TRAINING BETTER TEACHERS

An implementation brief for improving practice-based initial teacher education

A TICZA report by Kelly Shiohira, Kate Lefko-Everett, Patrick Molokwane, Tshegofatso Mabelle, Lauren Tracey-Temba and Zahraa McDonald



TRAINING BETTER TEACHERS An implementation brief for improving practice-based initial teacher education

JUNE 2022

A TICZA report by Kelly Shiohira, Kate Lefko-Everett, Patrick Molokwane, Tshegofatso Mabelle, Lauren Tracey-Temba and Zahraa McDonald





Acknowledgements

The aim of TICZA is the adoption of internship-based pathways of initial teacher education (ITE) which are effective, efficient and widely utilised in public schools in South Africa.

The convening group of the TICZA initiative consists of JET Education Services, the Bertha Centre at the University of Cape Town, BRIDGE Innovation In Learning and Trialogue. The Global Teachers Institute (GTI) played a key role in conceptualising the initiative.

TICZA is supported by funding from: Absa, the Maitri Trust, the Standard Bank Tutuwa Community Foundation and the Zenex Foundation

© 2022 JET Education Services Published in June 2022 by JET Education Services

JET Education Services



The Education Hub 6 Blackwood Avenue, Parktown, Johannesburg, 2193 +27 11 403 6401 | info@jet.org.za www.jet.org.za

Kindly attribute as follows:

Shiohira, K. et al. (2022). *Training better teachers: An implementation brief for improving practice-based initial teacher education*. A TICZA report. Johannesburg: JET Education Services.



Shared under a Creative Commons Share Alike License Version 4.0 https://creativecommons.org/licenses/by/4.0/legalcode Users are requested to respect the copyright of all included works.

Contents

	Figures and tables	4
	Acronyms and abbreviations	6
	Foreword	7
	Executive summary	8
01	Introduction	10
	1.1 Background	11
	1.2 Structure of the implementation brief	
02	International literature review	12
	2.1 The importance of teacher quality	14
	2.2 Creating quality: Virtuous and vicious cycles of education	14
	2.3 Initial teacher education	
	2.4 Other supports for teacher development	
03	The South African context	21
	3.1 Current practices in ITE/ATEP and teacher support	21
	3.2 Current systemic interventions to strengthen South African education	
04	Alternative teacher education pathways: Sector mapping study results	26
-	4.1 Overview of teacher internship programmes	
	4.2 Qualifying criteria for teacher interns	
	4.3 Internship programme components	
	4.4 Resources and financial support	
	4.5 Requirements of participating schools	
	4.6 Support for TICZA	
05	Lessons and considerations for ITE in South Africa	44
	5.1 Analysis of findings	
	5.2 Teacher Internship Collaboration South Africa	
	5.3 Concluding comment	
	References	51
	Appendix: TICZA Theory of change	55





Figure 1: The cycle of schooling	13
Figure 2: Finland's teacher preparation model	15
Figure 3: SACE Professional Teaching Standards	
Figure 4: Scale of internship programmes/opportunities (n=13)	
Figure 5: Operational locations (n=13)	
Figure 6: Minimum academic requirements for teacher interns (n=13)	
Figure 7: Language requirements for teacher interns (n=13)	
Figure 8: Additional demographic selection criteria (n=11)	
Figure 9: Internship duration (n=13)	
Figure 10: Additional programmatic support for interns (n=13)	
Figure 11: Internship programme funding sources (n=13)	
Figure 12: Programmatic contribution to interns' academic fees (n=13)	
Figure 13: Sources of contributions to interns' fees (n=13)	
Figure 14: Additional resources and support for interns (n=13)	
Figure 15: Support for TICZA (n=14)	
Figure 16: TICZA stakeholders and collaborators	

Table 1: Teacher intern intake, 2019–2021 (n=13)	27
Table 2: Education level of internship placement (n=13)	28
Table 3: Subject areas selected for intern specialisation (n=6)	30
Table 4: Teacher intern age requirements	31
Table 5: Additional teacher intern qualifying criteria	32
Table 6: Range of internship duration offered in years (n=13)	33
Table 7: Hours per week spent with mentors (n=12)	34
Table 8: Average number of interns per mentors (n=13)	34
Table 9: Hours per week spent on school activities, by number of programmes reporting (n=10)	36
Table 10: Methods of tracking and reporting intern performance (n=13)	37
Table 11: Requirements/expectations of host schools (n=9)	41
Table 12: Requirements/expectations of interns (n=3)	41
Table 13: Issues that should be addressed by TICZA (n=11)	42
Table 14: Challenges anticipated for TICZA (n=12)	43



Acronyms and abbreviations

ATEP	alternative teacher education pathway
B.Ed	Bachelor of Education
COPs	communities of practice
CPD	continuing professional development
CPTD	continuing professional teacher development
DBE	Department of Basic Education
DHET	Department of Higher Education
ECD	early childhood development
EU	European Union
FET	further education and training
FL	Funza Lushaka Bursary Scheme
GTI	Global Teacher's Institute
HEI	higher education institution
HOD	head of department
ISPFTED	Integrated Strategic Planning Framework for Teacher Education and Development
ITE	initial teacher education
JET	JET Education Services
M&E	monitoring and evaluation
MEAL	monitoring, evaluation, accountability and learning
MRTEQ	Minimum Requirements for Teacher Education Qualifications
NGO	non-governmental organisation
NPO	non-profit organisation
NQT	newly qualified teacher
NSFAS	National Student Financial Aid Scheme
NTCQ	National Council on Teacher Quality
NWU	North West University
PGCE	Postgraduate Certificate in Education
PISA	Programme for International Assessment
PLC	professional learning community
SACE	South African Council of Educators
SAESC	South African Extraordinary Schools Coalition
SAQA	South African Qualifications Authority
TFA	Teach for America
TICZA	Teacher Internship Collaboration South Africa
TIMMS	Trends in International Mathematics and Science Study
TLDCIP	Teaching and Learning Development Capacity Improvement Programme
UCT	University of Cape Town
UJ	University of Johannesburg
UNISA	University of South Africa
UP	University of Pretoria
UWC	University of the Western Cape
Wits	University of the Witwatersrand





Foreword

TICZA: A viable solution to the national crisis of teacher shortages

Pre-service teacher internships, particularly those that leverage on the human and physical capacity of functional government and independent schools, have emerged as an innovative teacher development model in South Africa. Such internships have presented a viable solution to poor graduation rates and the lack of quality teachers in the country.

Prior to the Teacher Internship Collaboration South Africa (TICZA) programme, a few implementers of internship models sought to collaborate in communities of practice, at summits and conferences, sometimes sharing ideas and resources. With the formation of TICZA, non-governmental organisations, the Department of Basic Education (DBE), higher educational institutions and private funders have been bringing cohesion to this emerging sector - coordinating partnerships and creating common standards to develop a replicable public-private-third sector partnership model. This model represents a systemic solution to initial teacher education and the broader educational crisis characterised by crumbling infrastructure, overcrowded classrooms, relatively poor educational outcomes and a high dropout rate.

As one of the founding implementing partners of TICZA, we have found this to be a useful platform for collaboration and knowledge sharing as well as a driver for innovation and continuous improvement. This all happens in the hope of improving the quality of teaching and learning. This focus is driven by our vision of creating future leaders that are reflective, empathetic, liberated and who are socially responsible agents of change.

We cannot underestimate the value of a collective voice to promote teacher internships as a viable alternative pathway to teacher training. An added benefit to this collaborative effort has been the building and deepening of relationships with national, provincial and district officials as well as other implementing partners. Two of the many benefits of this are reduced competition between members of TICZA and a more efficient transformation process.

As the Global Teachers Institute, we are looking forward to working with others to unlock the value internships as an alternative pathway to training new teachers. The teacher supply and demand report that was recently released by the Department of Higher Education and the DBE shows that the country will require 30 000 and 50 000 new teachers in 2025 and 2030, respectively. The need for quality teachers is urgent, huge and undeniable. To us, TICZA is a powerful vehicle for all initial teacher education stakeholders to collectively respond to this national challenge.

Hassiena Marriott Head of Education, Global Teachers Institute

Executive summary

Educating a nation is arguably one of the most important responsibilities any government has. Education systems in many countries are allocated a big slice of the national budget in accordance with the belief that an educated nation is the foundation of a prosperous nation (Majgaard and Mingat, 2012). However, research has shown that expenditure alone does not guarantee quality within an education system - as evident at the most basic level, richer nations with higher expenditures are often outperformed by developing or middle-income countries in international comparative studies (Darling-Hammond, 2017). Other factors crucial to creating a successful education system include management, the preparation and training of teachers, and the policy environment. Of these elements, teachers receive the most attention as the contact point between content delivery and learner performance (Carter and Lochte, 2017) and the largest expenditure item in the education system (Hanushek and Rivkin, 2006).

And yet, the South African education system performs comparatively poorly on international studies like Programme for International Assessment (PISA) (Tucker, 2021; Deacon, 2012), and there is no doubt that the country is currently struggling to emerge from a vicious cycle of education. The Centre for Development and Enterprise (CDE, 2017) identifies poor teacher quality as the primary driver of poor performance in the South African context, implicating by extension the systems of ITE and support for the transition between study and work. Research into teacher selection and training shows that only 49% of South African teachers indicate teaching was their first-choice career (OECD, 2019), entry requirements for ITE have remained consistently below those for other professions at higher education institutions for more than a decade (CDE, 2017) and that South African initial teacher education (ITE) varies widely by institution and programme, with some failing to instruct teachers in even the basics of their subjects, much less pedagogical content knowledge (Taylor and Schindler, 2016).

Innovative teacher internship programmes with extended or embedded internship components are a viable mechanism to solve a number of the challenges faced by the South African system, with benefits including better results and improved teaching practice (NCTQ, 2020; Mohammadi and Moradi, 2017; Hofmeyr, 2016), better preparation for and adjustment to the demands of teaching and the school environment (van Tonder and Fourie, 2018; Otara, 2014; Hendrikse, 2013; Darling-Hammond, 1990) and improved diversity in the teaching cohort (Feistritzer, 2001). But the caveat is that there are a wide range of programmes available, and not all of them demonstrate these benefits. In the United States, for example, ATEP (ATEP) graduates 18% of the teachers in the system (NCES, 2018), but over 40% of ATEP programmes received a failing grade in a national review (NCTQ, 2014). And ultimately, the mechanisms which drive teacher quality and contribute to effective teacher preparation are still not well understood (Goldhaber et al., 2020; von Hippel and Bellows, 2018; Hanushek and Rivkin, 2006).

Still, there is universal recognition that quality ITE is critical to developing committed, high-quality and effective teachers. In South Africa, governments, the private sector and civil society organisations are responding to the need for more committed, high-quality teachers in South Africa. In government, policy measures include the revision of the Minimum Requirements for Teacher Education Qualifications (MRTEQ), the development of the South African Council of Educators (SACE) Professional Teaching Standards and the Professional Teaching Pathways, the provision of the Fundza Lushaka bursary for teachers, and the development of induction frameworks and mentor training manuals for newly qualified teachers. Projects and programmes such as new teacher induction, mentor training, the establishment of teaching schools and professional practice schools, the Teaching and Learning Development Capacity Improvement Programme, the Primary Teacher Education Project and the Teacher Choices in Action modules for teaching practice.

In addition, a number of non-governmental organisations are also active in the ITE space, most of which deliver 'valueadded' models of ITE by offering supplementary training and increasing the time and/or commitment of student teachers to complete their degrees. These internship implementers operate across South Africa and are well placed to assist in improving teacher development and quality. Similar to international research, the scoping study found that a wide variety of programme implementation models exist in South Africa – including programmes of varying selection criteria, sizes, locations, resources and financial support, time commitments and components – although mentorship was a common approach.

The evidence presented in this report and through the sector mapping study demonstrates how well-designed alternative education models can provide solutions to the challenges faced by the South African education system. It further highlights how internship implementers are at the front line of service delivery and are well placed to address some of the major bottlenecks that exist in ITE, and which could assist in improving teacher development and quality. The findings of the literature and scoping study suggest that there are four main components to ensuring top-quality ITE in South Africa: the rigorous selection of ITE candidates, strong mentorship, supervised practice with written feedback, and strong theory components. The incremental advancement of expectations through a competency-based approach also underpins the strong delivery of quality ITE programmes.

Finally, this brief suggests methods through which the various activities already taking place across government departments, the private sector and the third sector can be

aligned. It introduces the Teacher Internship Collaboration South Africa (TICZA), a collective impact approach to generate new knowledge about teacher internships and alternative pathways, align sector initiatives and ultimately drive the improvement and scale of practice-based ITE, in order to support the improvement of South African educational outcomes.

Key findings from the TICZA scoping study

- 1. The data suggests that the participating internship programmes have been growing in scale, with a 63% increase in the number of interns between 2019 and 2021.
- 2. Responses suggested that most programmes had some connection with HEIs but that the formality of these relationships varied.
- **3.** Although there are a limited number of teacher internship programmes operating at present, these are located throughout South Africa. Fewer programmes currently operate in South Africa's more rural provinces.
- 4. Internship programmes cover the full range of pre-primary to senior secondary schools, but the majority operate in grade school.
- 5. Internships which require subject specialisation are focused on core subjects as emphasised by the South African government.
- 6. Internship programmes in South Africa are linguistically diverse and cover all official South African languages.
- 7. Some but not all programmes are focused on youth. A majority of programmes consider race in their selection of interns whereas less than half require other demographic criteria. Province of origin is least likely to be considered.
- 8. Most alternative teacher education pathway (ATEP) programmes in South Africa run by NGO implementers are aware of and aligned to SACE registration policies.
- 9. Most NGO-implemented ATEP programmes in South Africa require a minimum of two years of classroom practice.
- **10.** All NGO implementers of ATEP programmes include mentorship as a component, and in a number of programmes interns have multiple mentors and/or mentors both inside and outside the school.

The activities considered to be part of mentorship differ between organisations.

- **11.** More than half of NGO-implemented ATEP programmes include assistance with logistics related to education and/or work and academic assistance. Most include intern training and a focus on observations and/or feedback during classroom practice.
- **12.** NGO-implemented ATEP programmes have high completion rates as compared to other research findings, with an average completion rate of 93%.

01. Introduction

Educating a nation is arguably one of the most important responsibilities any government has. Education systems in many countries are allocated a big slice of the national budget in accordance with the belief that an educated nation is the foundation of a prosperous nation (Majgaard and Mingat, 2012). However, research has shown that expenditure alone does not guarantee quality within an education system. As evident at the most basic level, richer nations with higher expenditures are often outperformed by developing or middle-income countries in international comparative studies (Darling-Hammond, 2017). Other factors crucial to creating a successful education system include management, the preparation and training of teachers and the policy environment. Of these elements, teaching and teachers receive the most attention as the contact point between educational content delivery and learner performance (Carter and Lochte, 2017) and the largest expenditure item in the education system (Hanushek and Rivkin, 2006).

In South Africa, government, the private sector and civil service organisations are responding to the need for more committed, high-quality teachers through measures including policy changes and a range of intervention programmes.

Formally launched in 2021, the Teacher Internship Collaboration South Africa (TICZA), a multi-partner collaboration initiated by Trialogue, JET Education Services (JET), BRIDGE and the Bertha Centre at the University of Cape Town (UCT), emerged as an innovative vehicle that brings together government, academia, the private sector and nongovernmental organisation (NGO) implementers in order to drive innovation and continuous improvement in the delivery of teacher internship programmes. The collaboration aims to demonstrate teacher internships as an alternative pathway of initial teacher education (ITE) which is:

- **Effective:** The internship pathway creates knowledgeable teachers who positively influence the education system and demonstrate learner results.
- **Efficient:** The internship pathway is cost-effective and maximises impact on quality and teacher retention.
- Widely-utilised: The internship pathway is widely scaled across South African contexts.

The TICZA is interested in systemic change and seeks to establish and demonstrate the efficiencies and impact of teacher internships as a credible alternative ITE pathway that can generate *high quality, effective teachers* for public schools in South Africa, and for adoption of this mechanism as a formal pathway to a teaching qualification. Purpose

This implementation brief aims to familiarise stakeholders with the body of knowledge on internships and alternative education pathways, and to orientate implementers to the work of the TICZA.

This implementation brief contains the findings of a literature review and sector scoping study conducted in 2021. The literature review consolidates existing South African and international research on methods, challenges and best practices in teacher internships and other alternative ITE models; critically reviews and identifies gaps in the research; and reflects on the implications of prior research for teacher internships in South Africa. The scoping study identified current alternative teacher internship programmes operating in South Africa and explored how they are implemented in practice.

The implementation brief reviews the evidence for and against alternative teacher education programmes, the criteria for quality with regard to both teachers and ITE, and the diversity of efforts within South Africa aimed at improving teacher quality. The brief builds a case for the potential of ATEPs at scale in South Africa, presents evidence of the current achievements in relation to this ambition, and identifies gaps in the literature and existing knowledge.

The brief further introduces TICZA as a method to contribute to sector advancement through the sharing of best practices, the coordination of a research agenda and the generation of new knowledge.

1.1 Background

Teacher quality has been established by a large body of research to be one of the most prominent in school variables in a learner's educational outcomes in both developed and developing contexts, at all levels of education (Goldhaber, 2016). Poor teacher quality is a key driver of poor performance in the South African context, implicating by extension the systems of ITE and support for the transition between study and work (CDE, 2017). In response to this, efforts have been undertaken internationally, including in South Africa, to revise the minimum requirements for teacher education in an effort to improve teacher quality.

There are, however, still gaps in the knowledge base of what constitutes effective ITE. The results of research show that variations in teacher performance are not well explained by attending different teacher preparation programmes (von Hippel and Bellows, 2018; Hanushek and Rivkin, 2006), paving the way for explorations into how variation within rather than between ITE programmes accounts for differentials in performance (Goldhaber et al., 2020). In particular, the amount of pre-service practice is of particular importance, prompting a number of shifts in the duration of ITE practicals from weeks to a full year (NCTQ, 2020). Work-integrated learning, shortterm internship components, and more extensive models such as alternative preparation programmes, are central to almost all ITE curricula. The quality of ITE programmes is not only limited to the ITE curriculum but also includes the ability to support and train the student teachers, supporting both coursework and apprenticeship or work-integrated learning aspects of the ITE (Hofmeyr, 2016).

Given the current situation within South African teacher education and retention, research supports that welldesigned alternative education models may provide solutions to many of the challenges within the South African system. Unfortunately, the ability of internship programmes to upscale has been hampered by the fragmentation of the sector. This brief highlights how internship implementers have been at the front line of service delivery for years and are well placed to address some of the major bottlenecks.

1.2 Structure of the implementation brief

The implementation brief is divided into five sections.

- **Section 1** introduces the brief, its purpose and the background to the paper.
- Section 2 comprises the literature review, which consolidates and reviews existing research around methods, challenges and best practices in teacher internships and other alternative ITE models, both in South Africa and internationally. In addition, it identifies gaps in the research, critically reviews the research findings and reflects on the implications of prior research for teacher internships in South Africa.
- Section 3 focuses on the South African context and includes both findings from the literature and prominent policies, systems and concepts relevant to teacher internships in South Africa.
- Section 4 presents the results of a scoping study conducted in 2021 to identify established teacher internship programmes operating in South Africa and compared and analysed how these are implemented in practice. The scoping study included fourteen implementing organisations that supported 627 interns, and provides a snapshot of the scope, scale and types of programmes operating in South Africa during 2021.
- Section 5 discusses the key findings of the report, unpacks considerations and lessons for ITE and internship implementers in South Africa. and presents the ways forward.



02. International literature review

2.1 The importance of teacher quality

The importance of teacher quality, as indicated earlier, continues to be one of the key determining factors in a learner's educational outcomes in both developed and developing contexts, at all levels of education. A study in Indonesia found significant effects of teacher quality on student performance in senior high schools in mathematics, science and English (Sirait, 2016). De Paola (2009) found that the quality of university teaching staff has a significant effect on student performance. Hanushek, Kain and Rivkin (2005) found that teachers have a massive impact on reading and mathematics achievements. Arguably most definitively, Blömeke, Olsen and Suhl (2016) evaluated 2011 Trends in International Mathematics and Science Study (TIMSS) results in relation to teacher and instructional quality in 47 countries, and found that teacher quality was a significant predictor of both instructional quality and student achievement.

In fact, an aggregate understanding of the research into the subject has led to a nearly ubiquitous understanding that teachers are the single most important school-related factor in student achievement (Goldhaber, 2016). In response, efforts have been undertaken internationally, including in South Africa, to revise the minimum requirements for teacher education in an effort to improve teacher quality.

2.1.1 Measuring teacher quality

Questions emerge when it comes to examining the means of determining teacher quality. Notably, there is no common understanding of the components which contribute significantly to teacher quality, and a variety of methods and metrics are used which raise their own concerns (Kumar and Wiseman, 2021). For example, challenges have emerged to the use of student performance to measure teacher quality as it is unclear whether en masse quality teachers develop high-performing schools or high-performing schools draw quality teachers. Value-added metrics which measure change in student performance during a given year attempt to control for these biases but are still subject to extraneous and school factor influences. Further, the findings for many of these common metrics remain inconsistent:

> The most commonly available characteristics, teacher education and experience [...] explain little of the actual variation in teacher effectiveness, and even more detailed information about college quality, scores on standardised examinations or other information continues to leave much unexplained. Moreover, whenever separate surveys are designed to provide a richer set of characteristics, the specific items are seldom replicated in other surveys, thus providing little ability to ascertain the generalisability of any findings. (Hanushek and Rivkin, 2006, p. 1060)

In particular, the contribution of teacher certification programmes has been a considerable area of debate for decades, with research providing conflicting findings. For example, Blömeke, Olsen and Suhl (2016) found that teacher education was the strongest predictor of student achievement across all countries. On the other hand, other studies show that teacher quality is not highly correlated to concrete traits such as education or experience (Hanushek, Kain and Rivkin, 2005), that higher degree attainment has no predictable effect on student outcomes (Hanushek and Rivkin, 2006), or that certification effects on value-added metrics are small when considered with respect to returns from teacher experience (Jepsen and Rivkin, 2002), suggesting that spending at least a year in the classroom is more influential than the credential level on student achievement.

In response to these discrepancies, more robust teacher quality measures have evolved to rely on a combination of qualification, experience, professional development, and measurements such as teacher performance on content assessments and classroom pedagogy as well as nonobservable characteristics such as empathy, commitment to the profession and motivation (Kumar and Wiseman, 2021).

2.1.2 Teacher development and the cycle of schooling

Ignoring, for a moment, complexities such as teacher migration, a given school system can be viewed as a dependent cycle in which the products of a primary or basic education system are recruited and trained as teachers of the next iteration of the cycle. In such a system, the products of each subsequent generation are in part dependent upon the quality of its predecessors. Figure 1 outlines the cycle of schooling, following a teacher's life from starting school to retirement. Items in orange, below the dotted line, indicate elements which take place in government-sponsored or equivalent education spaces (Grade R-12 in South Africa) while the items in maroon above the line indicate the contribution of higher education.

In basic education, the dream of a young child to become a teacher might be nurtured before they apply to an ITE programme. In the university system, ITE is the bedrock of the teaching cycle as it involves the recruitment and selection of quality students and their initial preparation towards a teaching career. Here, the quality of the ITE curriculum and its delivery will have far-reaching effects on what kind of teachers these students become, and will in large part determine the quality of their performance as a teacher once they enter the world of work (Whatman and MacDonald, 2017). Successful recruitment of quality candidates and strong ITE result in a qualified, capable and committed teaching force, while ITE of poor or inconsistent quality creates the harder task of trying to compensate for poor skills and low competency later in the professional life of the teacher.

5 ITE course Δ Accredit ITE content programmes 6 Qualification Selection into initial teacher education (ITE) START CHOOL Induct. mentor RETIRE School leaving qualification 2 School curriculum Licence to 8 practice Career progress: promotion 9 10 Teacher / school performance Continuing professional development

Figure 1: The cycle of schooling



2.2 Creating quality: Virtuous and vicious cycles of education

Systems that create the best conditions for new teachers to thrive and want to remain in education contain elements that can be desired in any field or profession. In virtuous education cycles, education is treated as a research-based science, recruiting only high-quality candidates into ITE and training them through a combination of quality content and pedagogical theory as well as practice-based internships. Teaching is a highly regarded profession with demonstrated educational outcomes for learners, further incentivising the entry of top candidates into ITE. These aspects are supported by policies which ensure equal, or even at times equitable, distribution of resources (infrastructure and available human capital) across the system in order to eschew the perpetuation of cycles of wealth and poverty.

In vicious education cycles, the teaching profession is not highly regarded or well paid, resulting in a lack of desirability and low-quality candidates when compared to other professions. ITE may be poor, mediocre, or of variable quality, and ultimately the classroom performance of teachers is also poor, mediocre, or of variable quality. The system also suffers from poor teacher retention, and teacher shortages may contribute to overworked teachers and poor learning outcomes.

Vicious education cycles commonly also involve a number of policy or practice interventions related to teacher accountability or educational delivery. Examples of high accountability policy interventions include the 'No Child Left Behind' policy instituted in America from 2002–2015, which held schools responsible for learner achievement and penalised schools which did not show improvement. Poor public perception of education persists, or, in the worst cases, further declines based on the outcomes of these mechanisms (and the often politicised rhetoric around them), perpetuating the cycle.

Another common intervention is contract teachers, or teachers who are not formally qualified or seeking qualification, utilised in many contexts around the world. In Europe contract teachers are established in schools to replace absent teachers or to employ teachers who are not fully qualified (Duthilleul, 2005). In South Africa, school leaders employ substitute teachers to deal with the issue of teacher absenteeism, mainly for reasons such as maternity leave or illness, but face challenges in finding qualified candidates particularly for languages, mathematics and physical science (Venter, 2016). Small schools may also rely on contract teachers or positions paid from school fundraising or their budget to fill positions which are not catered for by the staff allocation. In order to meet the demand for additional teachers amidst fiscal constraints, India has chosen to actively promote the hiring of contract teachers (Chandra, 2015), and interestingly, research shows that at least in this context, contract teachers are associated with better student performance (Goyal and Pandey, 2013), although Chandra (2015) argues low salaries and poor training negatively affect the motivation and commitment of contract teachers. Findings from Kenya also indicated that student outcomes improved under contract teachers, and attributed this primarily to lower teacher absenteeism (Duflo, Dupas and Kremer, 2015).

Perhaps the best lessons can be learned from countries that transitioned from vicious to virtuous cycles (Darling-Hammond, 2017). One prominent example often cited in international literature is Finland, which began its transition by closing down teacher colleges and relocating teacher training within their research universities, with accordingly more stringent admission criteria (Tucker, 2021). While critics feared this would reduce the number of applicants to these programmes, conversely the increased difficulty improved the profile of teaching to one of the most sought-after professions, second only to medicine (Darling-Hammond, 2017). Concurrent to these changes to candidate recruitment and positioning, curriculum reform ensured an alignment between the expectations of the state and the outputs of teacher training programmes. Training included components of cognition science to equip the future teachers with the tools to succeed in dealing with a multitude of learners with different abilities, and ensured teachers could recognise and deal with common classroom and learning disabilities. Finland also attached trainee teachers to master teachers based on a progression system established for experienced teachers. The fourth aspect is around making sure that future teachers become expert diagnosticians equipped to assist learners who experience difficulties and be able to deal with that situation. Finally, making sure teachers are prepared to work in a professional work environment was the element needed to create awareness in trainee teachers, to function as it would in any professional workspace (Tucker, 2021; Darling-Hammond, 2017).

In another example, Singapore established robust opportunities for career progression not only within education but also in government. For teachers, three pathways of progression are available: the teaching pathway through senior teacher, lead teacher, master teacher and principal master teacher; the leadership pathway from classroom teacher to Director General of Education; and the Senior Specialist Track through classroom teaching to specialties like curriculum, assessment and policy analysis (Tucker, 2021). A lack of career advancement is one factor that has been shown to negatively affect teacher motivation (Ekabu, 2018).





Source: Tucker (2021)

2.3 Initial teacher education

The emergence of prospective teachers is moulded by subject matter knowledge, pedagogic content knowledge and their curriculum knowledge. (Deacon, 2012, p. 3)

ITE is an integral part of the schooling system that serves as a bridge between prospective teachers in education faculties, and novice teachers starting their career in schools. ITE must not only ensure, either through recruitment or training, the required content and linguistic expertise but also develop professional expertise and the ability to use systematic knowledge to inform practical judgement and action (Taylor, 2014). Prospective teachers develop these competencies over the duration of their ITE programmes rather than all at once (Deacon, 2012). While research is beginning to focus more on ITE than on inservice training, there are still gaps in the knowledge base of what constitutes effective ITE. The results of research show that variations in teacher performance are not well explained by attending different teacher preparation programmes (von Hippel and Bellows, 2018; Hanushek and Rivkin, 2006), paving the way for explorations into how variation within rather than between ITE programmes accounts for differentials in performance (Goldhaber et al., 2020). In particular, the amount of pre-service practice is of particular importance, prompting a number of shifts in the duration of ITE practicals from weeks to a full year (NCTQ, 2020).



Thus, the line between higher education and the classroom is permeable for student teachers. Work-integrated learning, short-term internship components and more extensive models such as alternative preparation programmes are central to almost all ITE curricula. The quality of ITE programmes is not only limited to the ITE curriculum but also includes the ability to support and train the student teachers, supporting both coursework and apprenticeship or workintegrated learning aspects of the ITE (Hofmeyr, 2016).

2.3.1 Internships

Internships and other forms of work-integrated learning provide options to bridge the stage of transition between school and the world of work. Darling-Hammond (1990) makes the point that internships act as a training vehicle, safeguard for the public and support structure for a newly qualified teacher (NQT). Research shows that a strong internship component leads to teachers being able to teach their subject matter more effectively (Mohammadi and Moradi, 2017), and that two key elements to effective ITE are choosing the right students and choosing the right schools to place the interns (DHET, 2011). An internship undertaken prior to full gualification prepares the new teacher for the realities of the profession with comparatively more support than an NQT who encounters the practical, relationship-based and often intangible challenges of the classroom, school and school community with a full teaching load and, potentially, additional responsibilities such as extra-curricular activities (Otara, 2014). In addition, a student teacher may learn under supervision, providing a safety net and point of consultation for early career errors or uncertainties. Through monitoring and evaluation, the process becomes even more valuable for all stakeholders as measurable elements of the whole process can be used to inform ongoing efforts for continuous improvements (Tindowen, Bangi and Parallag Jr, 2019). After such an internship, continued support can create a seamless transition from a learning process to an implementation process on the part of the new teacher (Otara, 2014). For schools, student teacher internships may offer opportunities to reduce teacher workloads and administrative burdens while exposing students to the realities of the school environment in a reciprocally beneficial relationship (van Tonder and Fourie, 2018; Hendrikse, 2013).

Brown (2009) found that good internships ensure students are able to not only apply lessons from ITE coursework in practice but also reflect and make connections between the two environments, such as through communities of practice (COPs). Through COPs, interns practice forming and maintaining relationships as well as group learning and feedback loops. A quality practical component takes place for at least ten weeks with engagement for most or all of the school day and includes at least four observations with written feedback from a supervisor (NCTQ, 2020). The selection of a mentor is of particular importance, and the best results are obtained when student teachers are placed at schools with low staff turnover, more staff collaboration and similar demographics to their eventual teaching post (Goldhaber et al., 2020).

2.3.2 Practice-based and alternative forms of ITE

In response to challenges faced by traditional universities on their ITE programmes, there has been a development of alternative teacher preparation programmes and pathways. Alternative models may be run by local governments or NGOs, and do contribute to the production of qualified teachers, though they may not produce the high numbers of the traditional ITE programmes (Hofmeyr, 2016). In an analysis of 11 internship case studies, Mitchell and Romero (2010) identified four types of alternative pathways:

- 1. School oriented traditional programmes are typically driven by universities and enrol interns in the same courses as traditional ITE but work directly with school districts to meet teacher needs in a more market-driven approach to teacher training.
- School oriented local culture programmes are typically driven by districts, with training primarily undertaken by professionals outside the university system in an effort to create practical professional programmes with an integrated induction into the district's specific practices.
- 3. Candidate oriented traditional programmes are defined as driven by entrepreneurial organisations that offer training on flexible schedules, convenient locations and/or distance education. The syllabus remains quite similar to a traditional ITE programme, with more service-oriented delivery mechanisms.
- 4. Candidate oriented intensified training programmes focus on restrictive enrolment and more intensive training than that available through ITE, raising rather than lowering the time and/or effort required to secure a credential. These can be seen also as 'valueadded' models in which students take traditional and supplementary courses or training.

School oriented programmes see the quantity or distribution of teachers as the primary concern and focus on meeting recruitment needs, while candidate oriented programmes see the primary concerns as access and/or the quality of the existing training system and seek to bring more and better teachers into the system. Traditional programmes (types 1 and 3) do not see their approach as fundamentally restructuring teacher training while the others intend different sorts of fundamental shifts to ITE (Mitchell and Romero, 2010).

The variety and innovation of these alternative teacher preparation programmes across the world continues to increase. One additional method of alternative teacher preparation is particularly notable that essentially combines or bridges different types of recruitment, preparation and support outlined in the four models by Mitchell and Romero (2010):

The 'Teach for' model (e.g. Teach for America, Teach for SA) seeks to recruit top-quality university graduates who have not specialised in education for a limited amount of additional training, after which they are given short-term teaching positions in their country's under-resourced schools and communities on two-year contracts. The model emphasises the contributive aspect of teaching, promising participants the chance to make a difference in their communities, which has been found as a primary motivation towards teaching (Baeten and Meeus, 2016; Deacon, 2015). While there are some variations related to country and context, the preparation for Teach for America (TFA) consists of independent study activities, a five-week summer residential programme and a regional induction. The emphasis of the programme is heavily on recruiting quality candidates particularly for maths, science and special education. (Clark et al., 2015)

Variations of all of these models are prevalent in many contexts, but as these examples show, alternative teacher education pathway (ATEP) models vary in approach. Some feature formal coursework while others do not, just as they offer a range of support structures such as mentorship, evaluation and assessment (Hofmeyr, 2016; Piotrowski and Suell, 2007). To date, there is no specific model or standard framework that ATEPs follow to inform their programme organisation (Hofmeyr, 2016).

Critics of these models in general oppose placing students in work environments without adequate subject matter knowledge or coursework preparation (Mitchell and Romero, 2010; Darling-Hammond and Youngs, 2002), and further evidence points to wide discrepancies in the quality of alternative education pathways. In the United States, for example, 18% of new teachers graduate through alternative pathways (NCES, 2018), but a 2014 review of alternative certification programmes gave 44% of them a failing grade, while only 12% earned above-average marks (NCTQ, 2014), suggesting that many of the alternative pathways available are in fact performing exactly as critics propose. Some research within South Africa has found that, depending on the model, at least one ATEP requires revisions to content or methodology to be effective (Hofmeyr, 2016).

On the other hand, proponents of alternative pathways argue that it is possible for individuals to learn on the job provided there is adequate and appropriate support and in-service training (Hofmeyr, 2016; Rollnick and Mavhunga, 2016), and that those entering the teaching profession through alternative routes are typically older and add to the diversity of the teaching profession through both a wide range of experiences and, more concretely, in terms of gender (in this case, more men) and race or ethnicity (Feistritzer, 2001). In addition, existing research supports that ATEPs can be at





least as effective as traditional ITE models. Piotrowski and Suell (2007) found similar quality results between traditional ITE and ATEPs. Mueller (2012) likewise reports that no significant differences in the efficacy of the two teacher groups, and the most recent study available on Teach for America (TFA) found no statistically significant differences between the performance of TFA teachers and other teachers in high-poverty schools (Clark et al., 2015). Within South Africa, investigations into ATEPs found that internship-based programmes created competent maths, science and English teachers with satisfactory university results who were employed within the system (Hofmeyr, 2016).

In an investigation of teacher quality, Hanushek et al. (2005) found non-linear effects of teacher experience on student outcomes, noting that first year teachers perform significantly worse than peers with more experience, and that experience effects are largely clustered in the first year of teaching. This supports that a significant addition to teacher quality is the 'learning by doing' gained through immersive classroom experience, and suggests that an uninterrupted year of teaching practice during study would potentially lead to higher gains by first-year teachers – however, this theory has not been rigorously tested against various internship models, representing a gap in the current literature.

2.4 Other supports for teacher development

After studying in a university setting to be a teacher, the student must transition to becoming a teacher within the school system. Studies show that teacher shortages are still a worldwide concern arising from job satisfaction complaints such as low salaries as well as poor preparation and training, which most impact resource-poor schools (Toropova, Myrberg and Johansson, 2021; García and Weiss, 2019; Mwesiga and Okendo, 2018). The ability to attract and retain the required number of teacher candidates is therefore an equity issue that cannot be ignored.

In addition to issues of placement and retention, new teachers face challenges related not only to subject teaching but also to administration requirements and additional tasks such as extra-curricular activities. Research shows that both ITE and ATEP graduates feel underprepared to teach upon graduation due to gaps in their preparation (Piotrowski and Suell, 2007). New teachers may find the social aspects of integrating into a teaching team to be daunting, and face further challenges with community and parent engagements and communication. Additionally, many new teachers are also learning to act in a professional role, transitioning from students to teachers of students, and at times with a relatively small age gap between the two (DBE, 2019). Finally, challenges with classroom management and disruptive student behaviour can also lead to early career teacher attrition (Spilt et al., 2011). Therefore, the effectiveness of the structures that support the transition between study and work - primarily internships, induction and teacher professional development - are also very important.

2.4.1 Induction

Induction provides for a period of intensive support upon entry into the teaching profession as an attempt to support this transition. Induction is a common practice in highly regarded professions such as the medical field because it provides support for young doctors and mitigates the risks of early practice. In a profession with a high cost of failure for both patient and employer, induction provides a required level of supervision to ensure low levels of error even for newly practising medical professionals (Thomas et al., 2019). One might argue the teaching profession deserves equivalent treatment due to the high cost of failure for individual learners and the state, which has invested so heavily in their education.

Induction also fosters collaboration among different actors within the system and between generations of teachers. Through induction, an NQT enters the workplace under the best possible conditions, supported through the transition between student and teacher with a network of support that conveys as much advantage as possible towards the new teacher's success. Ponds (2020) noted that successful induction programmes include a mentoring element in which older or retired teachers provide guidance to new teachers as they transition into the workplace.

2.4.2 Mentorship

Mentorship is seen as a critical component of both studentteacher internships and teacher induction. Mentorship is a widely practised form of knowledge sharing in many professional spaces, consisting of a relationship formed between practitioners for the purpose of professional development. The effectiveness of a mentor is strongly influenced by personal characteristics, willingness, motivation and capacity (Hofmeyr, 2016), and successful mentors will also have adequate time and resources to provide meaningful support (Humphrey, Wechsler and Hough, 2008). Mentorship can be formal or informal, but in the context of South Africa is seen as a critical part of supporting NQTs to enter the teaching field (Paniagua and Sánchez-Martí, 2018). Mentorship has many forms, including between a new practitioner and a more senior practitioner, or between peers. Peer mentorship can provide important benefits such as emotional support and mitigate situations in which a senior mentor is not available or not active (Hendrikse, 2013). Some programmes focus on mentorship within the school while others include external mentors such as professors at a university (Hofmeyr, 2016).

Mentorship should have a clear goal that is to make sure new teachers are integrated into the school culture and community, ensure that the transition into the classroom is quick and seamless, and help new practitioners develop confidence in their classroom teaching. The DBE (2019) has outlined some objectives for a mentorship programme in support of these goals:

 Ensure new teachers have a good understanding of the school culture, the community and the learners at the school, as well as the school system and contacts;

- Support new teachers to develop positive and professional relationships with colleagues, parents and learners;
- Establish a core component of a support network that will help the new teacher understand and develop good practices for managing stress and building resilience, collaborative problem-solving and reflective practice; and
- Support new teachers to achieve their development goals through meaningful conversations and advocating for new teachers' participation in growth opportunities, such as professional learning communities (PLCs), school evaluations, peer and group reflection sessions, and training.

What these objectives emphasise is that mentorship supports a range of relationships for a new teacher, including with learners, the school management, other teachers and the broader school community.

For effective mentorship to take place, the right mentors need to be chosen. The DBE (2019) recommends that the mentor be selected from within a school by the school management team and based on the following criteria:

- A minimum of three years of experience as a teacher in the school;
- A member of the teaching staff outside the school management team;
- Nomination from the principal and/or another member of staff;
- Up to date with their professional development profile; and
- Participation in a South African Council of Educators (SACE)-accredited mentorship course.

The DBE has further developed a mentorship training manual (DBE, n.d.) to support mentors in delivering quality support to NQTs, which could also be considered as good practice for mentors of student teachers.1 The processes of modelling good practice, coaching NQTs through their practice and supporting new teachers through regular, weekly engagements are emphasised. The guide advocates for mentors to provide just-in-time training, or training related to immediate needs (e.g. what the NQTs will need to know or do at the staff meeting next week or for the upcoming parent conference); and to carefully construct questions to stimulate reflection in the NQTs. Perhaps most importantly, the guide emphasises the need for mentors to treat mentees as professional colleagues who are valuable assets in the school community. The guide outlines some of the emotions and phases a new teacher may go through in their first year, from anticipation to disillusionment, rejuvenation and reflection, and notes some of the typical challenges faced by new teachers such as an unexpected amount of work and challenges with classroom management. The importance of cultivating trust, confidentiality, good communication, collaboration and courage are stressed, together with concrete strategies to develop these mentor-mentee relationship traits, such as planning discussion points and preparing for weekly meetings and asking permission to share information with others (DBE, n.d.). Recognition and peer mentoring have also been shown to have positive effects on student teacher performance (Hendrikse, 2013).

In addition to supporting NQTs, mentorship has been shown to provide positive developmental opportunities for student teachers and mentors of student teachers. A qualitative study of the mentorship relationship in South Africa found benefits including a broader range of instructional strategies and skills, better lesson planning, and improved classroom management and use of resources. Mentor teachers were found to have better opportunities to reflect on their own practices in meaningful ways, contributing to their own professional growth. Mentors further gained 'self-awareness, communication skills, the use of positive reinforcement, relationship building, interpersonal skills and in specific skills and techniques in approaching and working with individual student-teacher interns' (Hendrikse, 2013, p. 107).

The Center for Teacher Education (CTE, 2020) also outlines some of the concrete responsibilities of a mentor teacher:

- Prepare pupils to work with a teacher intern and notify parents that there will be a teacher intern in the classroom;
- Share responsibilities whenever possible, accepting the teacher intern as a co-worker and professional;
- Immediately involve the teacher intern in specific classroom tasks;
- Acquaint the teacher intern with pertinent school policies and regulations, philosophy, priorities, and assessment criteria; and
- Require the teacher intern to be a full participant in the planning, preparation, instruction and evaluation processes by midterm or sooner if intern demonstrates readiness.
- Providing interns who are ready opportunities to take the lead role in the classroom.

In the case studies conducted, intern teachers had both 'managers' and 'mentors', who were not the same person, underlining the importance of divesting accountability and mentorship due to the nature of the desired mentor-mentee relationship. Mentors were responsible for the orientation of student teachers, collaborative planning and preparation for lessons, opportunities for evaluation and reflection on intern performance, and intern professional development; while the manager was responsible for activities such as meeting weekly with interns to discuss their performance related to the programme of study (Hendrikse, 2013).



2.4.3 Continuing professional development

The teaching profession is a very specialised field where high-quality professionals are needed to maintain the high standards required for best outcomes. Continuing professional development (CPD) is one way to support teachers to continue to grow even after completing a degree, and to enable career fulfilment (Munnhar, 2019). Many highly regarded professions such as the medical field and accountancy have achieved the level of professionalisation sought by the education sector through establishing councils that hold practitioners in those fields accountable and make sure they live up to the highest standards of the profession (Dhai and Mkhize, 2006). Professionals in those fields have to register to be able to practise, which is one way they are held accountable.

For teachers, CPD for teachers should begin with the teacher's professional career and continue until the teacher

retires or changes professions. CPD creates a desirable working environment and support systems for employees in this case, teachers. This development brings excitement for teachers and is a good way to keep them within the profession. Darling-Hammond (2017) notes that around the world job embedded forms of learning are taking root and teachers are now getting the chance to share learnings with each other. A very important thing to mention about CPD is that not only is it good for a teacher's own career development, but it also improves the teacher's ability to design better learning environments for students and improved outcomes (Mohammadi and Moradi, 2017). According to an international survey of teachers, successful CPD programmes have four common elements: 1) building on prior knowledge; 2) adapting to teachers' personal development needs; 3) a coherent structure; and 4) a focus on content needed to teach the teacher's specific subject(s) (OECD, 2019).



03. The South African context

In South Africa, the education system performs comparatively poorly on international studies like PISA (Tucker, 2021; Deacon, 2012), and there is no doubt that the country is currently struggling to emerge from a vicious cycle of education. The Centre for Development and Enterprise (CDE, 2017) identifies poor teacher quality as the primary driver of poor performance in the South African context, implicating by extension the systems of ITE and support for the transition between study and work.

3.1 Current practices in ITE/ATEP and teacher support

The Department of Basic Education (DBE) has reported that as of 2019 there were 407 001 educators employed in public schools and an additional 37 856 in independent schools, for a total of 444 857 nationwide. These teachers were responsible for educating more than 13 million learners at about 25 000 schools throughout the country's nine provinces (DBE, 2020).

To qualify as a teacher, candidates must follow one of two possible qualification pathways:

- 1. Completing a four-year Bachelor of Education degree (B.Ed.); or,
- 2. Completing a three- or four-year Bachelor's degree, followed by a one-year Postgraduate Certificate in Education (PGCE).

After graduating and upon assuming a teaching post, teachers are required to register with the South African Council for Educators (SACE).²

3.1.1 Teacher recruitment

Recruiting qualified talent to initial teacher education (ITE) is an important part of the teaching cycle and is one potential point of intervention that can reform a vicious cycle. Countries with strong recruiting strategies recruit top talent, fully fund students and further provide them with salaries during their studies (Darling-Hammond, 2017). Conversely, the recruitment of low-capacity or underqualified basic education graduates compromises their ability to cope with the academic demands of the profession. See et al. (2020) note that in many countries teaching is not a career of choice but rather an option pursued because of low barriers of entry when compared to other professions.

Other important considerations include motivation for entering the profession – while the Fundza Lushaka bursary offers an incentive towards ITE, some candidates may consider teaching only a stepping stone to further careers elsewhere. According to the 2018 OECD Teaching and Learning International Survey (TALIS), teaching was the firstchoice career for only 49% of South African teachers, the lowest among all participating countries. The TALIS report further found that South African teachers, while more highly educated than the general population, had the lowest rates of education of any participating country, with 24% of teachers reporting they had not completed any tertiary education, and only 1 in 5 reporting the attainment of a higher education degree (OECD, 2019).

² See https://www.education.gov.za/Informationfor/Teachers/InitialTeacherEducation.aspx.

3.1.2 Teacher preparation programmes

Within South Africa, a review of ITE programmes has shown wide inconsistency, with some failing to instruct teachers in even the basics of their subjects, much less pedagogical content knowledge (Taylor, 2019; Taylor and Schindler, 2016). A reduction in the number of higher education institutions (HEIs) that offer ITE programmes may have served to strengthen the production of highly qualified teachers; however, not all institutions were able to enhance the quality of their ITE programmes, especially the previously disadvantaged universities (Hofmeyr, 2016), and reviews of the sector have demonstrated that entry requirements for ITE have remained consistently below the entry requirements for other professions at higher education institutions for more than a decade, as well as stubbornly poor delivery of particularly the practical teaching component of ITE (CDE, 2017). Taylor (2014) suggests that ITE in South Africa so far has not provided the basics in the languages of teaching and learning, higher-order comprehension, subject competency or pedagogy, and further does not support the 'complex forms of reasoning necessary for the acquisition, application and elaboration of professional expertise' (Taylor, 2014, p. 5).

Although student teachers are required to complete schoolbased work-integrated learning as part of their degree coursework, this differs in length for each qualification pathway as set out by the Department of Higher Education and Training (DHET) in the Revised Policy on the Minimum Requirements for Teacher Education Qualifications. Most teacher trainees spend between 16 and 24 weeks in school classrooms while enrolled in a four-year B.Ed and six to eight weeks while completing a PGCE.

Further, research findings suggest that this practical component of ITE may not adequately prepare teacher trainees for taking up employment once fully qualified. A 2015 study found that young teachers lacked sufficient conceptual, content and pedagogical knowledge. Further, both teacher trainees and school managers believed that the time spent on practical training in classrooms was inadequate to bridge the theory-practice divide. As a result some ITE programmes, including those offered at the University of South Africa (UNISA) and North West University (NWU), have expanded on the practical components of their degree courses. While still only available to a small minority of candidates, this has enabled student teachers to 'spend considerable time as classroom teaching assistants, to receive mentorship from experienced teachers and to build a professional practice integrated with theory of their university coursework' (Richard, 2017).

Weak ITE in South Africa has resulted in a host of problems in the system, including poor preparation of new teachers and new teacher attrition (Taylor and Robinson, 2019) and the eventual underperformance of students as teachers lack the requisite content knowledge for teaching effectively. To compound these issues, ITE does not consider the many challenges the South African learners face, such as poverty and child-headed households (Taylor and Robinson, 2019; Thaba-Nkadimene and Mmakola, 2019), and South African teachers report a need for additional training on teaching learners with special needs (OECD, 2019; Deacon, 2016).

In addition, due to shifting population demographics and the demographic profile of teachers, as well as challenges with both graduation and teacher retention, there remains a high demand for new, high-quality teachers in South Africa (CDE, 2015). While the current system may be able to handle the demand, it will be through an increased reliance on distance education, which already produces nearly half of South Africa's teachers (DBE, 2019), sometimes with extremely low graduation rates and with wide disparities in quality and content (Taylor and Robinson, 2019; Taylor and Shindler, 2016). There is, therefore, an urgent need for ITE that can respond to the human capital demands of the sector and generate a large number of skilled educators, as well as respond to evolving departmental mandates (such as the inclusion of robotics and coding in the curriculum).

On an even broader scale, the South African education system is still evolving and has not yet been fully able to respond to the demands for redress in the post-apartheid era. In particular, the need to support social inclusion in higher education has taken a spotlight in the popular discourse in recent years. Student protests in 2015 advocated for feefree higher education and a 'decolonised' education system. Students identified the fact that the curriculum and pedagogy of ITE in South Africa are rooted in Western educational philosophy, which can alienate students who do not identify with what is being taught (Sayed, Motala and Hoffman, 2017).

These issues are not without empirical grounding. Research suggests that social inequalities and economic background is an important determiner of students access to higher education and learning, as well as to completing their studies (Kromydas, 2017; Nyamupangedengu, 2017; Prodan et al., 2015). Bülbül (2017) argues that despite government policies and institutional projects, demographic information such as income status and location still influence students' access to higher education in many countries. Barriers to higher education in South Africa often include the direct costs of fees, relocating, cost of living (particularly in urban areas), supplies, etc., and the 'opportunity cost' of lost income while studying. These barriers are particularly pronounced for prospective students from rural areas.

Further challenges in ITE in South Africa include the fact that aspiring teachers are not given sufficient opportunity to engage in practice learning, a problem compounded by weak institutional-school relationships, poor communication, few and inadequate supervision and mentorship arrangements, and sometimes no deliberate student placement policies (DHET, 2010).

3.1.3 Transitions to the teaching force

Within South Africa, the number of new teachers has been increasing since 2013 and is on course to meet departmental goals for 2025. UNISA has been the biggest driver of new teacher production, graduating about 49% of new teachers in 2016, with 61 107 ITE students enrolled. Overall, new teachers begin their first teaching jobs at age 28, indicating a delay between completing education and employment (Taylor and Robinson, 2019). This finding is supported by Deacon (2016), who found in a study of final year ITE students in 2013 that 52.6% were teaching and 40.7% were unemployed. The survey also found a lack of alignment between specialisation and teaching assignments, particularly in the high-need subjects of English and Mathematics. About one-quarter of qualifying teachers pursue other professions due to low wages in the education sector (Taylor and Robinson, 2019).

A concerning number of teachers also leave the profession in the early stages of their career, either for other work, unemployment or to relocate to other countries, with more than a quarter of new teachers in South Africa expressing dissatisfaction with their choice of profession due to low salaries and the poor image associated with teaching (Shibiti, 2020). Whereas in theory these teachers could be replaced by the adequate number of newly qualified teachers (NQTs) each year, it would be problematic if this is not adequately anticipated in government plans, and further if an additional one-quarter of teacher graduates choose not to go into teaching at all as reported. South Africa is also facing a large number of poorly qualified teachers (DHET, 2020; OECD, 2019), and further concerns have been raised with the additions of contract workers in schools to respond to the COVID-19 pandemic. Early reports indicate that these ungualified individuals may be displacing new teacher graduates within the schools.

3.1.4 Continuing professional teacher development

In South Africa, 91% of teachers report participating in professional development activities, and 88% indicate that they feel the training they receive impacts positively on their teaching practice. Satisfaction with professional development is linked to higher levels of job satisfaction among South African teachers (OECD, 2019). The South African Council for Educators (SACE) is responsible for the professional teacher development (CPTD).

SACE has developed professional standards, a code of ethics and a monitoring system for CPTD on three-year cycles and is a key driver of enabling the professional development of teachers and maintaining high standards in teaching (Taylor and Robinson, 2019). One of the mandates of SACE is to promote and support CPTD for teachers as amended by the Basic Education Laws Amendment Act (BELA) No. 15 of 2011. Standard No. 2 of this Act mandates that:

- Teachers participate in endorsed continuing professional teacher development activities/programmes organised by their subject associations, professional learning communities (PLCs), higher education institutions, teacher unions and private providers.
- Teachers provide supportive environments for the induction and mentoring of colleagues who are new to their school, as well as for pre-service and NQTs.

To support this mandate, SACE has proposed a Professional Teaching Pathway, which is the product of a collaboration of legislative departments promoting the professionalisation of the public sector, with the aim of enhancing the status of the teaching profession across the teacher education and development continuum. The Professional Teaching Pathway (SACE, 2020a) outlines nine major milestones in an educator's career:

- 1. Minimum requirements for enrolment into ITE;
- 2. Provisional registration of student teachers;
- Final year provisional registration newly qualified educators;
- 4. Newly qualified educators;
- 5. Submission of the electronic professional development portfolio;
- Review of the submission of the electronic professional development portfolio;
- 7. Certified teacher professional designation;
- Participating in the three-year cycle of the CPTD system; and
- 9. Periodic renewal of registration.

The SACE Professional Teaching Standards (SACE 2020b), which are outlined in Figure 3, cover a broad base to include pre-service and in-service teachers across all phases, subject specialisations, job descriptions and institutions within the sector.

The process to develop these standards was inclusive of many stakeholders in the sector and included SACE, JET Education Services and the Zenex Foundation as well as representatives of all key stakeholders: five teacher unions; the Education, Training and Development Practices Sector Education and Training Authority (EDTP-SETA); the Education Labour Research Council (ELRC); faculties of education at HEIs; SAQA; school governing boards; the National Alliance of Independent School Associations (NAISA) and independent schools; provincial education departments, the DBE and DHET; educators; and policy researchers.



Figure 3: SACE Professional Teaching Standards



3.2 Current systemic interventions to strengthen South African education

The **Funza Lushaka (FL) Bursary Scheme** for teaching students, established in 2007, seeks to draw talent to the teaching profession.

The **South African Extraordinary Schools Coalition (SAESC)** has a teacher programme that seeks to produce quality teachers through a recruitment strategy targeting 5–10% of each Grade 12 graduating class to study to become Mathematics and Science teachers.

A review of the Minimum Requirements for Teacher Education Qualifications (MRTEQ) is currently under way. The Policy on the MRTEQ was a progression from the Norms and Standards for Educators published in February 2000 and was meant to be read in conjunction with the Higher Education Qualifications Framework (DHET, 2011). This policy is meant to be a foundation for the construction of ITE and CPTD. Having found that there was a need to improve all aspects of the system of ITE, including subject and pedagogical content knowledge, the government mandated that all new programmes were to get MRTEQ approval (Hofmeyr, 2016). The MRTEQ published in 2015 (DHET, 2015) is currently under revision but requires a minimum of 20 and a maximum of 32 weeks of school-based work-integrated learning spread over at least two years for the B.Ed degree. For the PGCE, eight to 12 weeks of formally assessed school-based practice is required. The current policy notes that part-time or distance programmes may accommodate currently employed but under-qualified teachers but mandates the same amount of supervised and assessed school-based practice.

The **Teaching and Learning Development Capacity Improvement Programme (TLDCIP)** was implemented through a partnership between the DHET and the European Union.

The **Primary Teacher Education Project (PrimTED)** worked with 24 universities, focusing on leveraging available expertise through working groups to conduct and aggregate foundational research to improve the curriculum offerings of ITE in English as First Additional Language (EFAL) and African languages, with a special focus on reading, mathematics and assessment (Taylor and Robinson, 2019).

The **Teacher Choices in Action** module represents the product of a national collaboration between HEIs to create a single course available to all South African student teachers. The module explores the everyday choices teachers make about issues such as resources, instruction and inclusivity, and in response to the opportunities and limitations of their unique contexts.

Research projects supported by the DHET, such as **the establishment of teaching schools** and/or **networks of professional practice schools**, have the goal of providing opportunities for student teachers to engage more regularly, and for more prolonged periods of time, in teaching practice (DHET, 2011). These schools/networks are seen as teaching practice spaces and are located near each teacher education institution.

A New Teacher Orientation Manual and an Induction Framework have been published together with associated resources, including a Guide for Training Mentors. The Framework outlines support structures for new teachers including mentorship, training, communities of practice and portfolios of evidence (DBE, 2019). The model is currently being piloted.

In addition to these systemic initiatives, a number of organisations are engaged in ATEPs through various means and models. A scoping study was undertaken to determine the current size, scope and shape of these efforts in South Africa. The results of this sector mapping study are presented in Section 4, which provides an in-depth picture of the state of teacher internship programmes currently operating within South Africa and how they are implemented in practice.





04.

Alternative teacher education pathways: Sector mapping study results

The sector mapping study was conducted with the aim of reviewing the state of teacher internship programmes currently operating within South Africa. A total of 46 internship programmes were identified through desktop research and within the networks of the Teacher Internship Collaboration South Africa (TICZA). Many of these organisations were ultimately not within the scope of TICZA. For example, some focused on international internships rather than on developing teachers for South Africa, and others were defunct or no longer operating. Of the 46 organisations collected in the database and approached, 14 participated in the scoping study.

Data, which was collected through an online survey that remained open from April to September 2021, was analysed by Trialogue. This section of the report presents the key findings of the sector mapping study.

4.1 Overview of teacher internship programmes

4.1.1 Programme types

Initial desktop research found considerable diversity in the way internship programmes operate in South Africa. Some form part of the required academic coursework for the completion of a Bachelor of Education (B.Ed) or a Postgraduate Certificate in Education (PGCE) through a higher education institution (HEI). In other cases, in-house internship programmes have been established by individual schools and early childhood development (ECD) centres. Other programmes are offered by non-profit organisations (NPOs) as well as by international organisations specifically targeting students in other countries seeking practical work experience in South Africa.

Following the desktop research, an online survey questionnaire for teacher internship programmes was disseminated that covered a range of topics, including organisational types and structures, qualifying criteria for teacher interns, resources and financial support, and mentorship, among others. Survey respondents' responses reflected a similar level of diversity when asked about the type of programme offered by their organisation or institution. Many in fact categorised their internship programme according to multiple types, including NPOs, foundations and both public and private schools.

4.1.2 Programme size

According to the research, there is considerable variety in the size of internship programmes in South Africa, which ranged from single positions advertised at individual schools to large organisations with a sizable annual intake. This diversity was also evident in the survey results. Respondents were asked about the numbers of interns enrolled or employed over the previous three years, from 2019 to 2021.³ Overall intake ranges and averages are shown in Table 1. Figure 4 compares the relative size of internship opportunities and programmes for these three years. See Key Finding 1.

³ It is important to note that schools' operations and attendance were significantly disrupted in 2020 and 2021 due to the COVID-19 pandemic.

Intern intake by year	Minimum	Maximum	Average	Median	Total (all programmes)
2021	6	104	48	42	623
2020	6	98	40	35	526
2019	0	89	32	22	383

Table 1: Teacher intern intake, 2019-2021 (n=13)

Figure 4: Scale of internship programmes/opportunities (n=13)



KEY FINDING: The data suggests that the participating internship programmes have been growing in scale, with a 63% increase in the number of interns between 2019 and 2021.

4.1.3 Programmatic associations

Given that practical training forms part of the mandated Minimum Requirements for Teacher Education, survey respondents were asked about whether their internship programme was associated with any specific higher education institutions (HEIs).

Eight survey respondents mentioned institutional affiliations between their internship programmes and HEIs, most commonly UNISA but also NWU and the universities of the Witwatersrand (Wits), Johannesburg (UJ), Pretoria (UP), the KwaZulu-Natal (UKZN) and the Western Cape (UWC). In addition,

- One had informal affiliations/relationships with multiple HEIs;
- Three received interns from a number of the HEIs but were not affiliated with these institutions; and
- One reported no affiliation whatsoever.

KEY FINDING: Responses suggested that most programmes had some connection with HEIs but that the formality of these relationships varied.



4.1.4 Geographic location

While most (10 of 13) of the programmes operated in a single province, three reported locations in multiple provinces. The geographic distribution is shown in Figure 5. The most

Figure 5: Operational locations (n=13)

common locations were KwaZulu-Natal, Gauteng and the Western Cape provinces.



KEY FINDING: Although there are a limited number of teacher internship programmes operating at present, these are located throughout South Africa. Fewer programmes currently operate in South Africa's more rural provinces.

4.1.5 Educational level

Research participants were asked about the educational level at which teacher interns were placed through their programme. Most responded that interns were placed at primary and/or secondary level, followed by ECD/pre-primary. Table 2 shows the results for placement.

Table 2: Education level of internship placement (n=13)

Educational level of internship placement	Count	Percentage
Primary	10	77%
Secondary	9	69%
ECD/Pre-primary	6	46%
FET	1	8%

Note: Multiple response question.

KEY FINDING: Internship programmes cover the full range of pre-primary to senior secondary schools, but the majority operate in grade school.

4.2 Qualifying criteria for teacher interns

During the desktop research phase, it was found that many teacher internship programmes define a clear set of qualifying criteria that they specify upfront to prospective teacher interns. These include academic experience and credentials as well as language requirements, specialised subjects and skills, professional registration status and key demographic characteristics.

4.2.1 Academic and subject requirements

Respondents to the sector mapping study were asked about the minimum level of educational attainment required of trainee teachers to be accepted into internship programmes. In three cases, interns only needed to have successfully completed matric, as shown in Figure 6. The remaining programmes stipulated that incoming interns are required to have been accepted by or enrolled in either a B.Ed or PGCE to qualify. One respondent added that interns needed to be in their final year of either a B.Ed or PGCE programme; while another programme also accepted tertiary students enrolled in other degree courses.



Figure 6: Minimum academic requirements for teacher interns (n=13)

Note: Multiple response item.

The sector mapping study found that teacher interns are required to specialise in specific academic subject areas in about half of the programmes (6) represented in the survey sample. Specialisation subjects are most commonly mathematics (5), science (4) and indigenous languages (4), as show in Table 3. One respondent added that this specialisation depended on interns' degree subjects, while a second noted that while no specific specialisation is required preference is given to scarce subjects. Three programmes also give preference to prospective teacher interns based on other special skills or competencies. In two cases this is based on sports, and in a third, interns' individual strengths are identified and assessed in the recruitment process.



Table 3: Subject areas selected for intern specialisation (n=6)

Subject required for specialisation	Number
Maths	5
Science	4
(Indigenous) Languages	4
ECD	2
English/Literacy	1

Note: Multiple response item.

KEY FINDING: Internships which require subject specialisation are focused on core subjects as emphasised by the South African government.

4.2.2 Language requirements

In terms of language, all programmes included in the sample require that teacher interns speak English, as shown in Figure 7. However, many answered that other languages were also required, and all other South African national languages were mentioned.





Note: Multiple response item.

KEY FINDING: Internship programmes in South Africa are linguistically diverse and cover all official South African languages.

4.2.3 Demographic criteria

The internship programmes included in the mapping study also use a range of different demographic criteria in selecting or appointing prospective teacher interns. Eight programmes specify age requirements for interns, which ranged from a minimum 18 years old to a maximum of 35 years old (see Table 4). Eleven of the 13 programmes also used other demographic criteria, most commonly including race and nationality, as shown in Figure 8. Gender, language and province of origin were also considered by some programmes.

Table 4: Teacher intern age requirements

Minimum age	Count
18 years old	5
19 years old	1
21 years old	2
Maximum age	Count
Maximum age 25 years old	Count 1
Maximum age 25 years old 30 years old	Count 1 4





KEY FINDING: Some but not all programmes are focused on youth. A majority of programmes consider race in their selection of interns whereas less than half require other demographic criteria. Province of origin is least likely to be considered.

4.2.4 Professional registration

In South Africa, teachers are required to be registered with SACE. During the discussions, research participants were asked when SACE registration occurs in relationship to teacher internships. Ten out of 13 (77%), answered that SACE registration occurs during the internship period. With respect to the other three programmes:

- One selects bursary candidates while in matric, and they are therefore not yet eligible for SACE registration;
- One requires registration before the internship commences; and
- One does not require SACE registration.

KEY FINDING: Most alternative teacher education pathway (ATEP) programmes in South Africa run by NGO implementers are aware of and aligned to SACE registration policies.

4.2.5 Additional qualifying criteria

Finally, survey respondents were asked about any additional qualifying criteria applied when selecting and appointing teacher interns. These criteria varied widely from geographic

location to personal characteristics and academic performance, among others (see Table 5).

Table 5: Additional teacher intern qualifying criteria

Qualifying criteria

'Interns must be based in Cape Town.'

'[They must] have the ability to be part of our Great Adventure Programme. They need to be able to swim and ride a bicycle.'

'[Interns must] demonstrate involvement in community learner support.'

'[Interns must] be NSFAS [National Student Financial Aid Scheme] or Funza [Lushaka] bursary holders [and] registered for a B.Ed.'

'Our school requires teachers and interns to be fairly robust – our diverse and confident students can present challenges for the timid and shy, so it was necessary (for the sake of everyone) to select with this in mind.'

'Matric results; NSFAS; must be able to conduct interview in English; written piece of work on family.'

'Our candidates join our matric programme during the year preceding their offers of bursary [...] We also track their Gr 11 and Matric results.'

'Leadership and some demonstration of teaching interest prior to joining the programme.'

'The school must have accepted the intern first before presenting them to [the trustees].'

'We have a rigorous recruitment process that involves an online application, in-person interviews, and a maths assessment.'



4.3 Internship programme components

4.3.1 Internship duration

Respondents to the sector mapping study survey were asked about the duration of student internships offered through their programme. Results showed that internships ranged in length, from a minimum of one year to a maximum of five years, as shown in Figure 9. About half of all programmes offered internships of differing lengths, and a further breakdown of these is provided in Table 6.



Note: Multiple response item.

Table 6: Range of internship duration offered in years (n=13)

Internship duration offered	Count
1 year	2
2 years	2
4 years	3
Multiple years possible, minimum 1 year	3
Multiple years possible, minimum 2 years	3

KEY FINDING: Most NGO-implemented ATEP programmes in South Africa require a minimum of two years of classroom practice.

Figure 9: Internship duration (n=13)



4.3.2 Mentorship

The mentoring of student teachers is an important component of programmes. All the survey respondents (100%) confirmed that teacher interns at their school or institution are assigned a mentor, and multiple mentors in some programmes. Individuals who served as mentors were as follows:

- In seven programmes, the mentors were teachers at the schools where interns were placed;
- In one programme, a staff member of the internship organisation was designated as a mentor;
- In five programmes, mentors included both teachers and organisational staff members; and
- Two respondents also mentioned additional mentors, namely a House Mother at a residential boarding facility and a private volunteer acting as a Goodwill Mentor.

Respondents were then asked about the average number of hours per week that interns spend with their mentors, with considerable variation in the results. While responses to the question ranged from one hour to 40 hours per week, although most often less than ten hours per week as shown in Table 7. Respondents explained that this differed according to factors such as multiple mentors and the experience level of interns:

- '1 hour per day for subject mentor. 1 hour per week with intern programme coordinator. 1 hour per week with House Mother.'
- 'Co-teaching, observed teaching and feedback at least 12 hours.'
- 'It depends on how much time the intern spends at the school. Other interns teach twice a week, while senior ones teach four to five times a week. The mentor though allows weekly time with the intern. Not less than two hours a week.'
- 'With mentor teacher every day at school, [external] mentor visits once a month and contacts them online at least once a week (need dependant).'

Examples of responses given suggest that there are differing definitions and responsibilities of mentorship, which may include co-teaching and observation as well to dedicated sessions outside of classrooms.

Respondents were also asked about how many teacher interns are assigned to each mentor, with answers ranging from one to a maximum of 17 (see Table 8).

Hours	Count
1-10 hours	5
11-20 hours	2
21-30 hours	3
31-40 hours	2

Table 7: Hours per week spent with mentors (n=12)

Table 8: Average number of interns per mentors (n=13)

Interns	Count
1-5 interns	10
6-10 interns	0
11-15 interns	2
16+ interns	1

KEY FINDINGS:

- All NGO implementers of ATEP programmes include mentorship as a component, and in a number of programmes interns have multiple mentors and/or mentors both inside and outside the school.
- The activities considered to be part of mentorship differ between organisations.

4.3.3 Programmatic support for interns

Next, the mapping study analysed the types of programmatic support offered to teacher interns, in addition to the time spent in classrooms. This was most frequently in the forms of observations and/or feedback on classroom practice (12), intern training (12), support with job applications (11) and arranging internship placements (11) (see Figure 10).

Additional types of academic and programmatic support mentioned included:

- IT training;
- Professional growth and development;
- Subject-specific support/training;
- Job application readiness;
- Academic support; and
- Psychosocial/emotional support and counselling if needed.



Figure 10: Additional programmatic support for interns (n=13)

Note: Multiple response item.

KEY FINDING: More than half of NGO-implemented ATEP programmes include assistance with logistics related to education and/or work and academic assistance. Most include intern training and a focus on observations and/or feedback during classroom practice.

4.3.4 Time commitment for interns

Survey respondents were then asked how teacher trainees spend their time during internships, including estimates of hours dedicated to teaching in classrooms, other school activities and completing their own academic coursework. Weekly hours of teaching in classrooms varied by institution, as well as by subject and the intern's own year of academic study. Results ranged from a minimum of four hours up to 40 hours per week which, while described as classroom time, was not always spent teaching. Qualitative inputs shed further light on how teacher interns spend their classroom time:

- 'Six hours [per week] but these may not be teaching. They could be observation lessons.'
- 'Towards the end of the programme, 15 hours [per week].'
- 'Depends on year of study, 3rd and 4th year interns get more teaching hours.'
- 'All our interns work full-time [...] They generally arrive at 7am and work until 3pm. Thus they are at school for 40 hours/week. Most of that time is spent in classrooms.'

- 'Depends on the number of days they teach. For an intern who works three days, they would teach more than four hours, excluding the admin work they have to do and the preparation.'
- 'Depends on their year of study and their readiness to teach, which is evaluated by their teacher mentors.'

Respondents were also asked about the amount of time that teacher trainees are involved in other school tasks such as extra-curricular activities. Most programmes estimated this commitment at between one to ten hours per week. These activities included:

- '[Interns spend] ten hours boarding duties. One hour tennis admin duty. One hour social responsibility.'
- 'Not compulsory but students do participate in sport coaching, extra lessons, choir, etc. This will be student dependent.'

Most respondents also estimated that interns spent between 11–20 hours (5) or 1–10 hours (4) per week completing their own academic coursework. Table 9 shows the time commitments of interns as reported by programmes.

Duration	Teaching hours	School activities	Own coursework
None	0	2	0
1-10 hours	5	6	4
11-20 hours	3	1	5
21-30 hours	0	0	0
31-40 hours	2	1	1

Table 9: Hours per week spent on school activities, by number of programmes reporting (n=10)



4.4.4 Intern performance

Internship completion rates are an important indicator of programmatic resilience and success. These ranged from 80–100%, with an average of 93% completing and a median of 95%. Programmes tracked and evaluated interns' individual performance in a number of different ways, including:

- Weekly/quarterly/annual reports;
- Coaching and engagement sessions;

- Performance appraisals;
- Informal discussions;
- Academic results tracking;
- Mentor reviews; and
- Journaling.

Detailed qualitative explanations of performance tracking are shown in Table 10.

Table 10: Methods of tracking and reporting intern performance (n=13)

Performance tracking

'Through the portfolio of evidence and the academic support officer has access to their academic records at UNISA.'

'Through the Teacher Internship Programme Manager's tracker of coaching sessions as well as weekly reports from mentors.'

'Individual subject teacher report in writing on lessons. Informal tracking is done on academic performance through verbal communication.'

'[Through the] mentor, school coordinator and [programme coordinator] reports. Continuous meetings for discussions on progress and class visits. Journal by intern teacher.'

'We keep track of their assignments, exams, results both manually and [online].'

'Individual mentors provide regular feedback and there is a termly report which is then collated into an annual report for the funders.'

'We have access to their university sites and track assignment and exam submissions and results.'

'Assignment submission and results, exam results, Teaching Practice portfolio has a scaffolded timeframe for completion, lesson observations and feedback [and] Organisation Project Manager and School Mentors, School visits.'

'Performance appraisal.'

'Within subject departments by HOD's [heads of departments] and mentors.'

'Academic results are captured each semester [...] mentors check in on all students each week and report risks to project manager.'

'Academic performance is based on their university results and for the internship is based on the rating of their mentors, university assessors [or] our programme evaluator.'

KEY FINDING: NGO-implemented ATEP programmes have high completion rates as compared to other research findings, with an average completion rate of 93%. For example, van Broekhuizen (2015) used data from the Higher Education Management Information System (HEMIS) to indicate that the ITE completion rates for all universities that year were around 60%.

4.4 Resources and financial support

The sector mapping study also explored funding and resources for teacher internship programmes, which are analysed in this section of the report.

4.4.1 Internship programme funding sources

The internship programmes featured in the mapping study reported an estimated intake of 623 students in 2021, and research participants were asked about both the funding they receive and that which is provided to interns. Figure 11 shows that the largest number of programmes received funding from foundations (n=9, 69%), followed by corporate support (n=6, 46%) and private donations (n=6, 46%). Three respondents answered that their internship programmes did not receive any outside funding.

Figure 11: Internship programme funding sources (n=13)



Note: Multiple response item.

4.4.2 Salaries and stipends

All programmes (100%) provided some financial support to teacher interns themselves, in the form of either a salary or stipend. Monthly amounts ranged from a minimum of R1 500 to a maximum of R9 000, but amounts received were also different within and across programmes according to factors such as the intern's year of study, workload and time spent teaching. As described by respondents:

- '[Interns earn a] maximum R6 200 depending on year of study.'
- 'R3 500 and they also receive accommodation and food at their partner schools.'
- '1st year R2 700; 2nd year R3 000; 3rd year R3 400; 4th year R3 900.'

- 'It's variable.'
- 'R3 000-R8 000.'
- 'They earn an hourly rate and stipends vary based on inclass hours. (R1 500–R2 000 per month).'
- '[It] varies on [the] level of intern, also if additional workload is provided the school motivates for more. Also varies on whether they are boarding or not, etc. It ranges from R5 000 to R9 000.'
- 'Between R2 000 and R5 500.'

4.4.3 Contribution towards academic fees

In addition to paying salaries/stipends, half (n=7, 53%) of the programmes included in the mapping study paid interns' academic fees in full and a further four programmes made a partial contribution, as shown in Figure 12. One respondent explained that partial payment was in the form of a once-off amount of R6 000 that interns could use towards registration costs and textbooks. A second explained that all interns apply for funding through the NSFAS and receive assistance in the way of partial fee payment if their applications are unsuccessful. Two programmes did not contribute towards academic fees at all.

Programmes cited multiple sources of funding towards interns' academic fees. These were most commonly from NPOs (4), donor organisations (4) and government scholarships, as shown in Figure 13. When asked about the rand value of annual financial contributions towards fees,

these ranged from R6 000 (once-off payment, as mentioned above) to a maximum of R240 000. Some respondents simply answered that programmes covered 100% (2) or 50% (1) of fees while others specified the following:

- 'A maximum of R240 000.'
- 'R20 000.'
- 'R24 000-R35 000.'
- 'R50 000 [...] bursary.'
- 'The range is [...] between R18 000 and R30 000.'
- 'Between R17 000 and R42 000.'

One programme providing extensive support estimated the total cost of university fees and additional supports to be about R200 000 per intern annually.



Figure 12: Programmatic contribution to interns' academic fees (n=13)

Figure 13: Sources of contributions to interns' fees (n=13)



Note: Multiple response item.



4.4.4 Additional resources and material support

Initial desktop research found that many internship programmes also offer teacher trainees other types of resources and support, such as contributions to regular costs and on-site meals and/or accommodation in some cases. Survey respondents were asked about these additional types of support, and results showed that a majority (10 out of 13, 77%) contributed towards books and other learning materials, followed by data allowances (n=9, 69%) and travel costs (n=9, 69%), as shown in Figure 14.

Other resources and supports provided included:

- Internship course material;
- Travel for practical lab-based work;
- Loans when required (including zero or low-interest loans to purchase computers);
- Medical insurance contributions;
- External psychosocial support;
- Funding for external events such as conferences; and
- Access to textbook libraries.

Figure 14: Additional resources and support for interns (n=13)



Note: Multiple response item.



4.5 Requirements of participating schools

While much of the focus of the sector mapping study was on internship programmes and teacher trainees themselves, survey respondents were also asked about the expectations/ requirements of host schools. As shown in Table 11, these included: quality of management, reporting standards, network requirements, training needs, methods of guidance and assimilation, location limitations as well as contracting and agreement terms.

Some respondents additionally included descriptions of expectations of teacher interns themselves, as shown in Table 12.

Table 11: Requirements/expectations of host schools (n=9)

Verbatim comments on host school expectations

'Well-managed schools with committed leadership and staff.'

'Must be one of [our network] of schools.'

'High performing schools were selected [and] all mentor teachers undergo training on how to support student teacher learning.'

'[Schools] link each intern to a teacher mentor, who must guide and develop the intern. The interns must become fully assimilated into the school environment and become members of staff. They receive staff training and teacher development in line with other staff members.'

'[Meetings with coordinators] at least once a term. Mentors to attend workshops once a term. Regular check-ins and professional development session.'

'Primary schools in townships [must be] within a 20 km radius of the [organisations] office in the respective area. We have signed MOUs (with each school that the [team members] must sign and agree to.'

'Sign an MOU agreeing to criteria laid down for course, mentoring and monitoring of interns; attend mentor meeting 1 x per term; complete mentor reflections 1 x per term; allow intern to attend academic support 1 x per week; not to use interns as administrative support assistants; pay interns per hr if they are doing relief teaching in schools and only permit them to teach 1 lesson per day when in 3rd or 4th year; integrate intern into life of the school.'

'Clear plan for the students and 100% assurance of the funding for the students until they complete the programme. 100% involvement of our organisation in the programme and participation in the programme steering committees.'

Table 12: Requirements/expectations of interns (n=3)

Verbatim comments on expectations of interns

'Full time attendance and participation in school activities. Good balance of academic studies and schoolwork.'

'The expectation is that students make themselves available to all opportunities available to them and to develop as many skills and experiences as they can while they are with us.'

'Interns do break duties and temp duties, teach one lesson per week.'



4.6 Support for TICZA

Finally, research participants were asked a series of questions about the value of teacher internships and the role of TICZA. Figure 15 shows that all respondents viewed teacher internships as very important. In addition, 13 (93%) respondents felt a collaborative process like TICZA is useful.

A further 12 (86%) indicated that they were likely or very likely to participate in TICZA, as shown below.

Research participants were also asked about the issues they felt should be addressed by a collaborative initiative such as TICZA going forward. Their responses are shown in Table 13.



Figure 15: Support for TICZA (n=14)

Table 13: Issues that should be addressed by TICZA (n=11)

Issues

'Funding of interns and support with job placement upon qualification.'

'The collaboration needs to think of how we can test these models in different districts to increased impact for teacher training and support.'

'How to get buy-in from universities.'

'Joint funding, SACE applications to be done altogether, Funza bursary applications, UNISA B.Ed applications, quality, M&E [monitoring and evaluation] systems, [and] one online portal.'

'A consistency of approach to internships. We hear reports of other programmes where the interns are serving primarily as admin assistants and don't get many opportunities to grow in the classroom. A sharing of best practice for internship programmes could be facilitated through TICZA, based on research.'

'Solid communication and opportunities to collaborate; clear expectations from outset.'

'Identifying and designing MEAL [monitoring, evaluation, accountability and learning] tools to use across programmes to capture lessons learnt.'

'Topic areas for collaboration – content knowledge support, pedagogical approaches, tools and approaches for assessing teaching improvement, collaborative funding models, collective bargaining with government/DBE, DHET, and ways to deepen and share learning.'

'Tracking the success of the internship beyond completion of studies. The school ha[s] a challenge to track past interns (or the interns do not consistently report back especially when there are changes in their lives).'

'Assisting organisations that are playing in this space but struggle to get funding because of lack of knowledge on how to access the funding.'



Despite consensus on the importance of teacher internships and moderately high agreement on the potential value of a collaborative initiative such as TICZA, some survey respondents also expressed reservations about its utility. One commented that they 'would be wary of having to change in order to follow a "prescribed programme".' Another indicated they would like to be contacted to discuss anticipated challenges to gain better understanding of the processes and potential benefits. Other notable comments include requests for external review and M&E to further assist with appraisals and support, and feedback from other organisations participating in the process to gain further insight. Respondents also identified a number of potential obstacles that such a collaborative process might encounter, which included (see Table 14):

- Having time for meetings;
- A lack of commitment to a collaborative approach;
- Holding onto intellectual property (IP);
- Poor communication;
- Competition for the best candidates; and
- Funding challenges.

Table 14: Challenges anticipated for TICZA (n=12)

Verbatim responses to anticipated TICZA challenges

'Expectations of compromise around programme delivery if the objective is to be more standardised.'

'We have previously found that collaborations are time-consuming talks about talks that make no difference to the lives of students in need. The people who attend the talks often have little understanding of the emotional and financial toll of the work "on the ground" that truly impacts the lives of individual people.'

'All schools run differently, therefore different expectations.'

'My concern would be the over-complicating of a process that is working well for us at present – greater bureaucracy would be detrimental to our programme. Our current supporters know us and trust our programme and give us a great deal of flexibility.'

'Need to know more about exactly what your organisation does.'

'Potential conflicts of interest (funder competition, focus area/priority differences, etc.). I would also be curious how to make sure each organisation has a seat at the table and that differing opinions/approaches are valued.'

'Implementing partners not being fully open to stretching their models for systemic uptake.'

'Using this process as a barrier to entry for other implementers.'



05. Lessons and considerations for ITE in South Africa

5.1 Analysis of findings

The literature and sector mapping study reveal a number of lessons for South Africa that could be taken into the teacher internship and alternative teacher preparation pathways. The first consideration is that given the current situation regarding South African teacher education and retention, research supports that well-designed alternative teacher education models may provide solutions to many of the challenges within the South African system.

Research, including research in South Africa, shows that alternative teacher education pathways (ATEPs) can produce teachers who perform similarly to those emerging from more traditional initial teacher education (ITE), and due to the flexibility in approaches, ATEPs are positioned to solve challenges such as access, diversity, allocation and even guality of teachers, given the right training conditions. With the current frameworks of ITE in South Africa, alternative pathways must deliver 'traditional' ITE through either a B.Ed or a PGCE, but multiple forms of ATEPs are still possible and indeed taking place already, including a range of candidateoriented traditional programmes that provide flexible models of study such as distance or blended education, and candidate-oriented intensified training that provide additional training or coursework over and above university ITE requirements. As the scoping study shows, many existing programmes in South Africa leverage a combination of these models to enable a value-added distance learning model with an embedded or extended teaching practice. Just over half of the participating programmes were formally affiliated with higher education institutions (HEIs), and even those that report no relationship with higher education leverage HEI qualifications. The expression of these models is considerably diverse and range in characteristics from their organisational types (NPOs, schools, foundations, etc.) to annual intake, levels of material support provided and the duration of placements.

Teacher internships in South Africa leverage distance and blended courses and qualifications offered by universities, with an emphasis on 'value-added' models that enhance or extend the requirements. There is considerable programmatic diversity within the teacher internship sector. Internships will not replace traditional ITE pathways.

KEY QUESTION: What types of alternative education pathways are most successful and most appropriate for the South African context?

Although the sample of programmes included in the research was limited, the 13 participating programmes were collectively responsible for the placement and training of 623 student teachers in 2021. According to the Integrated Strategic Planning Framework for Teacher Education And Development (ISPFTED), a minimum of 12 000 new teachers are required annually. Using this minimum target as a baseline, and assuming that half of interns in alternative pathways will graduate this year, ATEPs contribute about 2.5% of the targeted number of teacher graduates.

Another prominent consideration is linked to the quality of ITE. While efforts are underway to improve the quality of ITE, South Africa is currently in a system that has a highly

variable output from its universities. Therefore, ATEPs must work hand in hand with a high standard of ITE, which means the ability to augment the curriculum where necessary to provide top quality training. Conversely, programmes that link themselves to substandard programmes and rely primarily on ITE for theoretical training aspects may find the capacities of their students are bounded by the limitations of these programmes. Even the recruitment of top-quality candidates may not be enough to balance insufficient preparation. For example, Teach for America is a highly selective programme that recruits university graduates and provides about the equivalent of a semester's additional preparation. It yields results that are insignificant from other ITE and preparation pathways (Clark et al., 2015). How would even these candidates fair without their four years of university-level subject study and that intensive preparation?



KEY QUESTION: Recruiting qualified talent to ITE has proven to be a key point of intervention in countries that

have sought to improve their education system. What practical lessons can be drawn from these models?

Another consideration is cost. Most programmes included in the scoping study financially support teacher interns through both a contribution towards their academic fees (full or partial) as well as a salary or stipend. These ranged from R1 500 to R9 000 per month but varied between and within programmes based on factors including weekly teaching hours, academic attainment and recommendations from host schools. Most also provide material support in other forms, such as contributions towards books and learning materials, travel costs and mobile data. One survey respondent estimated the total cost of supporting an intern to be about R200 000 per annum, more than double the cost of ITE alone.

Most programmes contribute to academic fees as well as paying salaries or stipends. The cost of a 'valueadded' model of a supported embedded long-term internship in South Africa can more than double the cost of traditional ITE.



KEY QUESTION: Internship duration is the biggest cost driver of internship programmes. What are the

trade-offs between length, scale, efficiency and teacher quality, if any?

Even if alternative pathways prove to be cost-effective (e.g. they provide sufficient benefits in terms of learner performance, teacher retention, etc., to offset the additional cost), they may prove cost-prohibitive at a scale necessary to impact the teaching force. This raises further questions about how systemic impact can be achieved. What efficiencies can be gained through complementary initiatives such as teacher induction or continuous teacher professional development (CPTD)? What lessons can be learned from alternative pathways, and what are practice recommendations that should be adopted for existing teacher internships systemwide?

Some existing evidence within South Africa suggests what the 'right training conditions' for teacher internships would be. These include ensuring rigorous selection, strong mentorship, supervised practice with written feedback and strong theory components. The scoping study suggests that current alternative pathway programmes:

- Select teacher interns based on academic attainment as well as a number of other characteristics and competencies defined on a programme-by-programme basis, which include demographics, subject specialisations and language proficiency, among others.
- Base eligibility on acceptance/enrolment in either a B.Ed or PGCE in all but three programmes. However, only about half of programmes have formal partnerships with HEIs.
- Have internships that vary in length both within and between programmes, ranging from one to five years.
- Provide a varied menu of additional support, ranging from professional development activities to job placement. Notably, most programmes also provide support with study assistance and university course work, as well as with subject-specific content support.
- Invest in mentorship of teacher interns. Notably, teacher interns are mentored in all ATEPs, most often by teachers but also by other role-players including organisational staff, volunteers and house parents. The amount of time interns spend with their mentors differs but in about half of all programmes this was estimated at up to 10 hours per week. For their part, most mentors were responsible for between one and five interns.

The scoping study findings suggest that teacher interns often have a significant workload, with most spending up to 10 hours teaching each week and further time committed to extra-curricular activities. Respondents also estimated that interns spend up to 20 hours per week completing their own academic coursework.

International research also shows that interns perform best when placed in collaborative schools with evidence of good management and leadership. This does not describe a large proportion of South African schools, particularly in rural and disadvantaged areas. Although the scoping study focused mainly on internship programmes and teacher trainees themselves, it also found that host schools are selected on



the basis of good management practices, functionality and willingness to commit time and resources.

Research also shows that interns benefit from placements at schools which are demographically similar to their teaching posts. While the scoping study did not look specifically at demographic factors of interns, it suggests that alternative pathways operated in eight of the nine provinces, although the greatest numbers were in KwaZulu-Natal, the Western Cape and Gauteng. All programmes require interns to speak English, although survey responses suggest that other languages are often used, particularly Afrikaans and isiZulu. Indigenous languages are also sought after as preferred areas of subject specialisation, as are Mathematics and Science. These findings suggest that alternative pathways are focused on supporting some government policies targeting equity and inclusion, such as the indigenous language policy. However, there is a broad diversity of programmes with some geographically combined and others operating widely. It is not clear to what extent equity is a consideration in the location of programmes, and how the varied findings of the literature play out within the context of South Africa requires a substantial investment in further research.



KEY QUESTION: What are the contributions of ATEPs to equity, particularly disadvantaged schools and rural areas?

The purpose and positioning of ATEPs is also a relevant question in the context. It is clear through the variety of models presented that ATEPs can maintain the status quo of current ITE, contribute to the professionalisation of the teaching force, or contribute to the 'de-skilling' of the profession, depending on the focus of recruitment (quantity or guality) and the approach to candidate development. What is also apparent is that the broad strokes of different models reflect a different macro-level conversation in education: Are teachers professionals (or at least working towards that goal)? Or are they rather the equivalent of factory floor workers, tightly managed by professionals? How a system and its actors answer this question has implications for teacher preparation, pay, retention, motivation, educational outcomes and, ultimately, whether a system will attain the status of a virtuous cycle or be locked in a perpetual state of repair and reform.

Within South Africa, the question remains contentious. Efforts towards professionalisation such as the Professional Teaching Standards (SACE, 2020b), the high regard for CPTD and government innovations, such as the induction framework and commitment to research, indicate movement towards greater professionalisation of the teaching force. On the other hand, a broadening focus on a prescriptive curriculum, even to the point of scripted lesson plans, and emphasis on compliance-oversight indicate movement in the opposite direction. In addition to policy-makers, teacher preparation programmes have a major role to play in this conversation as ultimately these will be the mechanisms through which development in either direction takes place.



KEY QUESTIONS: To what extent are the Professional Teaching Standards embedded in internship

programmes? How are existing teacher professionalisation efforts leveraged by internship implementers?

5.2 Teacher Internship Collaboration South Africa

Teacher internship models are particularly appealing in South Africa as a potential solution to persistent historic inequities in higher education access since they enable students to generate an income while studying and increase accessibility for students regardless of location. Based on international research and reviews within South Africa, there is evidence that ATEPs can contribute to improved confidence, smoother transitions between ITE and teaching, and outcomes such as improved teacher retention.

However, within South Africa, there are a relatively small number of alternative teacher education graduates, and their collective impact on the sector is largely unknown, particularly their effect over time. How long do these graduates remain in teaching? What do they contribute to learner performance? Further, the ability of these programmes to deliver quality results at scale is hampered by the fragmentation of the sector and accompanying ills such as duplication of effort, a lack of robust standards and overall limited evidence of efficacy and efficiency – the latter exacerbated by poor resource allocation and limited funding for the development and testing of such programmes.

The Teacher Internship Collaboration South Africa (TICZA) emerged as an innovative vehicle to support ATEPs. TICZA is a collective impact project designed to support mutually reinforcing activities across discrete actors in the education sector who have varying interests in ATEPs. These stakeholders include NGOs and other providers of ATEPs, HEIs that offer a training and qualification pathway for student teachers, funders and government departments including the Department of Basic Education (DBE), the Department of Higher Education (DHET) and the South African Council for Educators (SACE). TICZA and its stakeholders are invested in developing alternative pathways as effective, efficient and scalable ITE options within South Africa. As a collective impact project, TICZA seeks to diverge from an 'individual impact' mindset, in which organisations compete for funding from single funders and impact is measured at the individual level, to a more collaborative approach in which there is shared accountability across actors in the sector. To this end, TICZA supports shared measurement and tools, shared goals and objectives, and sector-wide collaboration. It seeks to create efficiencies and to unblock key challenges implementers face in delivering quality ITE through alternative models, generating insights that can positively influence the sector (for more details, see Appendix: TICZA Theory of change).





TICZA launched in 2021 and successfully: set up a steering committee with funders, HEIs, government departments and unions as voting members; consolidated existing knowledge about the role of teacher internships as alternative pathways in the South African context; established a shared learning network in the form of communities of practice; and developed a monitoring and evaluations framework and associated tools. TICZA further contributed new knowledge through the sector mapping included in this publication and outcomes mapping exercises. The community of practice is focused on implementers and has seen a growing attendance, currently registering 19 members including both NGOs and HEIs. Finally, TICZA appointed an embedded resource to support systemic change within government departments involved in TICZA.

From 2022 – 2025, TICZA will focus on four streams of action.

5.2.1. Advocacy and governance

One key challenge with systemic change initiatives such as TICZA is to ensure that all role players are involved in a meaningful manner, but without disrupting the process. Government is key, and careful planning is required to influence policy developments during the timespan of the programme, while allowing teacher unions and other actors to be heard. In addition to maintaining good governance of the TICZA initiative through regular Steering Committee meetings, the appointed embedded resource will continue to work with department officials to further the aims of TICZA through sharing/aligning relevant data, the promotion of TICZA to the Education Dean's Forum and Provincial Teacher Education and Development I.

Key work under this stream will include the coordination of activities under the theme of Funding ATEP, which will investigate and seek to align available funding mechanisms within government and TICZA partners to promote efficiencies in the financing and delivery of ATEP. As part of this work, the viability of innovative financing models will be explored.



CRITICAL CONSIDERATION FOR TICZA: Implementers have expressed an interest in TICZA supporting joint fund raising efforts for the sector. What role

can TICZA play in this regard whilst maintaining neutrality and not compromising bilateral funding relationships?

5.2.2 Shared measurement and tools

Monitoring and evaluation (M&E) remains a key element of TICZA. TICZA will coordinate data sources and the ethical use of data to promote both knowledge generation and improvement in delivery. The development of academic interest through the engagement of young researchers and their supervisors as well as external M&E support are critical to this process.

From 2022-2025, TICZA will collect key indicators as linked to the M&E toolkit created in the inception phase, with contributions on a voluntary basis.

During the course of 2021, it was noted that many implementers are able to monitor up to or soon after the graduation of their interns, but that many of the changes or outcomes TICZA is interested in will only be measurable after some time. Therefore, there is a need for evaluations to undertake additional data gathering and analysis to fill these gaps. To collect outcomes data, the convening group intends to work with academics and practitioners invested in work-integrated learning, ATEPs and related topics, creating additional opportunities for shared value and collaboration across TICZA partners.

The key points of value-add for implementers who join TICZA will be routine reports that show sector and their own performance, and the contributions of longer-term outcomes evaluation metrics which will provide evidence that can be used for sector advocacy and/or to revise programmes for improved performance. As a collective impact project, the focus is on sector performance and not comparative performance. Therefore, while the analysis will show general trends (e.g. the overall contribution of a mentorship component to effectiveness, or the trends in hours of classroom practice against outcomes) and institutions will have access to their own data, we will not share the individual performance of all implementers publicly for comparison. Data and reports pertaining to each individual organisation will be shared only with that organisation by the convening group, with wider dissemination at the discretion of the organisation.

CRITICAL CONSIDERATIONS FOR TICZA: The M&E framework provides shared indicators for all partners.

What sensitivities does TICZA need to address before data collection and sharing can commence? Do the quality and non-measurable gains (such as increasing access to disadvantaged populations) offset the increased cost?

Further, TICZA itself is an innovative programme which is developing a collective impact model that can potentially benefit other projects in the sector if both well designed and rigorously evaluated. In 2022, one or more terms of reference (TOR) will be published seeking evaluating agencies that can provide these services. JET and convening partners will not influence this evaluation but the funding is allocated within the overall budget. JET will support with drafting the TOR/ scope of work, but not with the appointment and will not be involved in approving deliverables.

5.2.3 Sector-wide collaboration and innovation

In addition to the communities of practice, 2022 will see the formation of TICZA working groups. Working groups have been created through shared input exercises in the inception phase, including the outcomes mapping and group exercises in community of practice sessions. Strategic and implementation partners had multiple opportunities in 2021 to shape the working groups, and will have further opportunities in 2022 to refine their proposed outputs. Outputs will be generated through research and/or conceptual workshops, and participation in these exercises will be funded. Working groups have been preliminarily established and will support three thematic areas:

Mentorship. Engagements in 2021 have indicated the potential for systemic change which can enable more effective internship delivery at scale. This has also been identified as critical by all stakeholders. This stream will pull together the efforts of SACE, the DBE, HEIs, implementers and unions.

Implementer alignment. This stream will focus on applications of efforts under way to improve curricula and delivery taking place through DHET and academic collaborations. In addition, implementers of both types will be encouraged to improve their own short- and long-term internship programmes through the sharing of lessons learned and research findings, and to collaborate for the

formation of detailed standards for internships linked to policy. TICZA will continue to pursue and promote evidencebased programming, sharing of knowledge and learnings, and improvement of effectiveness and efficiency. A focus will be on researching and pursuing the elements of scale for both organisations and alternative teacher education models, and embedding key policies such as the SACE Professional Teaching Standards across levels of training and support.



CRITICAL CONSIDERATIONS

FOR TICZA: Considering the importance of high-quality, dedicated mentors in the Theory of Change,

internships cannot reach scale without the systematic training a cohort of mentors in government schools. What is the role of TICZA in this regard? What is the role of implementing partners in this regard?

What is the professionalisation pathway for teachers who want to focus on training the next generation of teachers? Where should mentorship be placed in a teacher's career and professional pathway? What pre-requisites should be in place within South Africa for mentors, and how can existing policies like the lead teacher policy be leveraged?

School support. The school support working group will support the conditions of success for interns within schools through research/advocacy around teaching practice schools, a focus on creating tools and resources for schools related to hosting work-integrated learning interns of all types, and the promotion of levelled work-integrated learning competency frameworks.

Working with the implementer/HEI community of practice and facilitated multi-stakeholder working groups, TICZA will respond to sector blockages identified in the outcomes mapping and other year-1 engagements (mentorship, competency development through work-integrated learning, supporting schools, ATEP/HEI alignment, etc.). These will focus on policy and practice support instruments, such as frameworks that can be adopted or adapted by individual programmes, thus preserving 'uniqueness' of implementers and HEIs while benefitting their engagements.



CRITICAL CONSIDERATIONS FOR TICZA: Implementing partners tend to have

bilateral relationships with HEIs and schools, hard won over time. How can TICZA support/ streamline this process?

What is the role of internship providers and TICZA in improving the theoretical component of ITE and practical teaching component of residential ITE programmes?

5.2.4 Knowledge sharing

TICZA will develop a huge amount of knowledge and outputs, many of which will seek to reach broad audiences. A knowledge management and dissemination strategy will be employed throughout the period of TICZA to disseminate high-level research findings as well as the practical tools and resources created. This strategy includes the development and management of a web presence, the participation of implementers and researchers in conference presentations, the dissemination of TICZA knowledge and advocacy for the collaboration across the shared platforms of participants, and publications and multi-stakeholder engagements to share findings.

This is a cross-cutting key lever that is embedded in all other TICZA activities, from communities of practice to advocacy efforts to research.

Most survey respondents supported the idea of a collaborative process such as TICZA in principle, and a majority indicated a willingness to participate. Some reservations were also expressed, however, including wanting to avoid unnecessary changes to already successful internship programmes and 'time-consuming talks about talks that make no difference'.

Respondents identified key focus areas for TICZA as including support in sourcing funding, building relationships with HEIs, introducing M&E systems, and tracking alumni.



CRITICAL CONSIDERATIONS FOR TICZA: Respondents generally supported the idea of TICZA and were willing to participate. But TICZA will need to address challenges to ensure sustained interest of implementers such as a bias to action (not just talking), protection of intellectual property, time

constraints of already stretched implementing teams, competition between implementers, etc.

How can implementers hold TICZA accountable for the systemic outcomes that they are driving towards?

5.3 Concluding comment

This implementation brief aimed to familiarise stakeholders with the body of knowledge on internships and alternative education pathways for teachers, create a case for the necessity and the potential of alternative teacher education pathways in South Africa, and to orientate implementers to the work of the Teacher Internship Collaboration South Africa.

There is evidence that alternative ITE models can provide solutions to some of the major challenges in the South African education system; i.e. as access, diversity, allocation and even quality of teachers. Currently existing implementers provide a range of ATEP models, with a common focus on selection, mentorship and additional training and support (that may or may not include academic support) for student teachers. Within South Africa, such 'value added' models of internship programmes are free to operate but are tethered to higher education institutions' ITE programmes with concomitant quality of outputs. However, the programmes provide between one and four years of embedded school teaching practice, compared to the 12 weeks required by South African policy, and some reviews have showed positive effects. Yet, the exact drivers of these effects are still unknown, both within South Africa and internationally. Developing quality models that can operate at scale requires answers to a number of critical questions, including:

- What efficiencies can be gained through complementary initiatives such as teacher induction or continuous teacher professional development?
- What types of alternative education pathways are most successful and most appropriate for the South African context?
- What lessons can be learned from alternative pathways?
- What are practice recommendations that should be adopted for existing teacher internships system-wide?

- What are the trade-offs between length, scale, efficiency and teacher quality, if any?
- What are the contributions of ATEPs to equity, particularly disadvantaged schools and rural areas?
- To what extent are the Professional Teaching Standards embedded in internship programmes?
- How are existing teacher professionalisation efforts leveraged by internship implementers?

The Teacher Internship Collaboration South Africa is a multipartner collaboration that brings together government, academia, the private sector and NGO implementers in order to drive innovation and continuous improvement in the delivery of teacher internships. The collaboration aims to demonstrate teacher internships as an alternative pathway of initial teacher education that are effective, efficient and can achieve the scale necessary to positively impact the education sector in South Africa. TICZA is interested in systemic change and seeks to establish and demonstrate the efficiencies and impact of teacher internships as a credible alternative ITE pathway which can generate *high quality, effective teachers* for public schools in South Africa, and for the adoption of this mechanism as a formal pathway to a teaching qualification.

Only through the collaboration and collective efforts of sector stakeholders, including government, the third sector and the private sector, can these ambitious aims be achieved and South Africa finally demonstrate the type of educational outcomes that ensure citizens are able to contribute socially, politically and economically to their communities. Stakeholders including higher education institutions, lecturers, researchers, government officials and NGOs are invited to join us as we write the next chapter for South African education.

References

Baeten, M. and Meeus, W. (2016). Training secondcareer teachers: A different student profile, a different training approach? *Educational Process: International Journal*, 5(3), 173–201. http://dx.doi.org/10.12973/ edupij.2016.53.1.

Blömeke, S., Olsen, R. and Suhl, U. (2016). Relation of student achievement to the quality of their teachers and instructional quality. In J.-E. Gustafsson and T. Nilsen (Eds.), *Teacher quality, instructional quality and student outcomes* (pp. 21--50). New York: Springer. http://dx.doi. org/10.1007/978-3-319-41252-8_2

Brown, C. (2009). Elements of successful internships. In Proceedings of the 2009 Association for Educational Communications and Technology Convention (pp. 41–49). 32nd Annual Conference of the AETC, Louisville, KY, USA.

Bülbül, T. (2017). Factors influencing access to higher education in Turkey. In S. Renes (Ed.), *Global voices in higher education* (Chapter 8). London: Intech Open. http://dx.doi.org/10.5772/intechopen.68821.

Carter, J.H. and Lochte, H.A. (2017). Teacher blame and corporate gain: edTPA and the takeover of teacher education. In J.H. Carter and H.A. Lochte (Eds.), *Teacher Performance Assessment and Accountability Reforms* (pp. 7–23). New York: Palgrave Macmillan.

CDE (Centre for Development and Enterprise). (2015). Teachers in South Africa: Supply and demand 2013– 2025. Executive summary. Johannesburg: CDE.

CDE (Centre for Development and Enterprise). (2017). *Teacher professional standards for South Africa: The road to better performance, development and accountability?* Johannesburg: CDE. https://www.cde.org.za/wpcontent/uploads/2018/06/CDE-Insight-Teacher-Professional-Standards-For-South-Africa.pdf.

Chandra, M. (2015). Implications of contract teaching in India: A review. *Policy Futures in Education*, *13*(2). http:// dx.doi.org/10.1177/1478210314567288.

Clark, M., Isenberg, E., Liu, A., Makowsky, L. and Zukiewicz, M. (2015). *Impacts of the Teach For America: Investing in innovation scale-up*. Mathematica Policy Research Report. Washington DC: Teach for America. https://teachforamerica.app.box.com/s/ wyuu1rpqogxmksat86mnuk16sur981le.

CTE (Center for Teacher Education). (2020). *Teacher internship and pre-internship handbook*. Grand Junction, CO: Colorado Mesa University. Darling-Hammond, L. (1990). *The teaching internship. Practical preparation for a licensed profession.* Santa Monica, CA: Rand Corporation.

Darling-Hammond, L. (2017). Teacher education around the world: What can we learn from international practice? *European Journal of Teacher Education*, 40(3), 291–309. https://doi.org/10.1080/02619768.2017.1315399.

Darling-Hammond, L. and Youngs, P. (2002). Defining 'highly qualified teachers': What does 'scientifically-based research' actually tell us? *Educational Researcher*, 31(9), 13–25. https://doi.org/10.3102%2F001318 9X031009013.

DBE (Department of Basic Education, South Africa). (n.d.). *Guide for training mentors*. Pretoria: DBE.

DBE (Department of Basic Education, South Africa). (2019). Towards a South African teacher induction framework. Pretoria: DBE.

DBE (Department of Basic Education, South Africa). (2020). 2019 school realities. Pretoria: DBE. https:// www.education.gov.za/Portals/0/Documents/ Reports/School%20Realities%202019%20Final%20. pdf?ver=2020-02-07-101051-330

De Paola, M. (2009). Does teacher quality affect student performance? Evidence from an Italian University. *Bulletin of Economic Research*, 61(4), 353–377. https:// doi.org/10.1111/j.1467-8586.2008.00299.x.

Deacon, R. (2012). The initial professional development of teachers: A literature review. Johannesburg: JET Education Services. https://www.jet.org.za/resources/ deacon-initial-professional-development-of-teachersliterature-review-feb15web.pdf.

Deacon, R. (2015). *Report on the 2013 survey of final year initial teacher education students*. Johannesburg: JET Education Services. https://www.jet.org.za/resources/ deacon-report-on-the-student-survey.pdf.

Deacon, R. (2016). *The initial teacher education research project*. Johannesburg. JET Education Services. https:// www.jet.org.za/resources/deacon-iterp-final-compositereport.pdf.

Dhai, A. and Mkhize, B. (2006). The Health Professions Council of South Africa and the medical practitioner. *Continuing Medical Education Journal*, 24(1), 8–11. http://www.cmej.org.za/index.php/cmej/article/ viewFile/281/170.

DHET (Department of Higher Education and Training, South Africa). (2010). *Draft policy on the norms and standards for qualifications in education*. Pretoria: DHET.



- DHET (Department of Higher Education and Training). (2011). Integrated strategic planning framework for teacher education and development in South Africa. Pretoria: DHET.
- DHET (Department of Higher Education and Training, South Africa). (2015). The minimum requirements for teacher education qualifications. *Government Gazette*, 583(34467).
- DHET (Department of Higher Education and Training, South Africa). (2020). *Strategic plan 2020–2025*. Pretoria: DHET.
- Duflo, E., Dupas, P. and Kremer, M. (2015). School governance, teacher incentives, and pupil-teacher ratios: Experimental evidence from Kenyan primary schools. *Journal of public Economics*, *123*, 92–110. https://doi. org/10.1016/j.jpubeco.2014.11.008.
- Duthilleul, (2005). Lessons learnt in the use of contract teachers. Paris: International Institute for Education Planning, UNESCO. https://unesdoc.unesco.org/ ark:/48223/pf0000144412/PDF/144412eng.pdf.multi.
- Ekabu, P. (2018). The level of remuneration and turnover intention of public secondary school teachers in Meru County: A mixed method study. *European Scientific Journal*, *15*(13). https://doi.org/10.19044/esj.2019. v15n13p1.
- Feistritzer, E. (2001). *Alternative routes to teaching*. Washington, DC: National Center for Education Information.
- García, E. and Weiss, E. (2019). *The teacher shortage is real, large and growing, and worse than we thought.* Washington, DC: Economic Policy Institute.
- Goldhaber, D. (2016). In schools, teacher quality matters most. *Education Next*, *16*(2). https://www.educationnext. org/in-schools-teacher-quality-matters-most-coleman/
- Goldhaber, D., Krieg, J., Naito, N. and Theobald, R. (2020). Making the most of student teaching: The importance of mentors and scope for change. *Association for Education Finance and Policy*, *15*(3), 581–591. https:// doi.org/10.1162/edfp_a_00305.
- Goyal, S. and Pandey, P. (2013). Contract teachers in India. *Education Economics* 21(5), 464–484. https://doi.org/10. 1080/09645292.2010.511854.
- Hanushek, E.A., Kain, J.F. and Rivkin, S.G. (2005). Teachers, schools, and academic achievement. *Econometrica*, 73(2), 417–458. http://dx.doi.org/10.3982/ECTA12211.
- Hanushek, E.A., Kain, J.F., O'Brien, D.M. and Rivkin, S.G. (2005). *The market for teacher quality*. Working Paper 11154. Cambridge, MA: National Bureau for Economic Research. http://www.nber.org/papers/w11154.
- Hanushek, E.A. and Rivkin, S. (2006). Teacher quality. In E.A. Hanushek and F. Welsh (Eds.), *Handbook of the economics of education, Volume 2.* Amsterdam: Elsevier B.V.

- Hendrikse, J. (2013). *Teacher education by means of internship: A case study* (Master's thesis, University of South Africa).
- Hofmeyr, J. (2016). International literature review on alternative teacher education pathways. Prepared for the Zenex Foundation. Johannesburg: JET Education Services. https://admin.jet.org.za/resources/ international-literature-review-on-alternative-itepathways-final-160922for-web.pdf.
- Humphrey, D.C., Wechsler, M.E. and Hough, H.J. (2008). Characteristics of effective alternative teacher certification programs. *Teacher College Record*, *110*(1), 1-63. https://www.sri.com/wp-content/ uploads/2021/12/effective-alt-cert-programscharacteristics.pdf
- Jepsen, C. and Rivkin. S. (2002). Class size reduction, teacher quality, and academic achievement in California elementary public schools. San Francisco, CA: Public Policy Institute of California.
- Kromydas, T. (2017). Rethinking higher education and its relationship with social inequalities: past knowledge, present state and future potential. Palgrave Communications, 3, Article 1. https://www.nature.com/ articles/s41599-017-0001-8.
- Kumar, P. and Wiseman, A. (2021). Teacher quality and education policy in India: Understanding the relationship between teacher education, teacher effectiveness, and student outcomes. New York: Routledge. http://dx.doi. org/10.4324/9781003054726.
- Majgaard, K. and Mingat, A. (2012). Education in sub-Saharan Africa: A Comparative Analysis. World Bank.
- Mitchell, D. and Romero, L. (2010). The politics and practice of alternative teacher certification. *Educational Administration Quarterly*, *46*(3). http://dx.doi. org/10.1177/0013161X10375272.
- Mohammadi, M. and Moradi, K. (2017). Exploring change in EFL teachers' perceptions of professional development. *Journal of Teacher Education for Sustainability*, 19(1), 22–42. http://dx.doi.org/10.1515/jtes-2017-0002
- Mueller, C.M. (2012). The impact of teacher certification programs on teacher efficacy, job satisfaction, and teacher performance: A comparison of traditional and alternative certification (Doctoral dissertation, Western Kentucky University, Bowling Green, USA). https:// digitalcommons.wku.edu/diss/28/.
- Munnhar, P. (2019). The South African Council for Educators point system policy: Implications for the professional development of teachers in Gauteng (Doctoral dissertation, Faculty of Education, University of South Africa). http://hdl.handle.net/10500/27247.

- Mwesiga, A. and Okendo, E. (2018). Levels of teachers commitment to the teaching profession in secondary schools in Kagera Region, Tanzania. *Research on Humanities and Social Sciences*, 8(14). https://www.iiste. org/Journals/index.php/RHSS/article/view/43581.
- NCES (National Center for Education Statistics). (2018). Characteristics of public school teachers who completed alternative route to certification programs. Washington, DC: NCES. https://nces.ed.gov/programs/coe/pdf/ coe_tlc.pdf.
- NCTQ (National Council on Teacher Quality). (2014). *Teacher prep review 2014: Findings on* Secondary *Alternative Certification Programs*. Washington, DC: NCTQ. https://www.nctq.org/dmsView/Chapter4_ FindingsonSecondaryAlternativeCertificationPrograms.
- NCTQ (National Council on Teacher Quality). (2020). 2020 Teacher prep review: Clinical practice and classroom management. Washington, DC: NCTQ. https://www. nctq.org/publications/2020-Teacher-Prep-Review:-Clinical-Practice-and-Classroom-Management.
- Nyamupangedengu, E. (2017). Investigating factors that impact the success of students in a Higher Education classroom: A case study. *Journal of Education*, *68*. https://doi.org/10.17159/2520-9868/i68a04.
- OECD (Organisation for Economic Co-operation and Development). (2019). South Africa – Country note: *TALIS 2018 results*. Paris: OECD Publishing. https://doi. org/10.1787/1d0bc92a-en
- Otara, A. (2014). Students' perceptions on education internship program in Rwanda: Effectiveness and challenges. *European Journal of Educational Sciences*, 1(2). https://www.ajouronline.com/index.php/AJEEL/ article/view/1432.
- Paniagua, A. and Sánchez-Martí, A. (2018). *Early* career teachers: Pioneers triggering innovation or compliant professionals? OECD Education Working Paper No. 190. Paris: OECD Publishing. https://doi. org/10.1787/4a7043f9-en.
- Piotrowski, C. and Suell, J. (2007). Alternative teacher education programs: A review of the literature and outcome studies. *Journal of Instructional Psychology*, 34(1), 54–58.
- Ponds, A. (2020). A case study regarding induction supports and activities and their impact on successful teacher retention (Doctoral dissertation, Department of Education, University Concordia, St Paul, MN, USA). https://digitalcommons.csp.edu/edd/13/.
- Prodan, A., Maxim, E., Manolescu, I., Arustei, C.C. and Guta, A.L. (2015). Access to higher education: Influences and possible implications. *Procedia Economics and Finance*, 20(1), 535–543. https://doi.org/10.1016/S2212-5671(15)00106-9.

- Richard, N. (2017) Internships would spawn ace teachers. *Mail and Guardian*, 27 October 2017. https://mg.co.za/ article/2017-10-27-00-internships-would-spawn-aceteachers/.
- Rollnick, M. and Mavhunga, E. (2016). The place of subject matter knowledge in teacher education. In the International handbook of teacher education (pp. 423– 452). http://dx.doi.org/10.1007/978-981-10-0366-0_11.
- SACE (South African Council of Educators). (2020a). Teacher professionalisation path. Centurion: SACE. https://www. sace.org.za/assets/documents/uploads/sace_71763-2020-10-12-Teacher%20Professionalisation%20Path%20 -%20Call%20for%20Comments%20Oct%202020%20 (002).pdf.
- SACE (South African Council of Educators). (2020b). *Towards excellence in education. Professional teaching standards*. Centurion: SACE. https://www.sace.org.za/ assets/documents/uploads/sace_31561-2020-10-12-Professional%20Teaching%20Standards%20Brochure. pdf.
- Sayed, Y., Motala, S. and Hoffman, N. (2017). Decolonising initial teacher education in South African universities: More than an event. *Journal of Education (University of KwaZulu-Natal)*, 68, 59–91.
- See, B.H., Morris, R., Gorard, S., Kokotsaki, D. and Abdi, S. (2020). Teacher recruitment and retention: A critical review of international evidence of most promising interventions. *Education Sciences*, *10*(10), 262. http:// dx.doi.org/10.3390/educsci10100262.
- Shibiti, R. (2020). Public school teachers' satisfaction with retention factors in relation to work engagement. *SA Journal of Industrial Psychology*, *46*(9). http://dx.doi. org/10.4102/sajip.v46i0.1675.
- Simkins, C. (2015). *Teacher supply and demand in South Africa: 2013–2025:* Johannesburg: Centre for Development and Enterprise. https://www.cde.org.za/ wp-content/uploads/2018/07/Teacher-Supply-and-Demand-2013-2025-Technical-Report-March2015-CDE. pdf
- Sirait, S. (2016). Does teacher quality affect student achievement? An empirical study in Indonesia. *Journal* of Education and Practice, 7(27). https://ssrn.com/ abstract=2846795.
- Spilt, J.L., Koomen, H.M.Y. and Thijs, J. (2011). Teacher wellbeing: The importance of teacher-student relationships. *Educational Psychology Review*, 23(4), 457-477. https://link.springer.com/article/10.1007/s10648-011-9170-y.
- Taylor, N. (2014). *Thinking, language and learning in Initial Teacher Education*. Johannesburg: JET Education Services. https://www.jet.org.za/resources/taylorthinking-language-and-learning-in-ite-for-web.pdf.



- Taylor, N. and Robinson, N. (2016). *Towards teacher* professional knowledge and practice standards in South Africa. Johannesburg: JET Education Services.
- Taylor, N. and Robinson, N. (2019). Secondary education in Africa: Teacher preparation and support. Case study South Africa. Background paper for Secondary education in Africa: Preparing youth for the future of work. Mastercard Foundation. https://mastercardfdn.org/ wp-content/uploads/2019/07/SEA-Teacher-Preparationand-Support-Case-Study-South-Africa.pdf.
- Taylor, N. and Schindler, J. (2016). *Education Sector Landscape Mapping: South Africa.* Johannesburg: Jet Education Services. https://www.jet.org.za/resources/ taylor-and-shindler-jet-education-sector-mapping-2016. pdf/view.
- Thaba-Nkadimene, K.L., and Mmakola, S.D. (2019). Examining the performance of teacher graduates from Limpopo rural university. *South African Journal of Higher Education*, *33*(5), 169–181. https://doi.org/10.20853/33-5-3596.
- Thomas, N., McGrann, E., Zammit, L., Eaton, P., White, W., Lingam, C., ... and O'Neill, R. (2019). Junior doctor-designed induction booklet to improve future junior doctor experience in a new post. *Future Healthcare Journal*, 6(2), 17. https://doi. org/10.7861%2Ffuturehosp.6-2s-s17.
- Tindowen, D. J., Bangi, J. and Parallag Jr, C. (2019). Preservice teachers' evaluation on their student internship program. *International Journal of Learning, Teaching and Educational Research*, 18(10). http://dx.doi.org/10.26803/ ijlter.18.10.18.
- Toropova, A., Myrberg, E. and Johansson, S. (2021). Teacher job satisfaction: the importance of school working conditions and teacher characteristics. *Educational Review*, *73*(1), 71–97. https://doi.org/10.1080/00131911 .2019.1705247.

- Tucker, M. (2021). Getting teacher professionalism right: Notes for the Biden Administration. https://ncee. org/2020/12/getting-teacher-professionalism-rightnotes-for-the-biden-administration/.
- van Broekhuizen, H. (2015). *Teacher supply in South Africa: A focus on initial teacher education (ITE) graduate production.* Presentation to the ReSEP Conference on Quantitative Applications in Education STIAS, Stellenbosch, 19 September 2016. https://resep.sun. ac.za/wp-content/uploads/2016/09/2.-Teacher-Supplyin-South-Africa-Hendrik-van-Broekhuizen..pdf.
- van Tonder, D. and Fourie, E. (2018). Internship as a criterion for South African educators' registration. *International Journal of Educational Management*, 32(7). http://dx.doi. org/10.1108/IJEM-08-2017-0198.
- Venter, F. (2016). An educator in every class: the management of substitute educators in northern Gauteng province (Master's dissertation, Faculty of Education, University of Pretoria).
- von Hippel, P. and Bellows, L. (2018). How much does teacher quality vary across teacher preparation programs? Reanalyses from six states. *Economics of Education Review*, *64*(1), 298–312. http://dx.doi. org/10.2139/ssrn.2990498.
- Whatman, J. and MacDonald, J. (2017). *High quality practica and the integration of theory and practice in Initial Teacher Education: A literature review prepared for the Education Council.* Wellington: New Zealand Council for Educational Research.

Appendix: TICZA Theory of change



