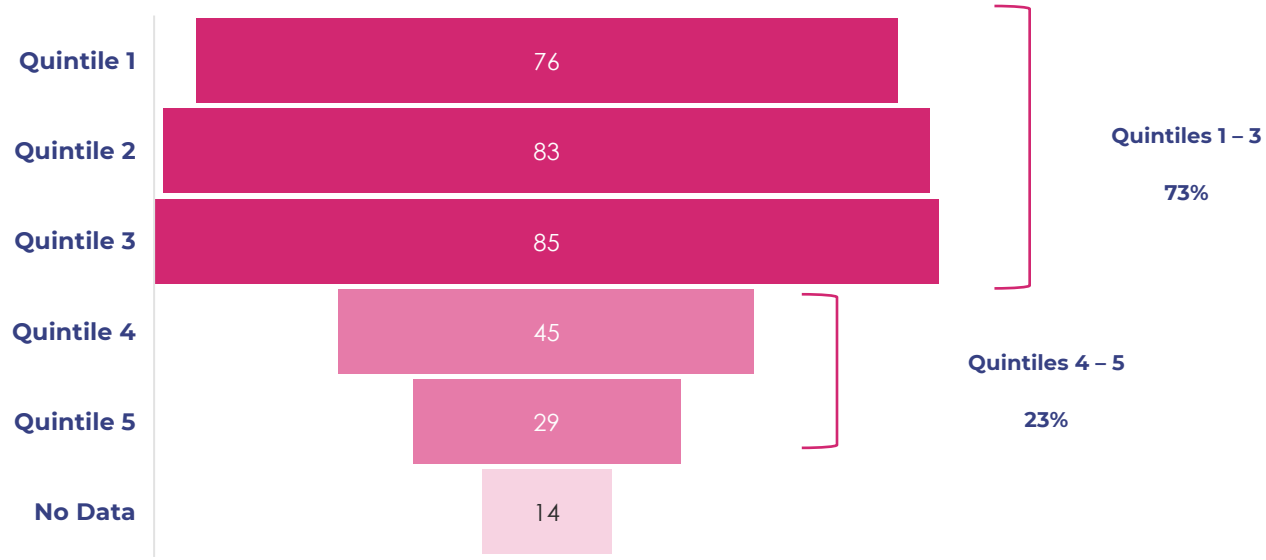
Pilot Schools by Type

The 332 pilot schools consisted of 149 primary schools (45%), 119 secondary schools (36%) and 56 combined schools (schools that have both primary and secondary grades) (17%).

There was not sufficient data to compare pilot schools according to their location (rural or urban); however a comparison by school quintile[3] shows that a large majority of the schools (**73%**) fall within **Quintiles 1, 2 and 3**. This means that a majority of E[3] pilot schools are located in the poorest communities. As the baseline data will show, this presents a number of resource-constraint challenges, which have an impact on E[3] implementation. In the upper quintile categories, **14%** of the pilot schools are **Quintile 4** schools, whilst **9%** are **Quintile 5** schools.

Figure 4: A large majority (73%) of the pilot schools fall within Quintiles 1 – 3

[3] In response to unequal access to quality public schooling, the South African Schools Act was amended in 2005 to establish a quintile system. Under this system, schools are categorized into five groups (quintiles) for the purpose of allocating financial resources. The categorization is based on the socioeconomic status of the school and is determined by measures of average income, unemployment rates and literacy levels in the area where the school is geographically located (Ogbonnaya and Awuah, 2019). Schools in the poorest areas are categorized as Quintile 1 schools; whilst schools in the most affluent areas are categorized as Quintile 5 schools. ***Schools in Quintiles 1 to 3 are non-fee-paying schools and receive more funding per learner from the government than schools in Quintiles 4 and 5***.



Master Training

Once the process of school selection was complete, master training was held at the DBE offices in April 2019. The purpose of the master training was to train Provincial Subject Coordinators (also called Deputy Chief Education Specialists/DCESs), Subject Advisors and Lead Educators to prepare them to deliver the E^3 training to educators in their respective provinces. **Thirty-four** people attended the master training, with each provincial delegation typically comprised of 3 – 4 people. Unfortunately, participant response rates to the master training feedback form were extremely low. The reflections included in **Table 1** below contain key themes, which emerged from the training report shared by the trainers who conducted the master training.

Highlights		Challenges	
Training participants were active and engaged throughout		**Number of training days had to be reduced from 2 ½ days**	
	"The participants loved the training; they were actively involved (and) the central message was the depth of learning that can take place		"The training was compressed into one and a half days due to logistical issues (training took place for 7 ½ hours on Day 1 and 1 ½ hours on Day 2)."

	through these games can have a real impact on the learners."		
There was a general positive sentiment about project-based learning		**There was a general feeling that the delivery of the training was rushed**	
	"Interactive learning through play makes learners/participants to learn and understand the content easy and, indirectly, the participants are discovering things and also becoming independent."		"Training is not sufficient. Educators must be trained during the holiday for a week. More training is needed. More time to discuss projects"

Educator Training

Once Provincial Subject Coordinators, Subject Advisors and Lead Educators had completed their training, they were then expected to cascade the training down to educators in the various piloting districts in each of the 9 provinces. There was no prescribed model for how the training should be delivered to educators. Therefore, each province used a different training model, based on the context. Some provinces delivered the training at a centralised training venue; whilst others split their educator cohorts across decentralized training venues in different districts. Some provinces conducted the full three-day training on consecutive days; whilst others chose to split the three-day training across different weeks. Some provinces conducted training of less than three days. Provinces also emphasised different areas of the training content, based on what they felt their needs were.

As the baseline findings will show, the application of different training models across the nine provinces had implications for the consistent delivery of the training.

Based on feedback and attendance registers received from the provinces, **727 people in total** received E^3 training. This number is comprised of district and province-based education officials, such as Chief Education Specialists (CESs), Provincial Subject Coordinators (DCESs) and Subject Advisors (SESs); deputy principals and principals, as

well as educators. An estimated number of at least **667[4] educators** were trained in the E[3] model and PBL across the country.

Table 1: Breakdown of Number of E[3] Training Recipients

Total number of people who received E[3] training								**727**
Number of district and province-based education officials who received training (e.g. CESs, DCESs, SESs)								**32**
Number of deputy principals and principals who received training								**18**
Number of educators who received training								**677**
Number of educators who received training by province								
FS	EC	WC	KZN	NC	LP	MP	GP	NW
278	**152**	**95**	**47**	**33**	**30**	**22**	**20**	**No data**

In order to capture educator feedback on the educator training, DCESs in each province were provided with paper-based feedback forms to distribute to participants at the various training venues across the country. Retrieving the paper-based completed feedback forms from the provinces proved to be a major challenge, and, at the time of writing, the team had only received **189** completed feedback forms. This response rate is extremely low; however, the completed forms provide some useful insight regarding educators' perceptions of implementing PBL or PLMs in Term 3, as well as their perceptions of the quality and efficacy of the training. The responses are summarized and attached as **Annexure B**.

Based on the educator responses received, it appears that although the majority of educators **(78%)** recognised and agreed that, with the advent of the fourth industrial revolution (4IR), the world is rapidly changing, which presents new challenges to learners; they did not appear entirely convinced that learners need to develop

[4] This number does not include data from the North West and parts of Gauteng, as this data is currently missing.

entrepreneurial thinking skills and mindsets to deal with these challenges. **Forty-nine percent** of educators agreed that the development of these skills was necessary, and **84%** majority felt that educators need to focus their energies on current tried and tested pedagogies.

78%	49%	84%
of educators agree that the 4IR is changing the nature of work, and the type of jobs learners will have access to, which poses a challenge to learners.	feel that learners need to develop entrepreneurial thinking skills and mindsets to succeed in a changing world.	indicated that educators need to focus on the tried and tested pedagogy.

In relation to understanding key concepts, although **87%** of educators agreed that PBL includes the use of a specific problem/challenge, solved across all relevant subjects, **57%** of educators failed to recognize that a **project task** and **PBL** are not the same thing. A project task is an assignment, which is pre-planned and based on specific directions and criteria. The emphasis with a project task is on the end-product, which is submitted and assigned a grade according to the specified criteria. There is less emphasis on the learning process itself. The current basic education curriculum is replete with project tasks. While PBL also features projects, the focus in PBL is on the learning process itself, where the learner is engaged in ongoing inquiry, discovery and continuous iteration as they attempt to solve a complex problem or question. Rather than relying on already-established criteria, PBL is driven by learner questions and choice, their background knowledge, technology and tools and support from others, amongst other things.

87%	of educators agreed that PBL includes solving a specific problem/challenge across all relevant subjects.	57%	of educator respondents failed to recognize the difference between a project task and PBL.

The failure by educators to identify the differences between a project task and PBL therefore **suggests an incomplete understanding of PBL** and the implications of introducing it as a teaching and learning methodology in the basic education curriculum.

Despite this incomplete understanding, an **82%** majority of educator respondents indicated that they feel confident about the task of implementing PBL in Term 3. Furthermore, when educators were asked to select options that best describe how they felt about the delivery of the training, **76%** of respondents included that **"the training was interesting, and I felt highly engaged throughout the process"** as part of their selected options. Out of these, **60%** selected this particular option as the only option to describe their views about the training.

82%	of educators feel confident about the task of implementing PBL in Term 3.	**76%**	of educators felt that the training was interesting and felt highly engaged throughout the process.

Educator Support

Once educator training was completed, each province was required to provide follow-on support to educators during the implementation, in accordance with its training and support plan. This would be in addition to some support provided by the E^3 programme team. The types of follow-on support contained in provincial plans included Professional Learning Communities (PLCs), WhatsApp groups, school visits, and classroom observations.

Table 2: Types of Follow-on Support Included in Provincial Plans

Type of Support Provided	Description
Professional Learning	PLCs are communities for shared and collaborative learning. The main aim is to foster educator development through activities that

Communities (PLCs)	improve educator practice and, ultimately, improve learner performance. In the context of E^3, educators use PLCs to share innovative ideas and best practice, test theoretical understanding of concepts against practical application and receive in-person support.
WhatsApp Groups	WhatsApp is increasingly used by Provincial Subject Coordinators and Subject Advisors for monitoring and support. Educators use WhatsApp groups to check in, share live media of ongoing implementation, pose questions/queries and receive online support.
School Visits and Observations	School visits and observations of a selected sample of the implementing schools allow Provincial Subject Coordinators and Subject Advisors to conduct quality assurance checks, monitor progress and implementation, as well as provide in-person support.

BASELINE STUDY DESIGN

The 2019 baseline study was implemented in the context of ongoing programme implementation, as discussed in the previous section. The purpose of the study is to provide an evidence base against which to monitor and assess E^3's progress and effectiveness as pilot roll-out continues, with a view of ultimately scaling the programme nationally. The framework of the study was based on the programme's ToC ("**Annexure A**"), which includes the intervention mechanisms, causal pathways to change, expected outcomes and key success indicators for the programme. For 2019, three areas of implementation were prioritised for study, namely:

- **educator readiness** to implement PLMs (specifically PBL);
- **school readiness** to support implementation; and
- the **existence of key stakeholder partnerships**, which support E^3 programme implementation.

RESEARCH QUESTIONS

The study focused on the following research questions:

Primary question

1. What is the current level of educator readiness with regards to their implementation of PLMs (PBL) in the classroom?

Secondary questions

2. What is educators' understanding of what PLMs (PBL methodologies) are?
3. Do educators believe that PLMs (PBL methodologies) are needed to overcome some of the challenges with South Africa's education system and to enable learners to succeed in the 21st century and beyond?
4. What are the potential enabling and hindering factors for educators' implementation of PLMs (PBL methodologies) in the classroom?

METHODOLOGY

The design of the baseline study was informed by the overarching approach to M&E in 2019. This approach was largely **theory-based** because the objective was, specifically, to test the school implementation aspect of the ToC, and related assumptions in order to determine whether the logic model holds true. Since the institutionalisation and learning partnerships arms of the programme ToC were largely exploratory and causal pathways were unclear, the M&E approach also combined **developmental approaches**[5] in an effort to help the programme advance innovation and systems-change with respect to these. As the E^3 programme operates within a complex system, where there are a number of interacting and interdependent elements, developmental approaches allow for methodological flexibility and adaptability, in an effort to enable rigorous evidence-based perspectives. Developmental approaches further entail a **utilisation-focus** [6] to evaluations, which emphasises the use of the findings and process of evaluations to inform decisions and improve programme performance.

The baseline study was therefore designed to allow for the kind of methodological flexibility and adaptability required to work within a system as complex as the South African schooling system, whilst maintaining rigour. The study followed a mixed methods approach, which entails the simultaneous application of both qualitative and quantitative methods. Although both types of evaluation methods are utilised systematically to collect and analyse empirical data, with the purpose of finding patterns within the data in order to understand and explain phenomena, the fundamental difference between the two forms is the nature of the data collected and the methods for analysis (Neuman, 2007).

Qualitative data is in the form of words, symbols and sentences, whilst quantitative data is measures of values or counts, and is expressed as numbers. More importantly, quantitative and qualitative evaluation designs have different objectives. Qualitative

[5] Patton, M.Q. (2011). Developmental evaluation: Applying complex concepts to enhance innovation and use. The Guilford Press, New York.
[6] Patton, M.Q. (2000). Utilization-focused evaluation. In D.L. Stufflebeam, G.F. Madaus and T. Kellaghan (eds.). Evaluation Models. 2000. Kluwer Academic Publishers. Boston. Chapter 23.

evaluation methods focus on conducting detailed analyses of specific “cases”, which emerge naturally within a context, and interpretations in qualitative evaluation take socio-historical contexts into consideration. The purpose of qualitative evaluation is to develop theory inductively and more importantly, to understand the world from the perspective of the subject (Carr, 1994). Quantitative evaluation methods, on the other hand, emphasise the precise measurement of variables and the testing of hypotheses, which are associated with causal inferences (Neuman, 2007). The purpose of quantitative evaluation is to explain, statistically test, and evaluate cause and effect relationships. In quantitative evaluation, theories are deductively tested from already existing knowledge, through the development of hypotheses. The baseline study design therefore followed a mixed approach as the E^3 programme required the team to respond to evaluation questions that relate to context, as well as those that seek to test the programme theory.

In an effort to ensure that all key stakeholders were meaningfully engaged in the process, the study design also emphasised programme team participation in the development and implementation process of the study. This was done to increase the likelihood of the utilisation of the baseline findings and process to facilitate learning and continuous improvement of the E^3 programme.

Sampling Plan

The original programme implementation plan envisaged the baseline study being conducted in all the schools that would be piloting the programme in 2019. As the reader will recall, due to the overwhelmingly positive response from provinces, 332 schools ended up participating in the pilot, as opposed to the 180 that was planned. Since only 180 schools were budgeted for in terms of funds, resources and time, the implementing team maintained the original plan to **conduct the baseline in the intended number 180 schools**. The implication of this is that the size of the population of schools was therefore kept at 180 schools and did not change to 332. The 180 schools were selected randomly from the list of piloting schools, to allow for a mix of various quintiles, rural/urban schools and different school types.

However, due to unforeseen delays with acquiring the requisite permissions and ensuring that the baseline study was formally communicated through DBE structures to the provinces, districts and schools, the baseline study could not be conducted in all 180 schools. To accommodate the delays, the M&E team shifted the approach and selected a sample of **166 schools** from the list of 180 and maintained the approach of having a mix of school types, in different quintiles and locations.

We planned to administer a survey to two educators from each sample school—one educator who received training from the E^3 Master Trainers and another who did not receive training, for comparative purposes. A total number of **332 educators** would therefore be surveyed. The goal of the educator surveys was to test educators' understanding of 21st century skills and entrepreneurial mindsets, PLMs (project-based learning) and how these should be implemented in the classroom. We had also planned to conduct classroom visits to observe educators' lesson delivery; however, these had to postponed due to the delays with access and permissions described above.

Secondly, we planned to conduct interviews with school principals in the sample schools to test principals' understanding of the E^3 programme and its objectives, and to measure school readiness to support programme implementation. A total number of **166 principal** interviews were planned.

Table 3 below summarises the number of educators and principals who actually responded to the surveys and interviews respectively. The educator surveys had a total response rate of **74%**; whilst the principal interviews had a total response rate of **76%**. Although response rates were high, they were not consistently high across all provinces. For example, the **Eastern Cape** had a low response rate for both the educator survey and principal interview, at **50%** and **59%** respectively. At **59%**, **Kwa-Zulu Natal** had a low response rate for the principal interviews.

Low response rates to the educator surveys and principal interviews were largely influenced by the following three factors:

- incorrect/outdated/non-existent school and educator/principal contact details in many cases;

- unavailability of educators or principals in some cases due to other commitments during the course of baseline implementation; and
- failure by respondents to honour scheduled appointments in a limited number of cases.

The field team, which was tasked with data collection for the educator surveys and principal interviews, therefore had to adopt an adaptive and fluid strategy to secure appointments and to ensure that surveys and interviews are completed to increase the number of responses.

Table 3: Summary of Educator Survey and Principal Interview Response Rates

	EDUCATORS			PRINCIPALS		
Province	**Planned Educator Sample**	**Actual Educator Sample**	**Response Rate**	**Planned Principal Sample**	**Actual Principal Sample**	**Response Rate**
EASTERN CAPE	54	27	**50%**	27	16	**59%**
FREE STATE	96	66	**69%**	48	35	**73%**
GAUTENG	26	21	**81%**	13	11	**85%**
KWAZULU NATAL	34	26	**76%**	17	10	**59%**
LIMPOPO	32	31	**97%**	16	15	**94%**
MPUMALANGA	22	18	**82%**	11	9	**82%**
NORTH WEST	14	13	**93%**	7	7	**100%**
NORTHERN CAPE	30	26	**87%**	15	13	**87%**
WESTERN CAPE	24	18	**75%**	12	10	**83%**
TOTAL	**332**	**246**	**74%**	**166**	**126**	**76%**

Lastly, we planned to conduct interviews with Provincial Subject Coordinators and Subject Advisors in each province to test their understanding of the E^3 programme and the readiness of the system (provincial and district structures) to provide the necessary support for successful implementation. We planned for the interviews to be conducted face-to-face as much as possible in an effort to establish and preserve strong relationships with the stakeholders responsible for coordinating E^3 implementation in the provinces and districts, as well as to promote a contextualised understanding of the different ways of working in each of the provinces. We planned for two members of the M&E team to interview **nine Provincial Subject Coordinators** and **nine Subject Advisors** (i.e. one of each role in each of the nine provinces).

Eleven out of the total 18 stakeholders were interviewed **(Table 4)**. As Coordinators and Subject Advisors were preparing for exams during the course of baseline implementation, and many were invigilating, it was challenging to schedule and

complete stakeholder interviews. All **two interviews** were completed in only four of the provinces, namely **Eastern Cape**, **Mpumalanga**, **North West** and **Western Cape**. The team was only able to conduct **one interview each** in the **Free State**, **Limpopo** and **Kwa-Zulu Natal** and not able to conduct any interviews in Gauteng and the Northern Cape due to scheduling conflicts, interviews being postponed and then, ultimately, cancelled. In an attempt to remedy this, the M&E team created an online form to collect responses from the missing provinces; however, at the time of writing, we had only received one response from **Kwa-Zulu Natal**.

Although the plan was to conduct stakeholder interviews face-to-face as much as possible, five out of the 11 interviews had to be conducted telephonically and online due to not only scheduling challenges, but also the logistical challenges associated with traveling to remote districts (where Subject Advisors are based), which are often far from provincial offices (where Provincial Subject Coordinators are based).

Table 4: Summary of Stakeholder Interview Response Rates

Province	Actual Provincial Subject Coordinator Sample	Actual Subject Advisor Sample	Total
EASTERN CAPE	1	1	2
MPUMALANGA	1	1	2
NORTH WEST	1	1	2
WESTERN CAPE	1	1	2
FREE STATE	1	0	1
LIMPOPO	1	0	1
KWA-ZULU NATAL	1	0	1
GAUTENG	0	0	0
NORTHERN CAPE	0	0	0
TOTAL	**7**	**4**	**11**
Summary by Interview Type	Face-to-Face	**6**	
	Telephonic	**4**	
	Online Form	**1**	

Data Collection Instruments

This section provides a more detailed description of the instruments used for data collection.

1. Literature Review

The aim of the literature review (attached, marked **Annexure C**) is to document evidence supporting E^3's ToC, with a particular focus on the core intervention mechanisms i.e. those related to educator and learner implementation. Aside from informing the baseline study design, the review will serve as one of the foundational documents to inform the continued iteration of the programme strategy and approach, as well as ongoing M&E activities in the 2019 – 2021 Pilot Phase.

The literature review drew from diverse bodies of literature, including literature on constructivism and progressive education, 21st century teaching and learning, and entrepreneurship education. It also pulled insights from previous evaluations/studies of similar social change initiatives, which have been testing using educator training to drive pedagogical and mindset shifts that lead to changes in the way in which learners are engaged in the classroom. The literature review sought to further provide a view of what methodologies should be used to develop 21st century skills/competences/ mindsets and how these should be implemented and assessed.

2. Educator Survey Instrument

The educator baseline was be conducted by a team of trained fieldworkers. Fieldworkers were allocated to provinces in accordance with the sampling discussed above. Data was collected using the Educator Survey Instrument. The instrument was tested in two schools prior to data collection to refine the questions and approach to the interview.

Educators were engaged because they are the main recipients of the intervention. The surveys were administered largely telephonically to reach a wider sample; however, we planned for the field team to administer **at least 36** (10%) out of the 332 surveys in person. The interviewers conducted the interviews in English but also translated to the educator's language in some instances.

3. Principal Interview Guide

The principal interviews were also conducted by the fieldworker team, who were allocated to provinces based on the sampling plan. Data was collected using the Principal Interview Guide.

Principals were included in the study as a result of their role in school leadership and management. Literature has also highlighted the critical role that principals play in monitoring and sustaining the use of PLMs and PBL methodologies. The interviews were administered largely telephonically to reach a wider sample; however, we planned for the field team to conduct at least 18 (10%) out of the 166 interviews in person.

4. Stakeholder Interview Guide

Two representatives (Provincial Subject Coordinators and Subject Advisors) were interviewed per province. These interviews were conducted by two researchers, who are part of the M&E team. Data was collected using the Stakeholder Interview Guide.

Provincial Subject Coordinators and Subject Advisors were included in the study due to the critical role they play in championing, supporting, and monitoring the implementation of the programme at the provincial, district and school levels. The interview also aimed to gain a better understanding of the network of stakeholders currently supporting E^3 efforts in each of the provinces.

RESULTS

As indicated in the methodology section, **246 educators** responded to the educator survey, and **126 principals** and **11 stakeholders** were interviewed. This section summarises the key results and themes that emerge from the three datasets. A complete tabular presentation of these data is attached, marked **Annexure D**.

RESPONDENT ATTRIBUTES

In order to understand key attributes, and to help us better analyse the data, we asked respondents some background questions.

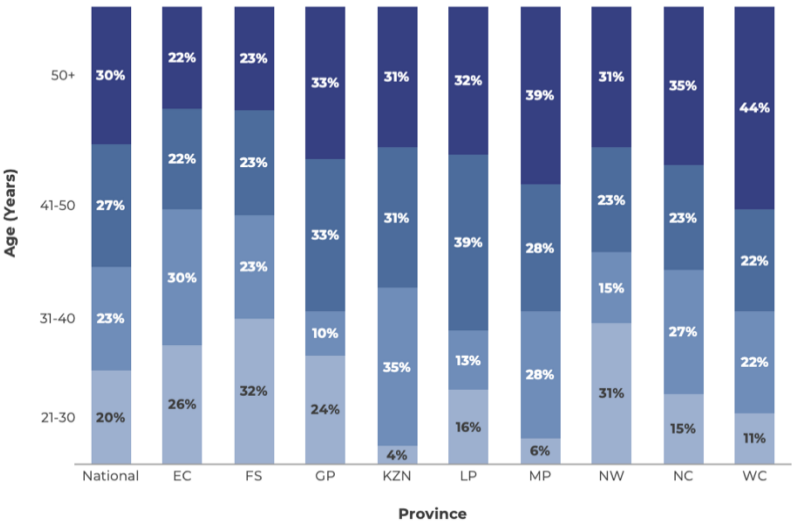
Educator Background

Thirty percent of educator respondents nationally indicated that they are age 50 and above (Figure 5). This is more or less in line with the results of the 2018 Teaching and Learning International Survey (TALIS), which reported that *32% of South African educators are 50 and older*. The study highlights that this means that South Africa will have to renew about one out of three members of its teaching workforce over the next decade or so, if all else remains equal.

The results of the baseline show, at 44%, that **Western Cape** had a significantly higher percentage of educators falling within the 50+ age category.

30% of educator respondents nationally are age 50 and above

Figure 5: Age of Educator Respondents by Province

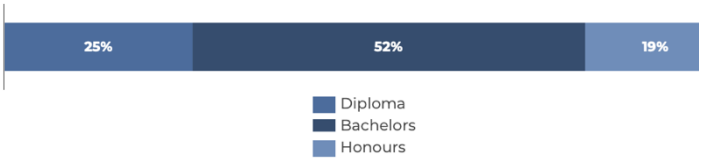


Twenty percent of the educator sample consists of young educators between the ages of **21 and 30**. It appears that **Kwa-Zulu Natal (4%)**, **Mpumalanga (6%)** and the **Western Cape (11%)** have a significantly lower number of young educators indicating

that they are between the ages of **21 and 30**.

52% of educator respondents hold a Bachelor's level qualification

Figure 6: Educator Respondent Level of Qualification



Out of the 246 educators surveyed, most **(52%)** have a Bachelor's level qualification (**Figure 6**). **Twenty five percent** hold a Diploma and **19%** hold an Honour's level qualification.

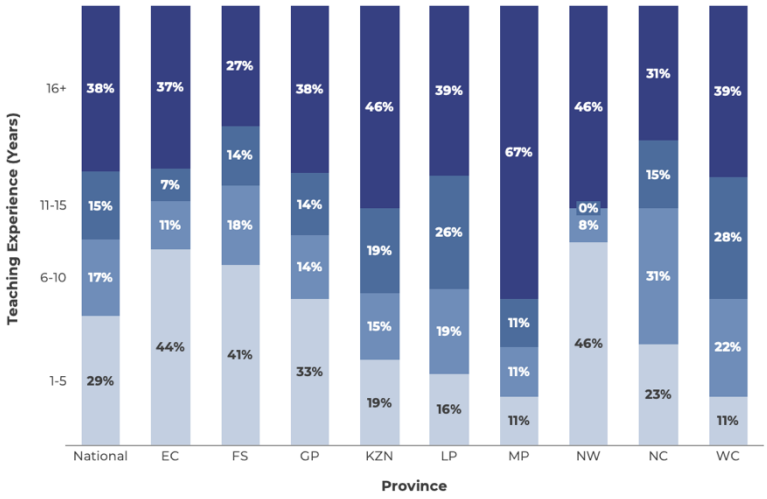
Nationally, **38%** of educator respondents have **16 or more years' worth of experience** in the teaching profession (**Figure 7**).

Notably, **67%** of educators in **Mpumalanga** had this high level of experience. This was also the dominant category selected across all the provinces, with the exception of the **Eastern Cape**, **Free State** and **North West**.

In the **Eastern Cape** and **Free State**, **44%** and **41%** of educators respectively reported having **only 1 – 5 years** of experience in the teaching profession.

In the **North West**, educators were evenly split between **1 – 5 years' experience and 16+** with a **46%** selection of each of these categories.

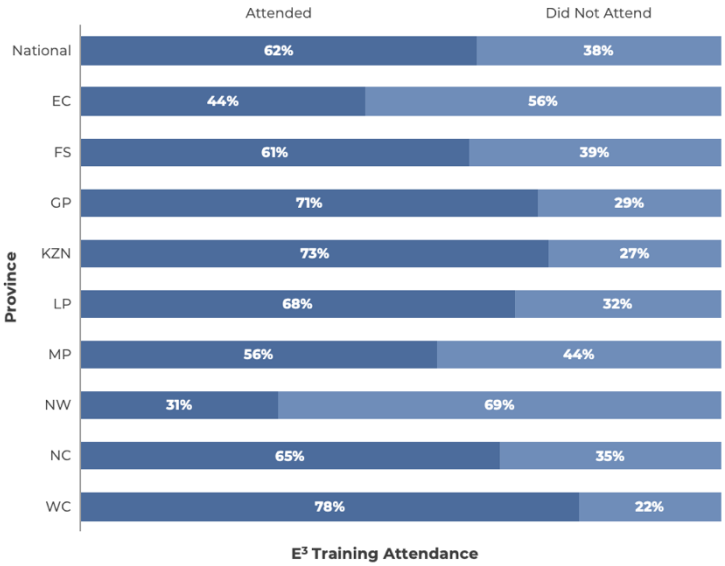
Figure 7: Educator Respondent Level of Teaching Experience by Province



We also asked educators whether or not they had attended the E³ training. For comparative purposes, we planned to have an even spread of educators who attended the training and educators who did not. However, the final sample included a higher number of educators who attended the E³ training, with **62%** of respondents indicating that they **had participated in E³ training** and **38%** indicating that they **did not attend** (**Figure 8**). Reasons for an uneven spread in relation to training attendance included selected educators not being available to take

the survey and the field team only being able to reach one educator instead of two in the case of some schools.

Figure 8: Number of Educator Respondents who Attended E³ Training (%)



62% of educators attended the E³ training

Only the **North West** had a majority of educator respondents who did not attend the training **(nine out of 13)**.

Principal Background

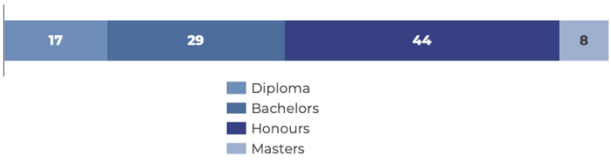
Sixty-one percent of principal respondents nationally indicated that they are between the ages of **41 and 50**.

According to the 2018 TALIS results, **60%** of South African school principals are *age 60 and above*, so our sample of principals may be considered young in comparison.

The predominant age category of **41 – 50 years** was consistent across all provinces, except in **Mpumalanga**, where **56%** of principal respondents indicated that they are between **51 – 60 years old**.

44% of principal respondents nationally have an Honour's level qualification

Figure 9: Principal Respondent Level of Qualification



Forty-four percent of principal respondents nationally have an **Honour's-level** qualification (**Figure 9**). This figure was highest in **Limpopo (67%)** and **Gauteng (64%)**.

At **40%**, the majority of principals, nationally, indicated that they have **1 – 5 years' experience** on the job (**Figure 10**).

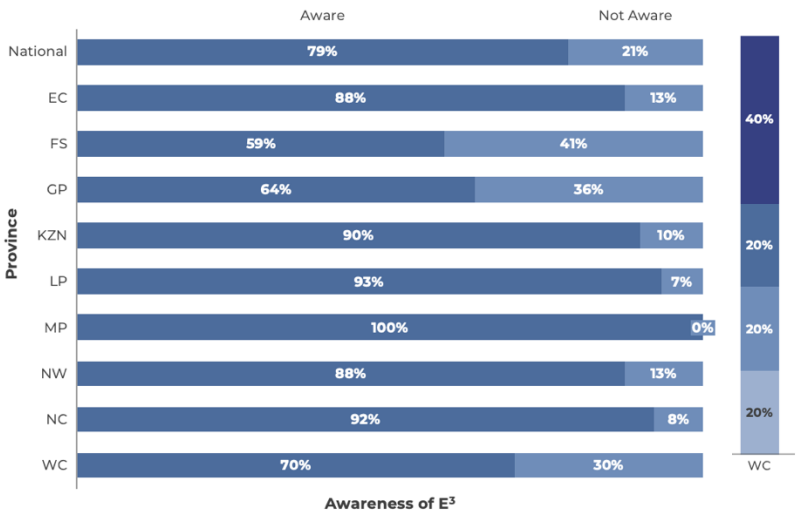
Most principal respondents nationally have 1 – 5 years' experience in their role

Figure 10: Principals' Years of Experience in their Role

It was only in the **Eastern Cape** that most respondents indicated having **more than five years' experience**. **Thirty-one percent** of the sample selected **6 – 10 years' experience**, **25%** selected **11 – 15 years** and another **25%** selected **16 and more.**

79% of principal respondents were aware of the E³ programme

Figure 11: Number of Principals who were Aware of the E³ Programme (%)



We were also interested in understanding whether communication about the programme had reached school principals, due to previous concerns that were raised regarding principals not being aware of the programme, even when it is already being implemented in their schools.

We asked respondents whether they had been informed of the E³ programme prior to the interview and **79%** indicated that **they knew of the programme** (**Figure 11**).

At a provincial level, all principal respondents in **Mpumalanga** indicated that they are aware of E³; whilst the **Free State** had the lowest number of respondents who had been informed of the E³ programme prior to the interview, with **59%** of respondents indicating that they had no knowledge of the programme.

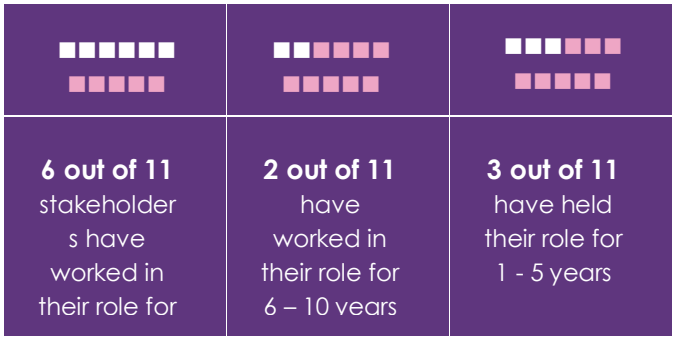
Stakeholder Background

All stakeholder respondents were **41 years old and above**.

Six of the 11 have worked in their roles for 11-15 years, two worked in the role for 6-10 and three hold 1-5 years in the role.

Most stakeholders have worked in their role for 11 – 15 years

Figure 12: Stakeholders' Years of Experience in their Role

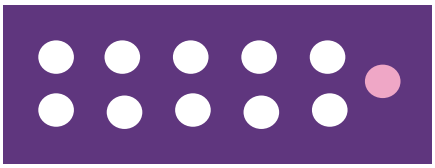


Those with 11-15 years were in roles as DCES for EMS, a Provincial Coordinator (EMS), a Senior Education specialist (working under EMS), and Subject advisor for EMS.

Other roles included Acting Chief Education Specialist, Chief Director for Curriculum Management and Educator Development, and Curriculum Advisor or Planners.

10 of the 11 interviewees attended the E³ training

Figure 13: Number of stakeholder interviewees who attended the E³ training



Ten out of the 11 stakeholders that were interviewed indicated that they attended the E³ training.

UNDERSTANDING OF THE E³ PROGRAMME

Understanding of the E³ programme and its objectives is critical to understanding the implications of the programme as a national initiative, which seeks to transform the learning environment through developing progressive classrooms in which learning helps develop a new generation of young people with entrepreneurial mindsets. We therefore asked survey and interview respondents questions to determine their level of understanding of the E³ programme.

We found that the current understanding of the E³ programme and its objectives is limited.

Educator Understanding of E³

Although **79%** of educator respondents correctly identified the objectives of E³ as ***"to make sure that learners develop the skills to succeed in the workplace; to start their own***

businesses and/ or to study further" in the multiple choice question, only **three percent** were able to somewhat articulate **the distinction between entrepreneurship and entrepreneurial mindsets** in an open question. This distinction lies at the heart of the programme purpose, which goes beyond merely increasing the number of young South Africans who create your own businesses. The programme intends to develop skills and embed mindsets so that learners contribute meaningfully to South Africa's social, economic and political development in many different ways.

When asked to express how they understand the distinction between entrepreneurship and an entrepreneurial mindset, only **seven of the 246** educator respondents were able to differentiate entrepreneurship from an entrepreneurial mindset. The majority saw both concepts as solely connected to the process of starting a business. It does not appear as though having attended the training gave respondents a significant advantage to be able to respond to this question correctly and comprehensively.

Only **12 of the 154 (eight percent)** educators who attended the E^3 training were able to make a distinction between the two concepts; compared to **two of the 94 (two percent)** who did not.

Most respondents identified entrepreneurship as the process or the ability/skill to start a business and an entrepreneurial mindset as having the inclination, desire or ideas to start a business.

> *"Entrepreneurship is the process of starting a business. Entrepreneurial mindset is someone who has ideas on starting a business." - educator*

Only six out of 246 educator respondents were able to relate an entrepreneurial mindset to something other than business creation.

Some respondents were able to connect an entrepreneurial mindset to purpose and agency, self-efficacy and innovation/creativity (21st century skills); however, very few gave a complete answer.

Three of the respondents who were able to distinguish entrepreneurship from an entrepreneurial mindset were from **Limpopo** and the other three were from **Kwa-Zulu Natal**.

> *"Entrepreneurship is the process of designing, launching and running a new business, which is often initially a small business. The people who create these businesses are called entrepreneurs. The entrepreneurial mindset is about a certain way of thinking — it is about the way in which you approach challenges and mistakes. It is about an inherent need to improve your skill set and to try and try again."*

STAKEHOLDER UNDERSTANDING

E³ stakeholders who were interviewed also appear not to fully understand the programme and its objectives.

For example, one respondent indicated that ***"(the) Main aim of E³ is that when learners pass grade 9, they can be able to start doing something to live off. Even if they pass matric and cannot afford varsity, they are able to start a business or get a job. The initiative is also to get more entrepreneurs, more people creating jobs. We want who are willing to not be afraid to take a risk because they been engaged"***

The above response demonstrates a similar incomplete understanding as we found with educator responses, which limits the programme purpose to entrepreneurship and job-creation.

Only **one respondent** provided a response which was completely correct (DCES - FS)

Seven out of the 11 respondents indicated a partial understanding of E³.

EDUCATOR READINESS TO IMPLEMENT PLMS

One of the main aims of the baseline study was to understand educators' level of readiness with regards to implementing of PBL in the classroom. In this regard, we sought to understand, amongst other things: whether educators have received training in all the subjects that they teach; educators' understanding of their role in

the classroom; their teaching style; their perception of their teaching ability, as well as their feelings about their ability to facilitate learning using PBL.

EDUCATOR FORMAL TRAINING

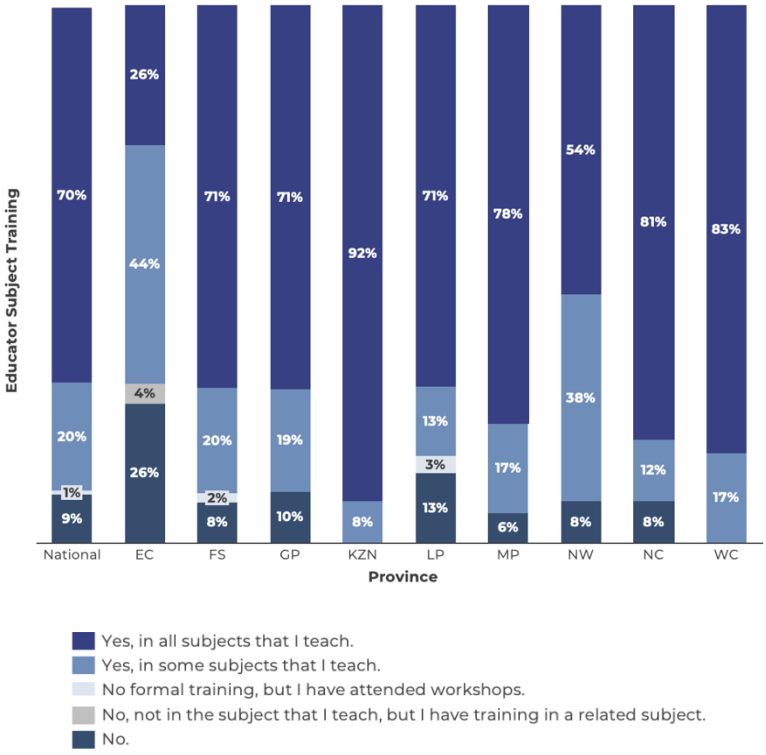
Seventy percent of educators nationally indicated that they had received formal training in **all the subjects that they teach** (**Figure 14**). Respondents' interpretation of training also included training workshops, which are conducted by the DBE.

Majority of educators have received formal training in all the subjects that they teach

Twenty percent of educator respondents said that they had received training only for **some of the subjects that they teach** and **10%** indicated that they had received no training in the subjects they are currently teaching.

Figure 14: Have you received formal training for all the subjects that you teach?

Of this 10%, (22 respondents), **32% (seven)** were from the **Eastern Cape**, **22% (five)** were from the **Free State**, **18% (four)** were from **Limpopo**, **9% (two)** each were from **Gauteng** and the **Northern Cape,** and **one** each from **Mpumalanga** and the **North West**.



The specific subjects that educators mentioned that they have no formal training in were **EMS** and **Life Orientation**. One stakeholder who was interviewed expressly indicated that one of the major challenges with implementing PBL in EMS in particular, is that educators are often not formally trained in the subject. They are pulled from other subjects and, as a result of their gaps in content knowledge, it

becomes challenging for them to learn and implement new pedagogies.

> *"…they have a lot of subjects and they might not be trained to teach EMS. It can get so bad that sometimes EMS is not taught." - stakeholder*

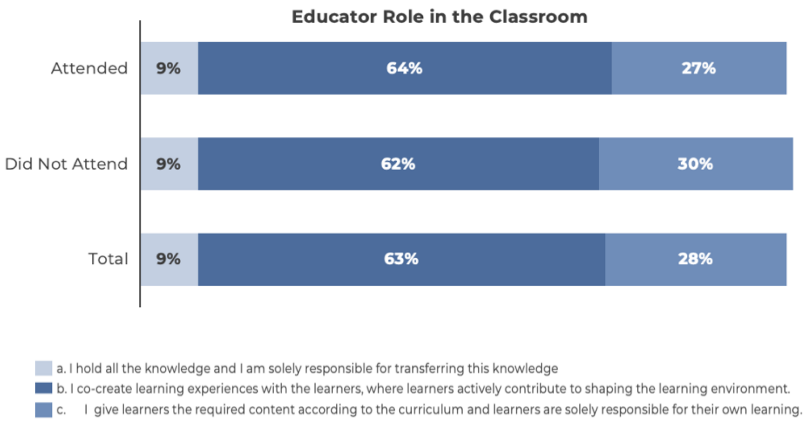
EDUCATOR TEACHING APPROACH

Educator respondents generally have a positive perception of their role in facilitating learner-centered approaches and PBL in the classroom

In an effort to determine whether or not educators' teaching practices align with the core tenets of PBL, we asked educators multiple choice questions about:

- how they see their role in the classroom; and
- how they would describe their teaching style.

Sixty-three percent of educators nationally (155 of 246) indicated that they see their role as co-creating experiences with learners, where learners actively contribute to shaping the learning environment (**Figure 15**). This is significant because learner-led involvement in the classroom is one of the cornerstones of PLMs.



Educator respondents predominantly see their role as co-creating learning experiences with learners

Figure 15: Educator perceptions of their role in the classroom by E³ training attendance

Attendance at the E³ training workshop does not appear to have had a significant impact on educator responses. **Figure 15** shows that educator responses were largely consistent whether educators attended the training or not.

Most educators also have a very positive perception of their teaching ability and ability to implement PBL in the classroom

Educators were asked to rank their teaching ability on a scale of 1 – 5 (with

one being very poor and five being excellent). Most educators rated themselves highly, with **46%** of educators in the sample giving themselves a five rating and **41%** giving themselves a rating of **four** (**Figure 16**).

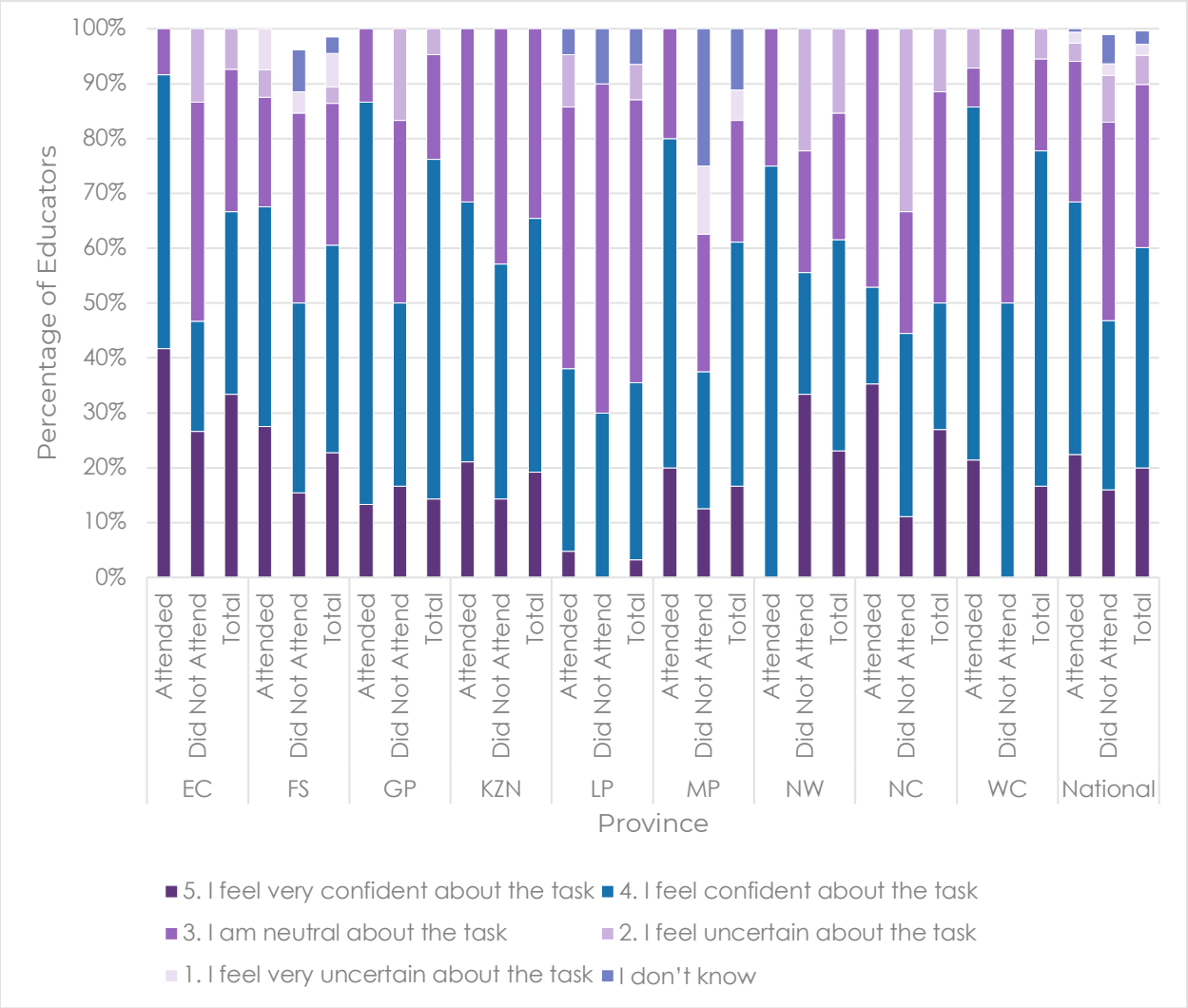
We also asked educators about their level of confidence implementing PBL in the classroom. Most educators nationally appear to feel some level of comfort about implementing PBL in the classroom. **Forty percent** indicated that they feel confident about the task of implementing PBL in the classroom; whilst **20%** indicated that they feel *very* confident.

Most educators indicated that they feel confident about the task of implementing PBL in Term 3. Typically, across most provinces, a higher proportion of educators who attended the training felt a high level of confidence with implementing PBL, compared to those who did not attend the training.

Looking at the data at the provincial level shows that there is a difference between the responses of educators who attended the E^3 training and those who did not. For most of the provinces, it appears that a higher proportion of educators who attended the E^3 training indicated that they felt confident about implementing PBL than those who did not attend the training (**Figure 16**).

For example, **73%** of educators who attended the training in Gauteng indicated that they feel confident about implementing PBL (i.e. rated themselves a four on the scale), compared to **33%** of those who did not attend the training. Similarly, **75%** of educators who participated in the E^3 training in the North West indicated the same levels of confidence, compared to **22%** of those who did not attend.

Figure 16: Educator feelings of confidence with implementing PBL in the classroom (by province and E³ training attendance)



It therefore appears that training attendance may have contributed to educators feeling a greater degree of confidence with respect to PBL implementation than those who did not attend, which is to be expected.

However, despite educators' positive perceptions about their role in the classroom; their teaching ability and their ability to implement PBL, most still feel constrained by the school and classroom context.

When asked to describe their teaching style, most educators **(36%)** indicated that, although they encourage learner participation in the classroom, their teaching style is still bound by "in-the-box-thinking".

A further **23%** of educator respondents described their teaching style as following a traditional educator-directed approach, where the focus is on giving learners the context they need to cover and then expecting them to be attentive and follow educator instruction.

With the exception of the Free State and Mpumalanga, a very small proportion of educators (mostly below 20% in each province) indicated that their teaching style involves delivering lessons that respond to the specific challenges and context of learners.

This is an indication that, despite their positive feelings, educators remain constrained and continue to teach using traditional approaches as opposed to applying progressive methods. Some of the constraints that prevent educators from implementing progressive approaches are covered in later sections.

EDUCATOR CHARACTERISTICS

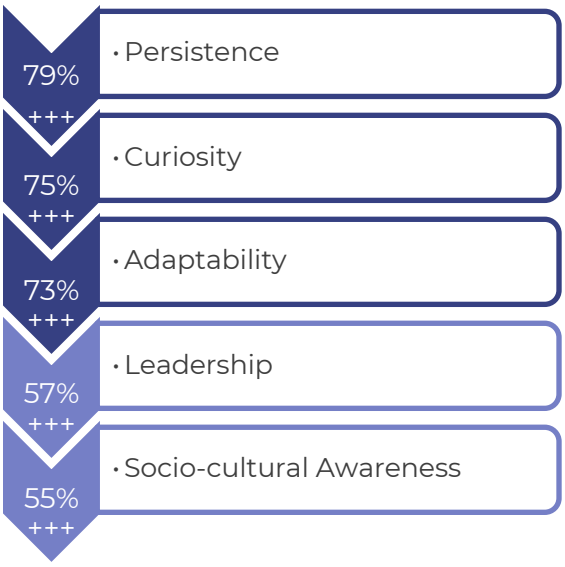
A larger proportion of educators rank themselves highly in relation to the characteristics that have been identified in the literature as the hallmarks of a great educator

Obanya (2010) identifies five key characteristics that are the hallmarks of a great educator and describes a great educator as one who is able to facilitate quality learning in the classroom in ways that honour the curriculum and content, but also create a learning environment which enables progressive learning. The five characteristics identified by Obanya are: **adaptability**, **curiosity**, **leadership**, **persistence** and **socio-cultural awareness**.

Using these characteristics as a guide, we asked educators scenario questions, in which they had to identify how they would typically respond. Based on their responses, we then gave them a score of 1 to 3 against each characteristic.

A larger proportion of educator respondents rated themselves a three on persistence, curiosity and adaptability than those who rated themselves a three on leadership and socio-cultural awareness.

Figure 17: Ranking of Educator Characteristics by Proportion of Respondents who selected the highest rating



EDUCATOR TECHNOLOGY USE

It appears that most educators are comfortable using technology in their personal lives; however, this does not translate into technology use in the classroom

Ninety-six percent of educators indicated that they use cellphones or tablets in the personal lives, compared to **14%** who indicated that they use cellphones or tablets in the classroom

Similarly, **55%** indicated that they use personal laptops/computers as compared to only **36%** who indicated that they use laptops/computers in the classroom.

Thirty-nine percent of educators indicated that they do not use any technology in the classroom.

It is difficult to say whether educators' limited use of technology in the classroom is as a result of technology not being available or as a result of not being comfortable with technology.

In their interview responses, principals predominantly indicated that technology is available in their schools; however, educators' use of it is limited. **Eighty percent** of principal respondents indicated that only some of their educators are capable of using the ICT resources or only some of the schools' ICT resources are being used.

UNDERSTANDING OF PBL/PLMS

We asked survey respondents and interviewees about key concepts related to PBL and PLMs, which were covered in the E^3 training. As indicated in the previous section, educators largely felt very positive about implementing PBL in the classroom in Term 3. However, their responses to questions relating to key concepts showed a limited understanding of PBL as a teaching methodology. The case was similar in relation to principal and stakeholder understanding of PBL, which proved limited.

EDUCATOR UNDERSTANDING OF PBL

In response to a series of multiple-choice questions, most educators were able to correctly identify the teaching strategies associated with PBL; however, when asked to describe PBL in an open question, very few respondents were able to provide correct or complete responses.

Thirty-three percent of educator respondents gave incorrect/circular responses to the question asking them to describe what they understood by PBL.

Twenty-four percent of educator respondents correctly described PBL as having something to do with learning by doing or real-life, practical or active learning, and **14%** identified it as having something to do with learner-centered approaches. However, no respondents described it as being associated with solving a complex problem or a challenging question and very few respondents – **two percent** – connected it to the development of 21st century skills.

No educator respondents provided a response that showed a complete understanding of PBL.

PRINCIPAL UNDERSTANDING OF PBL

Similarly, principal responses to the same question showed that PBL is predominantly understood as learners learning by doing, with **42%** of respondents making reference to this in some way.

No principal respondents gave a response showing a complete understanding of PBL.

STAKEHOLDER UNDERSTANDING OF PBL

In the stakeholder interviews, only two respondents provided responses that showed a complete understanding of PBL.

BELIEF IN PLMS AND MOTIVATION TO IMPLEMENT PLMS

To understand whether principals and educators have bought into PLMs as a new instructional method to be embedded into the basic education curriculum, we asked different questions to determine the extent to which they value the E^3 programme and its stated objectives.

EDUCATOR MOTIVATION

Ninety-four percent of educators indicated that they believe that educators need to teach in a different way to ensure that the objective of the E^3 programme, which is to ensure that 100% of school leavers are either employed, studying further or starting their own businesses, is achieved. This number is consistent for both those who attended the E^3 training and those who did not.

The same proportion of educators also indicated that they either have a belief, or strong belief, in the role of basic education to develop school leavers with the capabilities to study further, to become effective employees and to start their own businesses.

Although educators themselves reported a high commitment to the objectives of the E^3 programme, stakeholders expressed that lack of educator commitment and dedication to implementing E^3 was a major concern for them and a potential challenge to E^3 being implemented effectively.

PRINCIPAL MOTIVATION

Fifty-four percent of principals shared similar sentiments to educators, indicating that they believe in what the E^3 programme is trying to achieve. In

contrast, **35%** of principals indicated that they believe that traditional teaching methods will adequately prepare learners for a rapidly changing world.

When principals were further probed regarding their views in relation to what they think needs to be changed in the manner in which education is delivered, **53%** indicated that introducing technology and tools is a priority; **18%** expressed that introducing teaching methods that place learners at the center and increasing learner independence is critical, and **seven percent** indicated that more educator development and support is needed.

Seventy-nine percent of principals combined indicated that they are either very excited or excited to have E^3 implemented within their schools.

POTENTIAL ENABLING AND HINDERING FACTORS TO IMPLEMENTATION OF PLMS

Given the diverse context in which the E^3 programme is being implemented, we sought to understand the different potential enabling and hindering factors to implementing PLMs, which may arise in different contexts. This is important in determining what needs to be in place in order for the programme to succeed.

EDUCATOR CONTEXT

To determine the extent to which educators feel they have freedom or flexibility to experiment in the classroom, we asked educators scenario questions relating to how likely they are to deviate from the Annual Teaching Plan (ATP). **Seventy-three percent** of educators indicated that, if required, they would demand their HOD to deviate from the ATP for the benefit of their learners. This view was mostly consistent across the provinces; however, in the Eastern Cape, **only 22%** of educators indicated feeling as though they have the same level of flexibility.

According to **64%** of principal respondents, educators in their schools have full freedom to experiment in the classroom. A further **15%** went on to

qualify that by saying that educators need to make sure that their experimentation is aligned to the curriculum.

Principals from three provinces, namely **Mpumalanga**, the **Eastern Cape** and the **Northern Cape** indicated that they believe their educators have very little freedom to experiment.

We further asked educator respondents whether they agree with the statement:

"I think the Annual Teaching Plan (ATP) allows me to teach using PBL"

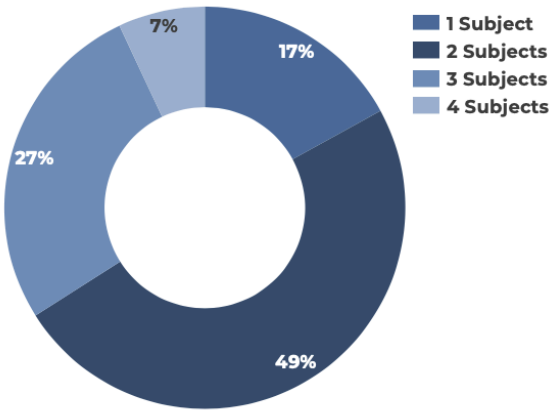
Sixty-one percent of educator respondents strongly agreed or agreed with the statement.

At the provincial level, **Mpumalanga**, **Kwa-Zulu Natal**, and **Gauteng** had less than 50% of educators agreeing with the statement.

In an effort to gain some understanding of the educator load, we also asked educators about the number of subjects and grades that they teach; their teaching hours and the number of learners in their classrooms.

Most educators in the sample teach more than one subjects and teach multiple grades.

Figure 18: Number of Subjects Taught by Educator Respondents



Educators in the sample predominantly teach two subjects, with **76% of respondents** nationally indicating that they **teach more than one subject** (**49%** teach two subjects and **27%** teach three subjects) (Figure 19).

In the **Western Cape**, **44%** of respondents indicated **teaching up to three subjects** and **33%** in the **Eastern Cape**, **32% in Limpopo,** and **31%** **in North West** gave a similar indication. There were also a few respondents – **18 out of 247** (seven percent) – who indicated that they **teach up to four subjects**.

Educators in the sample also typically teach **multiple grades**, with some educators teaching up to six grades per subject. In some cases, each grade also consists of **multiple classes**.

"…They have responsibilities on E³, HOD responsibilities and teaching. HOD could be teaching 3 to 4 subjects. They do not have enough time for all these subjects" - stakeholder

The majority of educators disagree with the statement that they have too many teaching hours

We asked educators whether they agreed with the statement that they have too many teaching hours. **Sixty-three percent** of educators nationally indicated that they either strongly disagree or disagree with the statement.

Although the proportions were still at or above 50%, the **Western Cape (50%)**, **Eastern Cape (52%)**, and **Gauteng (52%)** had the lowest proportions of educators disagreeing with the above statement.

Most educators in the sample agree that PBL requires additional preparation time and estimates of how much additional time is required varied

When asked whether or not they agree that PBL implementation required further preparation time, **74%** either strongly agreed or agreed that they need to account for more preparation time

Fifty-one percent of educators nationally estimated that PBL will require only 1 - 5 additional hours per week to implement, which was the minimum given. Thirty-one percent estimated that PBL would require an additional 6 – 10 hours per week.

We asked principals a similar question and asked them to estimate how many hours they think they would spend on efforts to monitor or sustain the E³ programme and PBL implementation in their schools. **Forty-five percent** estimated that monitoring the programme would add 1 – 5 hours to their work week; whilst **30%** estimated an additional 6 – 10 hours.

A large majority of principals believe that PBL implementation would not negatively affect coverage of the curriculum.

We also asked principals whether they believed that, even while implementing PBL in the classroom, educators would be able to cover the content they need to cover, **79%** responded positively. At **60%** and **50%** respectively, **Western Cape** and Kwa-**Zulu Natal** had a lower proportion of educators who shared this view.

When probed further about the reasons for their response, principals who indicated that PBL would not have an adverse effect on curriculum coverage shared the following:

- **Twenty percent** said that, given the appropriate E[3] educator training (including time management), educators should be able to cover curriculum;
- **Eighteen percent** indicated that, with E[3] being integrated into the curriculum/ATPs, educators would still be required to cover it as part of the curriculum. **Eighty-seven percent** of principals believe that E[3] is aligned to the National Curriculum and Assessment Policy Statement (CAPS);
- For **14%** of principal respondents, PBL helps learners to grasp the content faster and also allows for the incorporation of technology, which aids the learning process. As such, PBL implementation would not prevent educators from being able to cover the curriculum;
- Many principals also indicated that educators need to be more efficient or increase their teaching time in order to meet curriculum requirements.

Principals who felt that PBL implementation would negatively impact curriculum coverage shared the following:

- **Ten percent** indicated that PBL takes up a lot of extra time;
- **Four percent** expressed that a shortage of human resources would make it hard to cover the current curriculum under whilst also implementing PBL.

When asked whether or not they agree that they have difficulty keeping up with the changes in the curriculum, **53%** of educator respondents either

disagreed or strong disagreed, compared to **29%** who agreed or strongly agreed.

Time as a factor in PBL implementation also came up in stakeholder interviews. The lack of capacity in schools and districts and time pressures was mentioned by stakeholders as a constraint.

Most educators agree that they have too many children in the classroom.

Forty-one percent of educators in the sample strongly agree and **28%** agree that they have too many learners in the classroom. At over 80% each, Gauteng and Limpopo had the highest proportion of educators who either strongly agreed or agreed that their classrooms are overcrowded.

We also asked principals to indicate the number of educators and learners in their schools in order to ascertain the educator to learner ratio. It should be noted that the national average is one educator for every 35 learners. The lowest ratio in the sample is 1:6 while the highest is 1:60.

Table 5: Educator: Learner Ratio (1:number) (as reported by principals)

EC	**30,5**	**FS**	**39,9**	**GP**	**34,8**
KZN	**32,4**	**LP**	**35,4**	**MP**	**29,8**
NC	**35,8**	**NW**	**31,0**	**WC**	**38,6**
National 35,3					

A large majority of educators feel that they will receive support to implement PBL

We asked educators whether or not they feel they will receive support to implement PBL. **Ninety-two percent** of educators either strongly agree or agree that they will receive support from either the **principal** or **HOD** to introduce PBL into their classrooms, while **94%** either strongly agree or agree that they will receive support from their **subject advisor**.

When asked about their role within the E^3 programme, **37%** of principals mentioned providing support and guidance to their educators as critical to programme implementation. The specific types of support that principals indicated they provide included gathering resources **(18%)**, advocating and mobilising for educator development **(15%)**, planning and

facilitating **(11%),** and providing monitoring support **(10%)**.

One of the key factors which educators, principals and stakeholders identified as having an impact on the effective implementation of PBL is resources. Most survey respondents and interviewees cited a lack of resources as a major constraining factor in educators' ability to implement PBL in the classroom.

Seventy percent of educator respondents indicated that their schools lack the resources to implement PBL effectively. Some of the resources educators cited as limited include financial resources and access to technology, tools, and learning materials.

A similar proportion of principals **(76%)** also indicated that their schools do not have the required resources to support the implementation of PBL. Similarly, principals made express mention of financial resources, human resources and access to technology as limited.

Where access to technology is concerned, principal interviewees indicated that sometimes the technology is there; however, educators and learners do not have the ability to use it. **Twenty-six percent** of principals indicated that educators need to be trained in technology use and **13%** indicated that their educators have had no exposure to technology. A further **13%** indicated that their educators are afraid or have no interest in learning technology skills.

According to **52%** of principals, learners in their schools are not able to use the internet and technology equipment to complete tasks/activities at school.

The literature indicates that educator wellbeing is a critical determinant of educator ability to sustain classroom practices that create innovative and supportive learning environment for learners. We therefore asked educators about whether or not they agree that their schooling environment values their health and wellbeing. At a national level, eighty-five percent of educator respondents either strongly agree or agree that their school values their physical and emotional wellbeing. The North West stands out as the only province where the majority of educators did not share the same view.

Only **40%** of educators in the North West felt that the schooling environment supports their wellbeing.

We asked principal interviewees a similar question and **89%** of principals said that they perceive the physical and mental wellbeing of their educators as being very important. At **55%, Mpumalanga** had the lowest proportion of principals who found educator wellbeing as very important.

SCHOOL CONTEXT

In addition to the educator context, we sought to understand the culture of the school and the surrounding ecosystem, which according to the literature are critical to developing an environment that supports PLMs.

When asked what new initiatives they had implemented in the past year to promote innovation and improve the quality of teaching and learning in their schools, **22%** of principal respondents indicated that they had advocated or mobilised for educator development; **18%** indicated that they had driven technology/ICT improvement; another **18%** cited introducing extra lessons for learners as something new that they had done, and **15%** said that they had introduced new practices to drive learner motivation e.g. academic prizes.

Eighteen percent of principals indicated that they had not introduced any new innovations in the past year. In Kwa-Zulu Natal, this figure stood at **30%**, which was high in comparison to the national average and other provinces.

In an effort to understand what extended learning opportunities are available in schools for learners to participate in to develop E^3 related competencies, we also asked principals about the extra mural activities that are available in their schools. Sport was a dominant activity cited by principals **(90%).** Other extra mural activities included cultural activities (64%), academic activities **(nine percent)** and entrepreneurship related activities **(two percent)**.

We also asked principals about the entrepreneurship ecosystem around their schools and the types of businesses within a 5km radius of the school. **Forty percent** of principal respondents identified general dealers;

37% identified tuckshops, **22% identified** supermarkets, **10%** identified industry/farms and, six **percent** identified service businesses.

Similarly, we asked stakeholders about the extended learning opportunities available to learners through district and provincial partnerships with external organisations. Stakeholders indicated that there are a number of organisations that run programmes, which are aligned to E^3 objectives. The most recurring programmes and organisations in interviews included:

- The **ESKOM Simama Ranta Entrepreneurship Project** and the **Allan Gray Entrepreneurship Challenge (AGEC)**, which were the most frequently mentioned initiatives being implemented in the different provinces;
- the **Education with Enterprise Trust (EWET)**, which runs the Entrepreneurship Education Youth Enterprise Society Programme;
- the **South African Institute of Charted Accountants (SAICA)**, which runs Olympiads, as well as a joint entrepreneurship competition with **Old Mutual**; and
- district and provincial **financial literacy quizzes** and **competitions**.

Stakeholders indicated that, from their perspective, there is a plethora of extended learning opportunities, many of which they see as aligned to E^3. However, stakeholders felt that these programmes could be better coordinated and that E^3 could play a role in coordination efforts.

"A lot of times there are no connections between different programmes, like how do you connect them?" - stakeholder

"Companies must present their programmes, then the department can decide how to implement. Have a meeting with NGOs and companies and see how the learners' programmes in class can be integrated into the programmes." - stakeholder

Twenty percent of principals in the Western Cape and **25%** from the **North West** said that they do not have any businesses within a 5km radius of their schools.

KEY LESSONS

Based on the study results discussed above, this section provides the lessons and critical actions for the programme to consider to scale the programme effectively. The lessons can be grouped based on contextual **factors** and **process** aspects to implementation.

CONTEXT LESSONS

LESSON 1. EDUCATORS BRING A CONSIDERABLE LEVEL OF TEACHING

57% of educators nationally indicated that they are **aged 41 and above**

38% of educator respondents have **16 or more years'** worth of experience in the teaching profession

EXPERIENCE

Without high quality and persistent training, educators will continue teaching as they always have, this is more so among highly experienced educators. However, these educators do hold immense knowledge and wisdom, some with the capacity to provide support to other educators.

Actions to consider:

1. Stronger integration of adult-learning methodologies into training facilitation.
2. Create continuous PLM learning opportunities for educators.
3. Increase focus on pre-service activities to include training in PLMs among new educators.

LESSON 2. EDUCATORS' POOR SUBJECT KNOWLEDGE, AND HIGH NUMBER OF SUBJECTS AND GRADES TAUGHT BY A SINGLE EDUCATOR WILL INFLUENCE THE ABILITY TO IMPLEMENT PBL EFFECTIVELY

76% teach **more than one subject** *(49% teach two and 27% teach three)*

Educators in the sample typically teach multiple grades too, with **some educators teaching up to six grades** per subject.

30% of educators **did not receive training for ALL subjects they teach**. Nine percent do not have any subject training, some indicating they are not trained in Economic and Management Sciences or other Social Science subjects.

"They have a lot of subjects and they might not be trained to teach EMS. It can get so bad that sometimes EMS is not taught in schools." - stakeholder

Knowledge of the subject in which PBL is implemented will support the implementation of PBL as the educator will be able to more easily contextualise projects and align it to the lesson plans. In addition, educators that teach across subjects and grades have the opportunity to further adopt PBL approaches in the context of other subjects and learner age groups.

Actions to consider:

1. Increase focus on interdisciplinary PBL rather than subject focused PBL.
2. Strengthen curriculum specific support as a primer to ensure educators are enabled to implement PBL across various subjects.
3. Integrate PBL training into districts' curriculum support programme to strengthen content gaps and strengthen teaching practice.
4. Track the educator movement between subjects/schools/out of the school as a result of programmes such as the Rationalisation and Redeployment (R&R) programme.

LESSON 3. EDUCATOR RESPONDENTS SEE THEIR ROLE AS FACILITATING LEARNER-LED INVOLVEMENT IN THE CLASSROOM, HOWEVER, MOST ARE STILL BOUND BY "IN-THE-BOX-THINKING" IN THEIR TEACHING APPROACH

Learner-led involvement in the classroom is one of the cornerstones of active learning

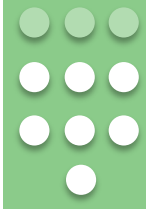
63%	of educators see their role as **co-creating experiences with learners**, where learners actively contribute to shaping the learning environment	36%	of educators feel that they are bound by "in-the-box-thinking"
		26%	deliver lessons to respond to the specific context and challenges of their learners

and PBL approaches. However, the context of the classroom does not always enable its effective implementation and the use of educator experiences to find ways to adopt PBL approaches. PBL adoption within current educator practices is limited.

Actions to consider:

1. Increase training emphasis on educator creativity and their freedom to experiment in their classroom.
2. Provide educators with toolkits and guides on how to design projects and implement PBL approaches in specific contexts and illustrate where there is flexibility.
3. Find ways to showcase motivated educators and encourage peep-to-peer support/mentoring, and the sharing of experiences in adopting PBL approaches within classroom constraints.

LESSON 4. SCHOOL AND CLASSROOM FACTORS SUCH AS CLASSROOM SIZE, TIME CONSTRAINTS, AND A LACK OF RESOURCES HINDER THE IMPLEMENTATION OF PLMS

69%	of educators agree that they have too many children in their class	National average of **35 learners per educator**	**82%**	Estimate that implementing PBL will require additional hours per week
5 **Barriers to implementing PLMs**	• Lack of resources • Access to technology • Overcrowded Classrooms • E³ knowledge • Time Constraints			**>70%** of educators and principals feel that they do not have the required resources to implement PLM.

Large classroom sizes, time constraints, and the lack of resources in schools are significant factors which lead to PBL not being adopted by educators. There is also a perception that PBL will require additional hours for lesson preparation and curriculum coverage. Principals echoed the same sentiment.

Actions to consider:

1. Targeted stakeholder (provincial and district offices, and the SMTs) engagements to advocate for the integration of PBL into Annual Teaching Plans (ATPs) and lesson planning processes.
2. Include elements on resources, classroom management and time management in educator training in order to address perceptions about PBL approaches being resource-intensive and time-consuming.
3. Work with the support ecosystem to address resource constraints – e.g. basic classroom infrastructure.

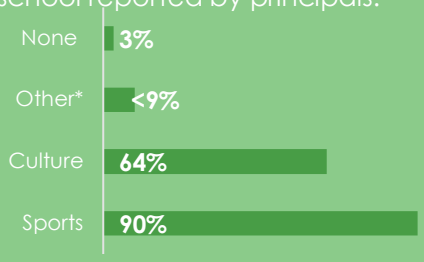
LESSON 5. THERE ARE MULTIPLE EXTRAMURAL ACTIVITIES ORGANISED BY SCHOOLS AND EXTERNAL ORGANISATIONS WHICH COMPLEMENT E³ EFFORTS

50% of principals indicated that there are **support programmes** being implemented either by companies in the private sector, NGO's, or community members

Types of **programmes**:

- entrepreneurship programmes (e.g. Allan Gray Entrepreneurship Challenge)
- various competitions (e.g. Olympiads with Old Mutual and SAICA, spelling bees, and quizzes),
- and school market days

Types of **extramural activities** included at school reported by principals:



**Academic/Entrepreneurship/Gardening/Computers /Community-based*

"A lot of times there are no connections between different programmes, Like how do you connect them?" - Stakeholder

Extramural activities and programmes, and even local businesses provide opportunities for PBL lessons to be put in practice to strengthen how 21st century teaching is delivered. Many of these already exist in communities but are not well coordinated. Stakeholders (DCESs, Subject Advisors and CESs) provided comments on the coordination of the various support programmes, stating that this is an important area of improvement for E³.

Actions to consider:

1. Identify opportunities to integrate PBL and other PLMs with these support programmes and to create linkages with the other providers.
2. Convene a meeting with support programme partners to coordinate efforts towards E³ implementation.
3. Support provinces and schools to establish ecosystems of meaningful programmes around them.

IMPLEMENTATION LESSONS

LESSON 1. THE CURRENT UNDERSTANDING OF THE E³ PROGRAMME IS INCOMPLETE

It appears that the explanation of the E³ programme and its objectives amongst educators, principals and stakeholders is obscure and does not show expanded understanding. This shows in respondents' limited articulation of E³'s three core objectives, which are abbreviated in the name of the initiative as "entrepreneurship, employability and education". This is an indicator of the level of comprehension of the programme purpose.

79%	of educator respondents were able to correctly identify **E³'s three core objectives** in a *multiple-choice question*
2%	articulated the **distinction between entrepreneurship** and **an entrepreneurial mindset** in *an open question (6 out of 246)*
1 of 11	Stakeholders were able to provide a complete description/understanding of E³
	"Entrepreneurship is the path to open a business and an entrepreneurial mindset is wanting to open the business." - Educator

"(the) Main aim of E³ is that when learners pass grade 9, they can be able to start doing something to live off (of). Even if they pass matric and cannot afford varsity, they are able to start a business or get a job. The initiative is also to get more entrepreneurs, more people creating jobs. We want (people) who are willing—to not be afraid to take a risk because they (have) been engaged" - Stakeholder

Actions to Consider:

1.The objectives of E³, and its intended impact, need to be clearly articulated before and during training.

2. Develop a communication strategy with targeted advocacy efforts to different stakeholders in the system, to foster a common and correct understanding the programme.

LESSON 2. KNOWLEDGE OF PROJECT-BASED LEARNING IS LIMITED

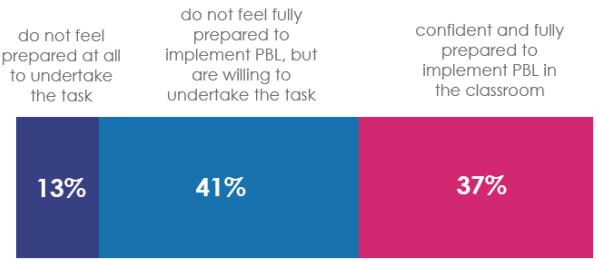
Although educators largely had a very positive perception of their competence in relation to the implementation of project-based learning (PBL), their responses to questions that tested their knowledge of PBL shows a limited understanding of it as an active learning methodology. Since PBL is a core focus of the educator training, such responses are indicative of the need to strengthen the content as well as how master trainers teach the educators.

24%	14%	2%	0%
educators described PBL to do with learning by doing/ practical/active learning	described PBL having something to do with learner-centered approaches	connected it to the development of 21st century skills question	associated with solving a complex problem or challenging

Actions to consider:

1. Measure, track and remediate quality of training to ensure a consistently high standard.
2. Integrate learning by doing and other PBL approaches within training to shift the mindset of educators from project tasks to PBL.

LESSON 3. EDUCATORS FELT THAT THE E³ TRAINING DID NOT ADEQUATELY PREPARE THEM FOR CLASSROOM IMPLEMENTATION



There were no major differences between E³ trained educators and other educators which would clearly distinguish the two groups, particularly in instances where some differences were expected, such as in educators' understanding of PBL.

In the feedback received from both the 2018 and 2019 master and educator trainings, the duration of the training has consistently been highlighted as insufficient. In the

2019 stakeholder interviews, it emerged that many of the provincial trainings had to be reduced from three days to two days, in most cases, and 4 hours in one case. Some of the reasons for having to reduce the training duration included logistical issues, lack of transport to a centralised training venue and inability to accommodate educators from remote districts closer at a centralised training venue overnight. **Eastern Cape**, **Kwa-Zulu Natal**, **Mpumalanga,** and **Western Cape** are the only provinces that indicated having conducted the full training.

75%	the **Eastern Cape** had the highest proportion of educators who expressed confidence in implementing PBL

In addition, different provinces reported following different approaches to the delivery of the training, with limited monitoring by the E^3 programme team to ascertain implementation.

Actions to consider:

1. Review the E^3 educator development package to make it more comprehensive and ensure that it adequately prepares educators to implement PBL in the classroom.
2. Systemic-level support also needs to be provided to address the factors that inhibit consistent and effective delivery of training.
3. Align with the provinces on a clear implementation approach with supporting management plans.
4. Review and respond timeously to training feedback.

LESSON 4. UNDERSTANDING THE EDUCATOR CONTEXT AND PROVIDING ADEQUATE SUPPORT IS NEEDED TO MANAGE THE RAPID E^3 IMPLEMENTATION AND ROLL-OUT

73%	of schools participating in the pilot are Quintile 1, 2 and 3 schools	**3-5** monitoring visits in Term 3 overall	Where they were able, Subject Advisors conducted monitoring visits only in a few schools

Educators have a positive perception of PBL and most suggest that they have the desire to facilitate learning in the classroom using different tools/methodologies; however, there are a number of contextual factors that arise as constraints, which include a lack of resources, lack of access to learning materials, lack of access to technology and other tools, and overcrowded classrooms. These are discussed in greater detail in the previous section of the brief, which outlines lessons on the context for implementation.

The nature of support provided to educators needs to take into account the complex and challenging context of these schools, which are representative of the challenges faced by many South African schools. One respondent gave an example of her experience with one of the E[3] pilot schools.

> *"...one school that I visited— [Anonymous] Primary School—where the one educator has seven Grade 7 classes. The educator will move from one class, scream and then move to another class and do the same thing. So PBL becomes really difficult to manage on the side of the educator where a school is a big school...in most of the schools that I visit, one educator focuses on a grade; not on a class and that is really taking its toll in big schools, but small schools are managing PBL...how some educators manage in schools where there are facilities is that they will conduct one class with all the learners in the grade in the school hall. Like one former Model C school I visited does that and it worked well for them. But some schools don't have the facilities and they are not able to do that."*

She further went on to highlight the importance of providing support to educators, particularly within the space of teaching time, so as to ease the demands on them outside the classroom:

> *"I think initiatives should focus on supporting educators within the space of the teaching time. We really need to ease the burden on the side of the educators."*

According to stakeholder respondents, the follow-on support provided to educators during the course of 2019 implementation was limited due to capacity constraints. Most stakeholders reported that WhatsApp groups were a useful platform for providing some support, but this was not adequate. Where they were able, Subject Advisors conducted monitoring visits only in a few schools (ranging from about 3 to 5 per province). The Free State and North West did not conduct any monitoring visits.

Mpumalanga was the only province that reported visiting all 10 of its primary schools to support educators with E^3 implementation and to assist with planning for the EMS Market Day; however, the respondent indicated that this compromised her ability to support other non-implementing schools in line with her KPIs.

Actions to consider:

1. Develop a detailed change management and support plan, which recognises the different contexts, different types of school profiles and challenges that may arise, needs to be developed.

LESSON 5. FAILURE TO CLEARLY AND TIMEOUSLY COMMUNICATE E^3 PLANS, ROLES AND REQUIREMENTS HAMPERS EFFECTIVE IMPLEMENTATION

One of the other dominant themes that emerged from stakeholder interviews is that clear and timeous communication of E^3 plans, roles and requirements is often lacking, which hampers effective implementation. Failure to communicate the E^3 effort along reporting lines, particularly to senior-level management, was cited as a key challenge, which had a number of adverse effects on 2019 implementation.

1. It meant that buy-in at management level was limited, as management did not understand E^3 and its requirements.

   "When these programmes comes, sometimes we do not understand what they want to bring, and yet this is a national programme. The top management sometimes will not understand."

2. The lack of buy-in at senior management meant that E^3 was not seen as part of job requirements or management plans, which made monitoring and implementation difficult

   "It becomes difficult to get permission to go and monitor E^3 schools. We have a tool to visit EMS but not one for E^3. Supervisor is asking for reports on the subject and not E^3. So, there is no time to actually focus on E^3...Our

job assessment is based on the subject (EMS) and not E³... it might help if it is included in our job description. So that when we monitor, we know that when we are assessed it is part of the job. You will always push for the thing you are assessed for."

3. Failure to communicate E³ plans and requirements clearly and timeously to critical stakeholders also meant that E³ was not seen as a strategic priority and not included in annual plans, which had budget implications

"Departmental heads need to understand the requirements and include them in annual plans. Particularly in relation to things that have an impact on finance (budgets) and logistics (transport, accommodation etc.). Communication needs to come early before plans for the financial year have been concluded".

4. Stakeholders did not know what to expect for the next stage of implementation and expressed some frustration about having to incorporate E³ into 2020 plans, which have already been finalised.

"There is an expectation that LO and Life Skills will be implementing next year, but they have not been trained; have not received communication about the plan for implementation next year and they don't know about E³"

"Provinces have done their planning for next year. We don't have any dates; any communication form E³. So next year around April/May/June they'll come, and we must now incorporate their plans into plans we already have—it becomes difficult."

Actions to consider:

1. Develop communication and advocacy strategies, which are clear on what needs to be communicated, and when, to specific stakeholders to allow for effective planning and execution.

2. Increase investment in institutionalisation efforts to ensure that E^3 becomes part of strategic priorities at all levels of the system and that roles and requirements are understood at all levels of the educations system.

CONCLUSION

The baseline study provides comprehensive insights into the current readiness of educators to implement PLMs, and the contextual and process factors to consider as the programme is scaled. To conclude, the evaluation questions and responses to these are summarised:

WHAT IS THE CURRENT LEVEL OF EDUCATOR READINESS WITH REGARDS TO THEIR IMPLEMENTATION OF PLMS (PBL) IN THE CLASSROOM?

The key findings of the baseline study indicate that there is high personal readiness to implement PLMs, but overall readiness is low. The level of educator readiness to implement PLMs can be viewed from three aspects: the motivation of the educator, the appropriate knowledge of the educator, and having a supportive environment.

From the first perspective, educators are highly motivated and see the value in PLMs. However, based on their appropriate knowledge levels, there are gaps in subject knowledge levels and in understanding of key concepts in the E^3 model. For example, 30% of the educators indicated that they did not receive training for all subjects they teach. Additionally, the perceptions on being bound to in-the-box thinking and having more than 70% respondents feel that they do not have the required resources to implement PLMs are indicators of the readiness based on the environment in which they operate.

The actions related to ensuring subject knowledge, refining the training programme and improving on support, and use of the ecosystem are approaches to improving the readiness of educators.

WHAT IS EDUCATOR'S UNDERSTANDING OF WHAT PLMS (PBL METHODOLOGIES) ARE?

The baseline findings indicate that there is an incomplete understand of PLMs among those that completed the E^3 training.

Fifty-seven percent of trained educator respondents failed to recognize the difference between a project task and PLMs. In contrast, 82% felt confident to implement PLMs

in term 3. The findings further showed that educators did find the training interesting and that the training was delivered in different ways.

Aspects of the facilitation and approach should be retained as this may have influenced the level of interest and motivation instilled in the educators. In addition, the content must be refined, and further resources provided to ensure that the understanding of PLMs is improved and sustained.

DO EDUCATORS BELIEVE THAT PLMS (PBL METHODOLOGIES) ARE NEEDED TO OVERCOME SOME OF THE CHALLENGES WITH SOUTH AFRICA'S EDUCATION SYSTEM AND TO ENABLE LEARNERS TO SUCCEED IN THE 21ST CENTURY AND BEYOND?

Educators do indicate their perceived value in PLMs, particularly in relation to building 21st century skills.

Seventy-eight percent of educators agree that the 4IR is changing the nature of work, and the type of jobs learners will have access to, which poses a challenge to learners, and 49% feel that learners need to develop entrepreneurial thinking skills and mindsets to succeed in a changing world. However, 89% indicated that educators need to focus on the tried and tested pedagogy. It did become very clear in the baseline that the context and current priorities may override the ability to implement PLMs. This is an area which must be addressed concurrent to training educators.

Actions related to aligning with the provinces on a clear implementation approach with supporting management plans and developing a communication plan will support in maintaining the perceived value and ensuring that translates into actual PLM implementation.

WHAT ARE THE POTENTIAL ENABLING AND HINDERING FACTORS FOR EDUCATORS' IMPLEMENTATION OF PLMS (PBL METHODOLOGIES) IN THE CLASSROOM?

The current motivation level of educators and available ecosystem partners are key enabling factors of the E^3 programme. There are several hindering factors which must be addressed to enhance the programme implementation. These include: lack of resources, access to technology, overcrowded classrooms, time constraints, and limited E^3 knowledge.

Most of these require systemic influence and should be actioned concurrently to improving the E^3 training and model.

The baseline findings and recommended actions are aligned to the strategic areas of the programme. Specifically, improve stakeholder communication and programme-focus on deepening E^3 institutionalisation within the education system, improving basic understanding of E^3 concepts among educators and education managers, improving training and communication efficiency through technology, and improving training effectiveness by strengthening andragogy in the delivery of the E^3 training.

It is important that these findings are considered as they provide the relevant evidence and recommendations to support the success of E^3 programme. Furthermore, they provide the base against which the progress and outcomes of the programme can be measured.

PRIORITY RECOMMENDATIONS

PRIORITY NUMBER	STRATEGIC PRIORITY	REMEDIAL ACTIONS TO BE TAKEN
1	**Improving stakeholder communication and programme-focus on deepening E³ institutionalisation within the education system**	*While most respondents were aware of the E³ implementation; a significant proportion, 31%, was still not aware of the implementation of the programme – with Free State having the highest percentage of unaware participants (41%). This indicated poor institutionalisation of E³ within the DBE system as interviews revealed lack of management buy-in, leading to general lack of resource-planning for E³ activities by regional entities.* • It is therefore recommended that E³ increases its efforts to communicate the details of the programme to all education stakeholders, especially at school level. • An example of this may include a routine monthly communique about the progress of the programme through official DBE channels to schools. • E³ must develop and consistently update website content attached to the DBE official website. • It is further recommended that the E³ management develop a detailed implementation plan, which takes into account the contextual challenges and parametres of the education system. This plan must both be prudent about the district offices' capacity, as well as clear about the expected roles. This will also imply investment into efforts that ensure deeper and sustainable institutionalisation of E³ principles into district and school education management.
2	**Enhancing basic understanding of E³ concepts among**	*Even among individuals who were aware of the E³ programme, understanding of the*

	educators and education managers	*fundamental concepts of E³ was only sufficient among three percent of the respondents.* • In order to improve comprehension of basic concepts and components of E³; it is recommended that the training content of E³ is revised to incorporate or strengthen elements dealing with the explanation of basic concepts, such as entrepreneurship vs an entrepreneurial mindset. • The content review effort must be supplemented by consistent circulation of "small bite-sized" content, explaining basic concepts to education stakeholders. An example of such a "small bite-sized" content can be a glossary of E³ terminology.
3	**Improving training and communication efficiency through technology**	*It appears that most educators are comfortable using technology in their personal lives (96%); however, this does not translate into technology use in the classroom. This is in spite of the fact that 21st century literature and framework strongly emphasise the use of technology in the classroom.* • Access to, and use of, technology by educators presents an opportunity for the E³ programme to leverage technology for both delivering and supplementing the E³ material to educators. It is thus recommended that the E³ programme considers a blended package for educator training. • Given the critical role that technology plays in 21st century competencies; it is prescribed that the E³ programme carefully considers how technology can be part of the programme design. And if not at all part of the programme design, then a clear explanation of how its absence affects the programme ToC and the ideals of 21st century learning.
4	**Improving training effectiveness by strengthening andragogy in the delivery of the E³ training**	*Both literature and this study have confirmed that South African educators are mostly more mature with many years of teaching experience (average educator age of 41 years and above). This finding is also intertwined by the fact that E³ trained educators seem to not show understanding of the basic concepts of the*

		programme, thereby suggesting challenges in the effectiveness of training mature individuals. • E^3 is currently delivered as a once-off theory-based training. It is recommended that the programme team considers ways of incorporating Malcolm Knowles' guidance for facilitating adult learning in the E^3 training. The following principles should guide the programme design: 1) educators should be carefully explained why the E^3 way is valuable and why they need to be trained, 2) the training should emphasise and facilitate practice in the classroom more strongly, 3) incorporation of problem solving exercises to solidify understanding, and 4) E^3 must explore opportunities to demonstrate immediate value of the training. • Given the Andragogy principles listed above, it is strongly recommended that the programme team considers delivery of the training in shorter and practical multiple intervals and not as a once-off theory-based format. This recommendation can benefit from leveraging technology. • Finally, the study strongly calls for the programme to accelerate efforts to provide ongoing educator support, which would ensure correct understanding and sustainable application of PLM principles in the classroom. An example of this effort would be ongoing educator coaching.
5	**Convening of supporting programmes and organisations**	*Although there is evidence showing that there are opportunities for learners to participate in extramural and extended learning activities, there Is a need to better coordinate them.* • Convene a meeting with support programme partners to coordinate efforts towards E^3 implementation. • Identify opportunities to integrate PBL and other PLMs with these support programmes and to create linkages with the other providers. • Support provinces and schools to establish ecosystems of meaningful programmes around them.

ANNEXURES

Annexure A: E³ ToC

Annexure B: Feedback from E3 educator training (2019)

Annexure C: Research protocol

Annexure D: Literature review

Annexure E: Educator survey

Annexure F: Principal interview guide

Annexure G: Stakeholder interview

Annexure H: Letter of approval – Principals

Annexure I: Letter of approval – Provincial representatives

Annexure J: Field work report

Annexure K: Educator survey raw data

Annexure L: Principal interview raw data

Annexure M: Stakeholder interview raw data