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A Critical Review of Extended Student Internships and Work Integrated Learning in South African Initial Teacher Education

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List of Acronyms

AJOTE	African Journal of Teacher Education
ATPs	Alternative Teaching Pathways
B Ed	Bachelor of Education
CEA	Cost-Effectiveness Analysis
CODESRIA	Council for the Development of Social Science Research in Africa
DBE	Department of Basic Education
DHET	Department of Higher Education and Training
DTL	Digital Teaching and Learning
DBTRS	District Based Teacher Recruitment Strategy
ECD	Early Childhood Development
ESTI	Extended Student Teacher Internships
EWAS	Extended Wraparound Support
FET	Further Education and Training
HEI	Higher Education Institutions
IT / ICT	information and Communication Technology
ISPFTED	Integrated Strategic Planning Framework for Teacher Education and Development
ITE	Initial Teacher Education
IP	Implementing Partner
MRTEQ	Minimum Requirements for Teacher Education Qualifications
NQT	Newly Qualified Teacher
NGO	Non-Governmental Organisation
NSFAS	National Student Financial Aid Scheme
NWU	North West University
OIS	Oxford Internship Scheme
PED	Provincial Education Department
PGCE	Postgraduate Certificate in Education
PST	Preservice Teacher
PT	Part time
QTS	Qualified Teacher Status
SEL	Social and Emotional Learning
SACE	South African Council for Educators
STEAMAC	Science, Technology, Engineering, Arts, Mathematics, Agriculture
STEM	Science, Technology, Engineering, Maths
TICZA	Teacher Internship Collaboration South Africa
ToC	Theory of Change
UJ	University of Johannesburg
UK	United Kingdom
UKZN	University of KwaZulu Natal
UL	University of Limpopo
UNISA	University of South Africa
WIL	Work-Integrated Learning

Background and context

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A Critical Review of Extended Student Internships and Work Integrated Learning
in South African Initial Teacher Education

1.1   Introduction

Initial Teacher Education (ITE) is a foundational stage in the journey to becoming a teacher (Deacon, 2016). It serves as a transformative process, allowing prospective teachers to shift from their early perceptions of teaching, formed during their own schooling, towards a more nuanced understanding shaped by academic theory and hands-on teaching practice during work-integrated learning (WIL). In South Africa, this phase is guided by national policies, frameworks and standards such as the Integrated Strategic Planning Framework for Teacher Education and Development (ISPFTED) (Department of Basic Education [DBE] and Department of Higher Education and Training [DHET] 2011), the Minimum Requirements for Teacher Education Qualifications (MRTEQ) (DHET, 2015), the South African Council for Educators (SACE) Professional Teaching Standards (SACE, 2018) and many others. Despite being governed by a common policy environment, the structure and delivery of teacher preparation vary significantly across higher education institutions (HEIs) (Taylor, 2016; Esau & Maarman, 2021; Gravett & Kroon, 2021; Rusznyak & Osterling, 2024).

These variations are influenced not only by the discrete enactment of national policy but also by institutional frameworks, resource availability and the capacity and expertise of those involved in designing, delivering and evaluating teacher education programmes. The Initial Teacher Education Research Project (ITERP) study of five South African universities' ITE programmes revealed significant variation in both module content and teaching practice components across the institutions (Rusznyak & Osterling, 2024; Taylor, 2014). The Centre for Development and Enterprise, in their study on teacher supply and demand, stated that Bachelor of Education (B Ed) programmes across South African HEIs 'vary greatly, highlighting varied amounts of time and quality in teaching practice' (Centre for Development and Enterprise, 2015, 7). In addition, according to Ndebele et al., (2024, 11), the effectiveness of WIL programmes which help student teachers to 'develop the necessary competencies to shape their teacher identities' is hindered by misalignment between theory and practice, as well as other challenges such as teacher absenteeism and lack of support from mentors. This undercuts the practical experience component as a critical laboratory in which student teachers' professional identities, capacities and values are tested, refined and reflected on within the future practice setting.

Over the years, South Africa's teacher education landscape has undergone significant changes, particularly following the shift of ITE from teacher training colleges to higher education institutions after the democratic transition (Robinson et al., 2024). This transition created opportunities to strengthen teacher preparation but also brought new challenges, especially in equipping future teachers to navigate the complex realities of South Africa's ever evolving classrooms. These challenges have mobilised a range of stakeholders, including government departments, public entities, philanthropic funders, and non-governmental organisations (NGOs), to address gaps in the ITE system. Persistent issues such as insufficient preparation of student teachers and the mismatch between teacher supply and sector demand (Deacon, 2016; Hofmeyr, 2016; Ndebele et al., 2024; UNESCO International Task Force on Teachers for Education 2030, 2024), have spurred the need for innovative solutions, laying the foundation for new partnerships to emerge that work across institutional settings to strengthen pre-service teachers' ongoing integration of knowledge and experience.

1.2   What is TICZA?

The Teacher Internship Collaboration South Africa (TICZA) is an attempt to improve ITE by means of Extended Student Teacher Internships (ESTIs). ESTIs have emerged as a promising innovation within the ITE landscape in South Africa and in other countries, offering an alternative to traditional work-integrated learning by embedding student teachers in schools for prolonged, structured periods (Fielder, 2023; McDonald, 2024). Designed to bridge the persistent gap between academic theory and classroom practice (Ndebele et al., 2024), ESTIs enhance student teachers' readiness to teach through sustained wraparound support, including structured mentorship, professional guidance and deep immersion in authentic school environments (Fielder, 2023). This approach not only increases the quantity of school-based learning time but also strengthens the quality of professional preparation through regularly guided practice, positioning student teachers for a more confident and competent transition into the profession (Gravett & Kroon, 2021; Morris & Forbes, 2023; Tindle et al., 2011).

According to McDonald (2024), the extended student teacher internship model is not a formal requirement of B Ed or Postgraduate Certificate in Education (PGCE) programmes but functions as a complementary support mechanism alongside traditional higher education pathways. By increasing school-based practice well beyond the minimum weeks prescribed in MRTEQ (see Table 1 below: DHET, 2015, currently under review), ESTIs shift the emphasis from a predominantly university-based mode of delivery, particularly the part-time or distance learning approach, towards a model embedded within future practice contexts (schools). This allows for deeper embedding and integration of theoretical knowledge within ongoing practice opportunities, supported by expert mentors and peers.

Open distance university learning typically involves self-directed learning where students exercise their autonomy with limited academic and other forms of support (Mbatha, 2024). In contrast, ESTIs pair this extended in-school presence with targeted academic, professional and mentorship support, structured monitoring of student experiences, and contributions to curriculum and lesson planning. In one example, a TICZA partner implementing an ESTI notes that student teachers spend half of each day in the classroom engaged in practice teaching, amounting to up to 20 weeks of WIL practice time in a single school year of approximately 42 weeks. Student teachers in the programme also meet with their assigned mentor teacher on a weekly basis to discuss their progress and troubleshoot challenges, ensuring regular professional input and guidance.

NGOs, as the primary service providers, play a pivotal role in delivering ESTIs at the present time, although this role could also be fulfilled by universities and other civil society agencies in the future. These NGOs work closely with student teachers to strengthen pedagogical skills in key areas such as literacy and numeracy, while also addressing learning gaps often found in traditional ITE programmes (Maje & Lubisi, 2024; McDonald, 2024; Roberts & Moloi, 2022).

Table 1: Minimum school-based practice as prescribed by MRTEQ

Qualification	Number of years	Min WIL Duration	Max WIL Duration	Other Specifications
B.Ed Contact	4 years	20 Weeks	32 Weeks	A maximum of 12 weeks per year may be spent in schools, of which at least 3 weeks must be consecutive.
B. Ed Distance	4 years (Part-time)			Students may spend extended periods in schools, such as those employed as unqualified teachers; however, they must still be supervised and assessed in the same manner as contact students.
PGCE	1 year	8 Weeks	12 Weeks	At least 4 of the required weeks must be completed consecutively in a school and must include supervised and assessed teaching practice.
PGCE Distance	1 year (Part-time)	Students may spend longer periods in schools, such as those employed as professionally unqualified teachers, but they must still receive the same amount of supervision and assessment in school-based practice as students in contact programmes		

These gaps may be cumulative, resulting from inadequate foundational education, or may emerge during insufficient initial teacher preparation. In both cases, they underscore the urgent need to produce highly competent novice teachers capable of improving learning outcomes in South African schools.

Recognising this need, the Teacher Internship Collaboration South Africa (TICZA) was launched in 2021 with the aim of documenting and strengthening innovative WIL approaches, examining their design, implementation and monitoring and evaluation practices to assess efficiency, effectiveness and cost effectiveness in producing classroom-ready teachers. TICZA is a multi-stakeholder initiative grounded in the Collective Impact model. It brings together government departments, statutory bodies, teacher unions, higher education institutions, NGOs, and philanthropic partners to collaborate on research, knowledge sharing, tool co-creation, and advocacy aimed at strengthening the ESTI model. TICZA's work prioritises the identification of effective ESTI practices, particularly those serving open distance learning student teachers, and the generation of evidence to inform policy and scale impactful approaches.

To better understand and document innovative approaches to WIL, both within TICZA's ecosystem (ESTI models) and beyond, this critical synthesis report combines current evidence on the functioning of ESTIs in South Africa and in comparable contexts internationally with an extensive review of academic work on student teacher experiences of work-integrated learning. The report is structured into three parts, each drawing on a distinct category of data sources:

- **Part 1** analyses TICZA's knowledge products.
- **Part 2** examines programme documents from nine implementing partners (implementing partners).
- **Part 3** presents a systematic literature review of academic and scholarly work capturing innovative WIL approaches outside TICZA and beyond South Africa's borders.

This synthesis report integrates findings from research and evaluation activities across these sources to provide insight into ESTI programme design, implementation and monitoring practices. It explores how various actors assess programme effectiveness, particularly in terms of student teacher practices and retention, and identifies the drivers, enabling conditions and pressure points that influence the success of the ESTI approach. The report aims to offer a broad synthesis of TICZA's activities as it is currently located within the wider research and practice landscape.

Initially, TICZA's research plan emphasised a quasi-experimental study; however, the focus has shifted towards using secondary data to examine processes and practices. This shift underscores the need for a high-level review of existing research and evaluation evidence, particularly from TICZA partners, to identify common indicators of efficacy, shared standards and metrics, and core design features across providers and participating HEIs. At the same time, this review was framed within a broader systematic review of literature on student teacher WIL, offering critical insights into the dynamics of effective field experiences, including the roles of mentorship, supervision and communities of practice in fostering teacher readiness.

This synthesis report furthermore forms part of TICZA's evidence-building agenda, integrating insights from implementing partners (IPs), academic literature and other relevant sources to deepen understanding of how ESTIs operate, how their effectiveness is assessed and which factors enable or constrain their success. The analysis contributes to a shared knowledge base that can guide the development, institutionalisation, and scaling of ESTIs within the South African ITE system. This work sits within a broader package of knowledge development activities designed to establish an evidence-informed foundation for embedding the ESTI model in the formal pathways into the teaching profession.
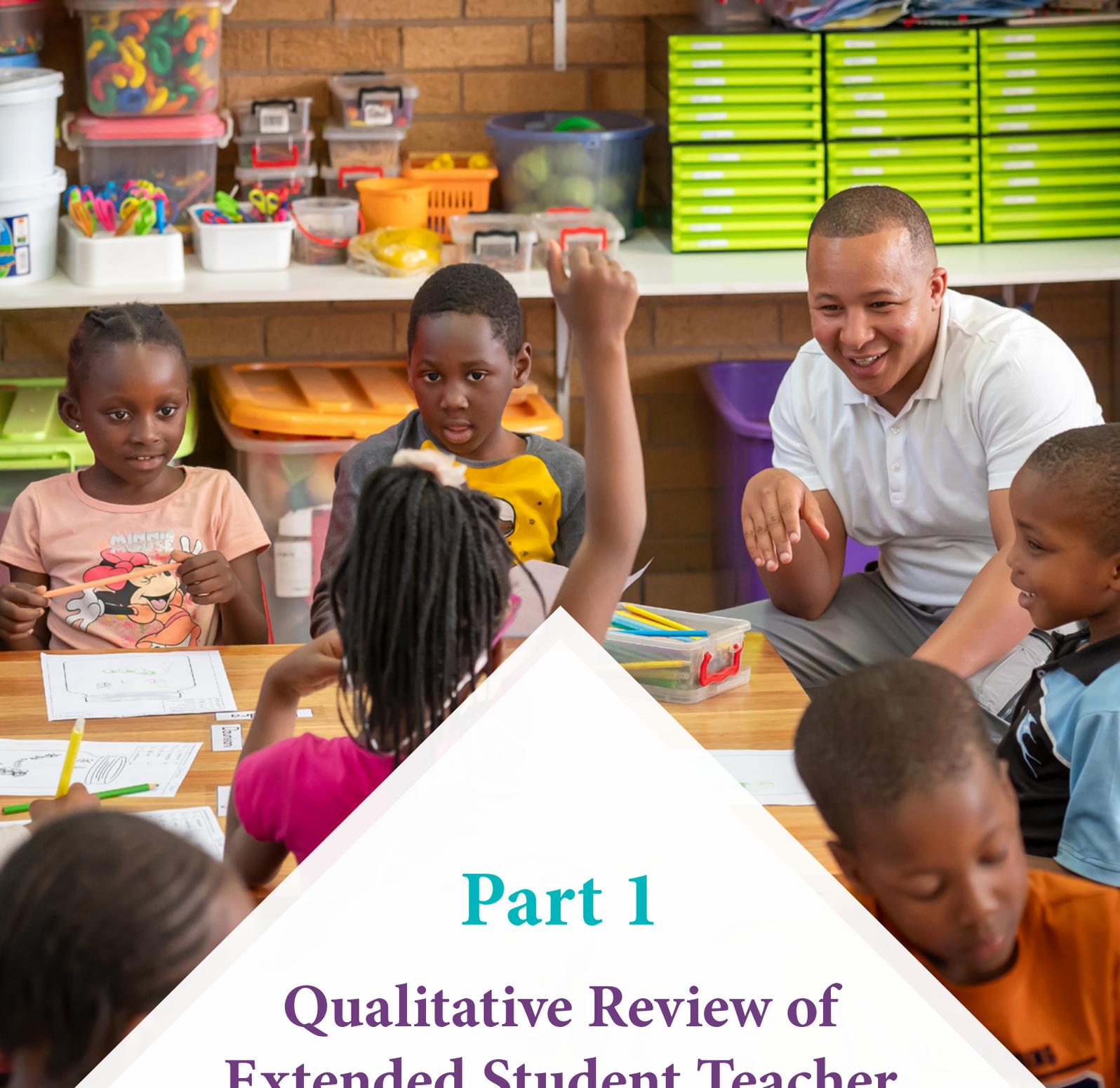
Part 1

Qualitative Review of Extended Student Teacher Internships: Lessons from TICZA

2.1   Background to the review

In February 2025, the research team conducted an initial review of the available resources in the TICZA database and their relevance to the critical review of research and evaluation activities conducted with respect to ESTIs. Resources reviewed during this process are included in the table below.

Other resources included the *TICZA Teacher Internship Collaboration South Africa: Practice &*

Research Digest (Keevy et al., 2024), internally-facing presentations to stakeholders and institutions including the DHET, DBE and University of South Africa (UNISA), research instruments used to collect quantitative and qualitative data, and minutes from convening group meetings. An analytical framework was developed to link data sources with research questions and sub-questions, and partners were contacted individually to request further supporting information to address gaps in the review framework.

Table 2: Resources used for the review

Document Name	Author	Year
Sector Mapping of ESTIs	Trialogue	2021
Save the Children District Based Teacher Recruitment Strategy (DBTRS): Narrative Report	Save the Children	2021
Monitoring data collected from ESTI Implementing Partners (IP)	JET Education Services	2022
Training Better Teachers Implementation Brief	JET Education Services	2022
TICZA 2023 Newly Qualified Teachers Survey Report	JET Education Services	2023
External Evaluation of the Teacher Internship Collaboration South Africa (TICZA) programme Final Report 04 August 2023	Southern Hemisphere	2023
Summative Evaluation of the Teacher Internship Collaboration South Africa (TICZA) Final Report June 2025	Southern Hemisphere	2025
Newly qualified teacher (NQT) performance in PrimTEd English and Numeracy tests	PrimTEd	2022/23
TICZA Annual reports (2022 | 2023 | 2024)	TICZA	2022, 2023, 2024
TICZA Cost Effective Analysis (limited release)	Trialogue	2024
The extended wraparound support (EWAS) report and modelling	JET Education Services	2025

This review framework proposed a threefold critical realist approach[1] that would look at **1) programme approaches; 2) factors and actors in implementation;** and **3) outcomes and evidence of success.** It was evident in the review of TICZA resources that partners felt the need for deeper understanding of the levers of change that contribute to student teacher interns' success and programme success as a whole, while findings from the cost-effectiveness analysis (CEA) of ESTIs (Trialogue, 2024) demonstrated that the cost of training and placing newly qualified teachers is significantly impacted by factors such as overall student throughput, completion time and placement rate. The success of ESTI graduates may also be the effect of ESTI programme selectivity in favour of more academically capable students, as argued by Trialogue.

The CEA positively found that more ESTI graduates were employed as teachers after graduation, as well as that ESTI programmes had comparably higher graduation rates than mainstream campus-based or distance learning teacher education programmes, including those of UNISA. This suggests that the enhanced support and professional development provided within the smaller networks of ESTIs may positively influence the professional growth and networking opportunities of student teacher interns, compared to peers in contact institutions or those not participating in ESTIs and studying via correspondence. However, the low response rate to the CEA questionnaire was a challenge encountered by the research team, as only five of 12 implementing partners participated.

Empirical evidence gaps prompted the decision to supplement the review of partner documents with a systematic review of literature that would verify, challenge or augment observations made from analysing the diversity of resources produced over the TICZA lifespan and by ecosystem partners. While this process was originally designed as a meta-review of both implementing partner data and academic literature, the uneven availability of data posed a challenge because 1) quantifying differences across uneven data sources would be methodologically and epistemically problematic, meaning 2) some IPs would need to be eliminated from the analysis

entirely, even if important learnings could be taken from their inputs to the process. Moreover, as the systematic review unfolded, it became clear that a similar challenge would emerge in the sifting and selection of studies relevant to the topic of student teacher work-integrated learning, extended student teacher internships, mentorship, and pathways to initial teacher qualification, particularly when the search narrowed its focus to African higher education. Research on these topics is extensive but dominated (in the Anglophone context) by South Africa, Egypt, Kenya and Nigeria, which have long-established higher and teacher education systems (De Kock et al, 2025). In states where these systems are still emergent or rebounding from institutional shocks, available new work on key topics may include doctoral theses, working papers, conference proceedings and, at times, works published in unrecognised journals. These works contain vital insight into the functioning of higher education systems in states such as Zambia, Zimbabwe and Malawi, which offer important lessons for other settings on the African continent.

While many of these works are not included in the final selection, it is important to consider all the available evidence in order to identify trends and differences in how key constructs, roles and practices are framed and understood. Wolgemuth et al (2017, p3) argue that 'excluding studies not up to methodological par conflicts with the idea of reviewing the full knowledge base' or at least conducting an exhaustive scoping of the landscape. This does not allow for an anything-goes approach: rather, methodological critique should form part of the selection and review process, drawing out critical insights while also raising important questions about the applicability of evidence outside the research context (Stutchbury, 2022). The systematic review aimed to produce insights into best practices in the topics under analysis, drawing these into discussion and comparison with the findings of the IP document review.

2.2 Desk review and mapping of existing research

The South African government has made notable strides in increasing the number of teachers in the

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1 A critical realist framework underpins this methodology and the structuring of the evidence and systematic reviews. Within realist evaluation, it is the difference between the intended outcomes of a programme based on planned inputs and processes and the real experience of implementation and participation that enables our understanding of the emergent gaps, challenges and areas of potential strength that may support future strengthening and improvement. This approach is particularly useful given the differences within and between HEIs and NGO IPs and how this shapes their delivery.

system since 1994, although concerns regarding the size, shape and substance of ITE graduates remain; this is particularly due to shortages of teachers in key subject areas and phases and an 'oversupply' of teachers in others, as well as the phenomenon of teachers teaching outside their phase and subject specialisation, 'out-of-field teachers' (Du Plessis et al., 2023). Data analysis by Bohmer and Pampallis (2022) shows that the number of ITE graduates more than tripled from about 9 000 in 2010 to over 28 000 in 2019. By 2014, B Ed enrolments accounted for one in five of all new undergraduate enrolments (Bohmer & Pampallis, 2022). A slight increase in the proportion of B Ed graduates can also be observed since 2015, holding at between 60-65% over the last decade.).

More recent data by DHET indicates this general growth has been maintained: the *Trends in Teacher Education 2022* report (DHET, 2024) notes that the overall graduation target of 29 950 in 2022 was slightly exceeded, with a total of 31 886 actual graduates[2]. This target combines all graduates of PGCE and B Ed degrees regardless of delivery mode and enrolment (part/ full-time). Moreover, the B Ed constituted the main pathway into the profession, producing 25 428 (80%) of the total graduates in 2022 (DHET, 2024). UNISA produced 12 179, or 38%, of all graduates in 2022, underscoring the sustained importance of distance education in training teachers.

The image below describes some of the key challenges affecting the teacher education to school employment pipeline in South Africa, as captured by a number of researchers (Bohmer & Pampallis, 2022; De Kock et al., 2025; Gravett & Kroon, 2021; Hofmeyr, 2016; Jones & Walters, 2015; Ndebele et al, 2024).

Figure 1: Challenges affecting the teacher education to school employment pipeline in South Africa

OVERSUPPLY
In specific subjects, phases and major urban areas

SHORTAGE
In key subjects including Maths, African languages; rural areas; and in inclusive education

ATTRITION
Due to retirement or early exit; a 'missing middle' of capacitated teachers

MISMATCH
Teachers teaching out of phase/subject specialisation, lacking the relevant pedagogic and subject knowledge

2   This amount is incomplete as the University of Cape Town did not submit data in 2022.

At least three (3) major quantitative mapping exercises which provide a snapshot of intern demographic and programme data have been completed over the TICZA lifespan. These include:

- The Trialogue sector mapping of teacher internships in South Africa (Trialogue, 2021): 14 implementing partners
- The monitoring data collection sheet shared with implementing partners in 2022: five implementing partners, total n = 241 interns
- The NQT survey conducted in 2023 by JET Education Services: five implementing partners, n = 68 NQTs

The 2021 Trialogue mapping exercise contributes useful information on the size and shape of implementing partners' programmes, the factors taken into account in their selection of students, the support provided and the form of monitoring conducted.

The monitoring data collected provides a snapshot of student teacher interns' demographic circumstances, including their registering institution, degree, financial status and funding source. The data confirms findings in the 2023 and 2025 evaluation reports and NQT survey that most student teacher interns are registered with UNISA, although the exact number is inaccurate, given data sharing limitations. Moreover, the data shows a high proportion of interns specialising in the Foundation, Senior and combined Senior & FET Phases.

This difference in phase specialisation is reflected in the 2023 NQT survey which reveals employment trends down the line and shows that more graduates of Foundation Phase programmes were employed as teachers after graduation, with unemployment higher among graduates of Senior and Intermediate Phase programmes. Unemployment among NQTs was also higher in KwaZulu-Natal, Gauteng and the Western Cape, indicating the possible effect of competitive and more urbanised employment markets on the immediate prospects of graduate teachers in these regions (De Kock et al., 2025).

The graphic below indicates the phase specialisation of participants in the 2023 survey. Note that of the sample of 124 NQTs in 2023, 68 completed the survey, including the question about their phase specialisation.

Table 3: Number and percentage of interns by education phase being studied

Phase	Number	Percent
Foundation Phase	27	22.3%
Intermediate & Senior Phase	8	6.6%
Intermediate Phase	44	36.4%
Senior & FET Phase	32	26.4%
Senior Phase	4	3.3%
FET Phase	6	5.0%
Grand Total	**121**	**100.0%**

(Source: TICZA 2022 Internal Monitoring Report)

Figure 2: 2023 NQT survey: Phase specialisation of respondents
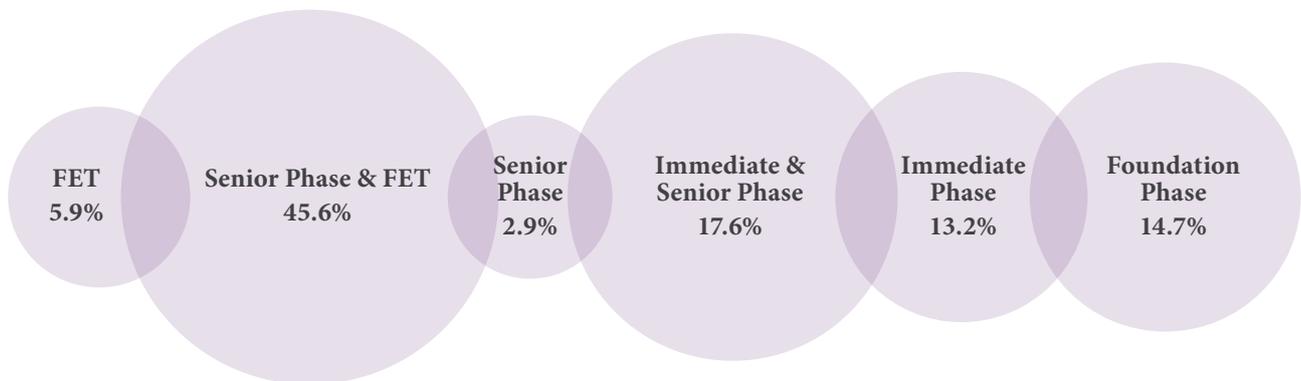
While gaps reported in quantitative data compromise the ability to make empirically grounded claims about the effectiveness of ESTIs, available data suggests that ESTIs may provide the necessary reflexive and guided clinical experience required to develop student teacher interns as competent graduate professionals, if certain conditions are met. These conditions include the development of a support and development architecture that promotes student teacher interns' growth while providing them with access to key resources and interventions that buttress their academic journeys. The research on essential wraparound support (EWAS) (McQueen, 2025) indicates that value is created through acculturating student teacher interns to the professional environment and progressively increasing the scope and complexity of their responsibilities under the supervision of project and/or school-based mentors. At the same time, interns are encouraged to collaborate with fellow teachers and interns to solve problems and reflect on their practices, effectively developing their capacity as agents of change. The EWAS research does suggest greater linkages should be built between provincial education departments, HEIs and implementing partners to support and coordinate placement and employment opportunities for ESTI graduates, which effectively requires the integration of ESTIs into the resourcing, provision and governance considerations of both the DHET, and the DBE and its provincial departments.

While the EWAS research makes the case for 'standardised core elements' of implementation across ESTIs, it is expected that implementation will differ across programmes and student needs, particularly where source and scope of funding differ, or where the programme is aimed at a specific demographic or subject group (e.g. women teachers, mathematics teachers). However, these variations underscore the importance of arriving at a shared conceptual language and functional understanding of what the essential levers of change are within the ESTI model, how these are to be defined and activated, and what enabling conditions need to be created or optimised for their success. This report understands an **extended student teacher internship** to be a *dedicated programme of professional experience and wraparound academic and psychosocial support offered to preservice student teachers undertaking their initial teaching qualification, and requiring a period of work-integrated learning longer than the parameters established in national policy.* This period of WIL is supported by regular mentorship, feedback and coach/peer support to deepen student teachers' development of critical attitudes, capabilities and practices necessary to support a smooth transition into the teaching profession.

For example, Save the Children South Africa's District Based Teacher Recruitment Strategy (DBTRS) Narrative Report (Save the Children, 2021) speaks to the value of extended engagements such as working retreats, which build community among student teacher interns while also providing learning and academic support opportunities. These activities exist outside of, but are aligned and scaffolded with, possible interventions provided through the

academic programmes of the HEIs that student interns are registered at, thus providing additional enrichment which contributes to future retention and teacher motivation. However, the additional costs of such activities might require government and philanthropic participation at scale and the leveraging of resources such as public facilities for workshop space and state-owned or civil service accommodation.

The curriculum dimension was flagged as part of the importance of coordinating the formality of relations between HEIs and implementing partners, given that varying degrees of formality exist between ESTI providers and the HEIs at which their students are registered. Greater organisation at the HEI level can correspond with enhanced alignment with the work of implementing partners in supporting student teacher interns, particularly given that many implementing partners provide meaningful academic support as part of their work. At the same time, it is necessary to understand how national ITE frameworks and the SACE Professional Teaching Standards undergird the work of implementing partners, as well as the extent to which the support they provide ameliorates gaps within B Ed instruction.

2.3   The structure of the report

A number of evidence gaps were identified in the review of resources and findings of relevant reports. These are crucial evidence gaps that the systematic review sought to address for the purposes of shared learning and planning, particularly at this stage of TICZA.

In terms of **programme approach** (Part 2 - Section 2.2), it is evident that while implementing partners agree on the importance of improving the quality of student teachers, they take variable routes to reach this goal. Research and evaluation materials relating to programme design, development and change were useful to contextualise changes, patterns and trends within the ecosystem over time, but were not received from all partners. The current review also aimed to fill the increasingly critical gap in knowledge of the **factors, mechanisms and actors in implementation**, with implementing partners providing varying levels of information on their public-facing websites. Useful documents such as the Teachers Plus Learning Brief *Debunking Myths in Teacher Training* provide insight into how an implementing partner operates

at a practical level and some details on how this implementing partner meets the needs of student teacher interns. Further detail was sought from implementing partners on dimensions such as academic support provision, the role of mentors within discrete programmes, and the balance of school-based and academic time. This granularity forms part of analysing 'the how' of what works across organisations, as well as contextual drivers of challenges and successes.

The implementing partner data report (Part 2 - Section 2.4) presents an analysis of the programme design, recruitment models, selection criteria, and implementation strategies used by various IPs and HEIs in South African ESTI programmes. Drawing on recruitment materials, programme documentation and stakeholder inputs, the report identifies key models, and highlights emerging good practices in the field. Where the report discusses 'student intern(s)', this refers specifically to teacher education students participating in an ESTI or similar school-based WIL experience. 'Student teacher(s)' is used to refer to teacher education students in general, as per standard nomenclature.

The section on **measuring outcomes** (Part 2 - Section 2.4.4) considers issues including student intern throughput, placement and retention, asking how implementing partners define programme success and how this is monitored. What notable changes or disruptions have occurred in the programme lifespan, and what has caused these? In order to develop the body of knowledge on ESTIs and produce the review and spotlight reports, it is important to consider quantitative evidence alongside the contextual and programmatic factors that shape the work of implementing partners.

The **systematic review** component (Part 3) complements the work of the IP document review in Part 2 by introducing evidence from the wider research, policy and practitioner base. This further builds on the work of the initial TICZA literature review by looking specifically at ESTIs and WIL in South Africa and the wider continental context, as well as work from elsewhere that is relevant to local socio-economic and political conditions. The development of the review follows the same structure as the headline themes for the analysis of implementing partner data, providing a synthesised account of how ESTIs have emerged, operated and been managed across a range of educational environments.
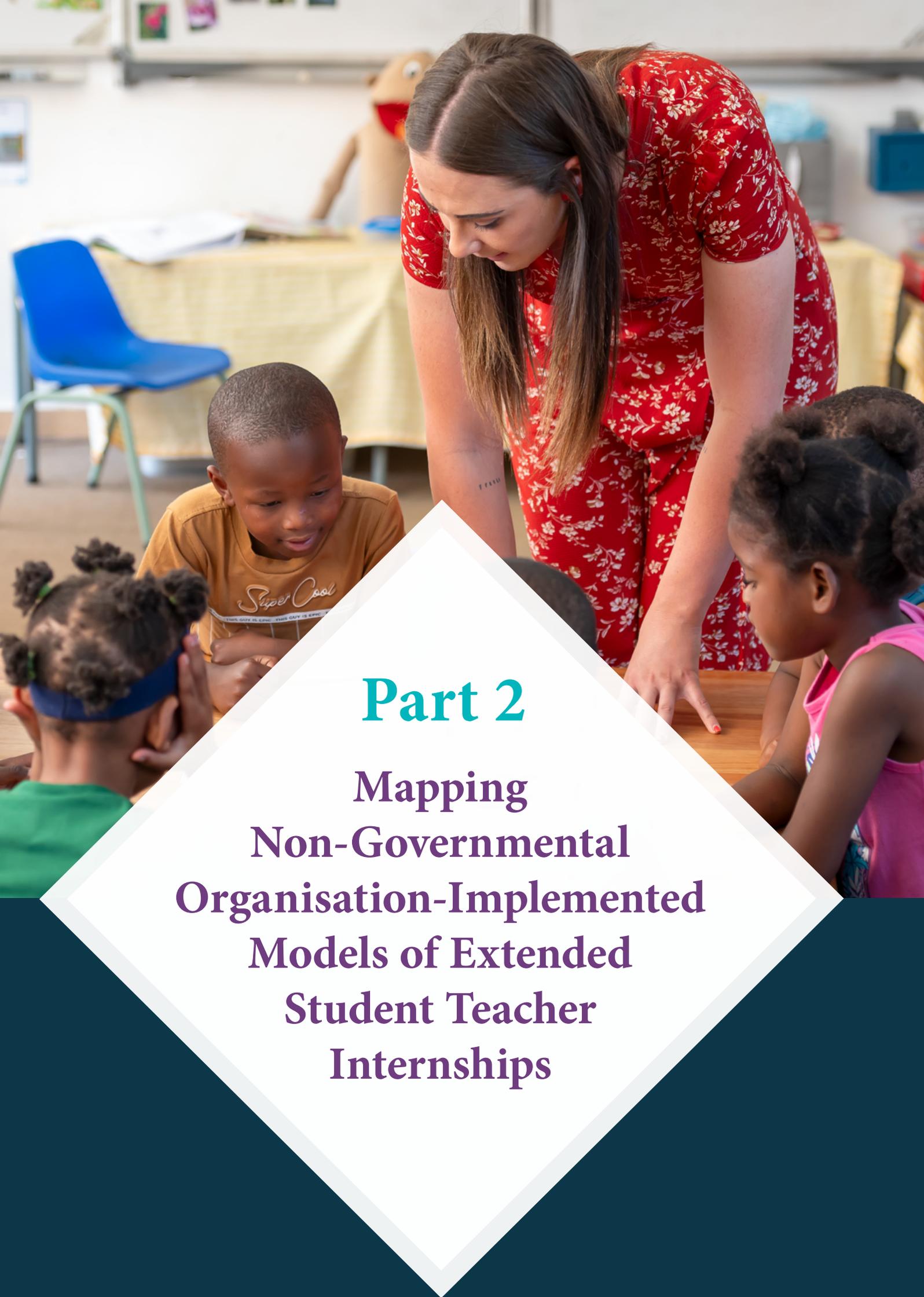
Part 2

Mapping Non-Governmental Organisation-Implemented Models of Extended Student Teacher Internships

3.1 Approach and design

This analysis employed a critical synthesis review approach to map the various ESTI models implemented by (NGOs) participating in the TICZA project. Unlike a traditional literature review or quantitative meta-analysis, which may aim to make generalisable claims or statistically compare outcomes, this approach focused on interpreting and synthesising diverse sources to gain a deeper, contextual understanding of the different ESTI models (Ulloa & Schwerer, 2024). Qualitative critical analysis enabled cross-comparison and interpretation of independent documents to identify key features, variations and patterns across the models. The purpose was not to advocate for one model over another, but rather to surface the distinctive approaches used within the South African ITE landscape.

One limitation of this component of the synthesis was the relatively small pool of accessible documentation on the design, implementation and impact of ESTI programmes. Nonetheless, the available programme reports, recruitment materials, evaluations and stakeholder submissions (in the form of responses to questionnaires, newsletters and testimonials)

provided a valuable foundation for mapping and synthesising the key models. This section outlines the methodology used to collect, analyse and interpret data on ESTI recruitment models, ensuring transparency in the research process and providing a solid base for the insights and way forward presented in the report.

3.2 Data collection

Due to the challenges encountered during the rollout of the quasi-experimental research design, as outlined in the Background and context section, the analysis relied on existing data sources that could provide sufficient insight into the design, implementation and evaluation mechanisms of ESTI programmes delivered by TICZA implementing partners. The data was drawn from a range of materials, including programme documentation, evaluation and annual reports, recruitment materials, responses to partner questionnaires, and organisational newsletters and testimonial reports. Table 4 below provides a summary of the data collected from each ESTI implementer.

Table 4: Data sources for TICZA partners' ESTI models

Name of Organisation	Website search	Questionnaire	Annual report(s)	Evaluation report(s)	Recruitment /Selection Criteria	Programme Document	Any other relevant documents
Implementer 1	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Implementer 2	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Implementer 3	Yes	Yes	No	No	Yes	Yes	Yes
Implementer 4	Yes	No	No	No	Yes	Yes	Yes
Implementer 5	Yes	Yes	No	No	Yes	Yes	Yes
Implementer 6	Yes	Yes	No	No	Yes	Yes	No
Implementer 7	Yes	No	No	No	Yes	Yes	No
Implementer 8	Yes	No	Yes	No	Yes	Yes	No
Implementer 9	Yes	No	Yes	No	No	Yes	Yes

As reflected in Table 4, data for this study was drawn from various programme documents; however, the availability of these documents was inconsistent across models, with most implementers providing only partial information. Of the nine NGO ESTI implementers who participated, only two supplied all the requested documents. Much of the analysis relied on information accessed through implementers' websites, including programme descriptions, annual reports (for some) and newsletters. Annual and evaluation reports were the most frequently missing, with several implementers indicating that these did not exist. To supplement the website-sourced data, a questionnaire was administered to gather more detailed insights; however, only five implementers completed it.

For those implementers that did not respond to the questionnaire or document request, programme information was primarily obtained from publicly available website content. This limited the scope and quality of information to public-facing materials which largely cover general organisational information, and news and updates about programme activities. Some implementers did not have comprehensive websites or were currently redeveloping these for improved reach.

As shown in Table 5 above, the findings of this synthesis are primarily based on two key data sources: programme documents and documents outlining recruitment and selection processes retrieved from implementers' websites. This reflects that, among the various types of information, programme and recruitment materials were the most readily available across implementers. However, this also highlights an opportunity for implementing partners to strengthen their reporting, monitoring and evaluation systems to better capture and communicate the full scope and impact of their ESTI programmes. It is important to note that the quality and depth of a research report are directly tied to the availability and richness of the data (Saunders et al., 2018). Accordingly, the data analysed here is not exhaustive, and additional information could further enhance the understanding of the models of the nine NGO ESTI implementers that participated in the study.

Table 5: Summary of data sources

Document Type	Yes (out of 11)	% Availability
Website search	9	100%
Programme document	9	100%
Recruitment/selection processes/criteria	8	88.8%
Questionnaire	5	55.5%
Annual reports	4	44.4%
Evaluation reports	2	22.2%
Other relevant documents	6	66.6%

3.3   Data analysis

Given the diversity of implementing partners engaged in ESTI programmes, a qualitative, exploratory approach was chosen. This approach was well-suited to capturing the depth, complexity and contextual nuances of recruitment and selection strategies across the various models. The analysis was guided by the four key questions below, which facilitated the mapping of the different ESTI models implemented by TICZA partners, focusing on their design, implementation and monitoring and evaluation practices.

1. How is the ESTI programme structured in terms of its objectives, balance between academic coursework and in-school experience, underlying rationale, alignment with government and institutional priorities, responsiveness to emerging needs, and the evidence supporting its design and effectiveness?

2. What recruitment models and selection criteria are used to identify student teachers, and how do they promote equity and inclusion?

3. What support systems are in place to develop the professional and academic capacity of student teachers?

4. How is data collected and used to track applications, demographics, student teacher progress and programme impact?

A thematic analysis was carried out to identify key patterns and distinctive features across each model, focusing on elements such as overall design and structure, recruitment approaches, selection criteria, alignment with national and institutional priorities, and the monitoring and evaluation mechanisms embedded within the programmes. This methodology enabled a comprehensive synthesis of diverse practices and approaches, providing a nuanced understanding of how recruitment in ESTI programmes is influenced by institutional priorities, resource capacities and programmatic objectives. The insights generated contribute to a broader reflection on how recruitment strategies affect the overall quality and readiness of prospective teachers entering the South African education system.

While a set of broad thematic categories were determined at the outset of the review to sort information, these were then used to further identify and refine applicable thematic and analytical categories emerging from the document analysis, which examined the various data sources in response to the key questions outlined earlier. Through this approach, themes and patterns were identified to reveal underlying meanings and construct a coherent narrative about the design, implementation and evaluation of the ESTI models by different implementing partners (Dawadi, 2020). Table 6 below presents the analysis framework used.

Table 6: Analysis framework for the ESTI models

QUESTION
1. How is the ESTI programme structured and what informs its design and implementation?
a. What are the objectives of the ESTI programme, and how do these shape its structure?
b. How is the balance managed between academic coursework and in-school experience?
c. What is the rationale behind the programme's design, and what theoretical or practical considerations inform it?
d. How is the programme aligned with government priorities and institutional mandates for teacher education?
e. In what ways does the programme respond to emerging needs in the teacher education landscape?
f. What evidence exists regarding the effectiveness and impact of the ESTI programme on student teacher development?

Data source	Details and purpose
Programme document, Evaluation reports, Questionnaire, Programme Theory of Change (ToC)	These documents were submitted by the implementing partners as part of their responses to the administered questionnaire. They provide insights into the design of each programme, detailing its structure, mission, vision and the underlying assumptions guiding their approach to supporting student teacher interns. Documents such as the ToC helped the analysis understand the intended outcomes and strategic objectives of the programmes, as well as the logic, principles and philosophies that informed their design.

QUESTION
2. **What recruitment models and selection criteria are used to identify student teachers, and how do they promote equity and inclusion?**

Data source	Details and purpose
Selection Criteria document, Recruitment Calls	These documents were obtained from implementer websites and through submissions received in response to the information request questionnaire. They supported the analysis by enabling the mapping and comparison of various recruitment strategies across implementers, providing insight into programme entry requirements and highlighting the diversity goals pursued by each programme.

QUESTION
3. **What support systems are in place to develop the professional and academic capacity of student teachers?**

Data source	Details and purpose
Questionnaire/ programme documents/ recruitment calls/ newsletter/testimonials	Student testimonials and newsletters offered valuable beneficiary perspectives that helped corroborate findings from the questionnaire. The questionnaire itself was instrumental in mapping the various support structures and components within each implementer's programme.

QUESTION
4. **How is data collected and used to track applications, demographics, student teacher progress and experiences?**

Data source	Details and purpose
Questionnaire/evaluation reports/annual reports/ application forms	These tools were used to gather and manage data on interns: systems for tracking progress, demographics, performance and feedback.

3.4   Findings and interpretation

The synthesis reviewed nine different models, which, while all aiming to produce quality preservice teachers (PSTs) in South Africa, demonstrated both similarities and distinct differences. Each model shares a common goal but varies in its design, values and strategic focus, which is evident in the models' programme structures and recruitment and selection approaches which are outlined below. This section concludes with a synthesis highlighting the key similarities and differences in the design and recruitment strategies of the nine models.

3.4.1   Programme goals, planning approaches and adaptations among ESTI implementers

The TICZA project brings together a diverse group of NGO ESTI Programmes implementers who share a commitment to strengthening teacher preparation in South Africa, particularly for under-resourced and historically disadvantaged communities. A review of responses from nine TICZA participating ESTI implementer organisations reveals several commonalities and notable distinctions in the organisations' long-term goals, programme targets and strategic planning and the adaptations they have made over time.

The **framing of roles and responsibilities** within these partnerships further reveals the nature of these collaborations. Implementing partners typically describe themselves as facilitators of extended student teacher internship emphasising wraparound support through experiential learning and professional development. They serve as bridges between HEIs and school environments, ensuring that interns receive support, guidance, and mentorship throughout their teaching practice and professional development journey. Schools, on the other hand, provide the practical setting and assign mentors who work closely with interns. These mentors are responsible not only for modelling good teaching practices but also for providing feedback, coaching and, in some cases, mental health support. The HEIs, meanwhile, are seen as the academic backbone of the partnership. Their role is to provide the theoretical and pedagogical knowledge that underpins effective teaching practice.

A common long-term goal across all implementers is to increase both the quantity and quality of well-prepared teachers entering the profession. Programmes are generally designed to recruit student teachers who show commitment to education, and who are often from disadvantaged or socially marginalised backgrounds, and support them through structured internships that run parallel to their academic studies. Strengthening teacher leadership, inclusivity, and transformation are also important outcomes, and a number of implementing partners offer programming dedicated to unlocking student teachers' potential as change agents in the classroom.

Another core objective is to retain these student teachers through to graduation and ensure they are equipped to deliver high-quality instruction in real-world classroom environments, especially in subjects such as mathematics and science and, to some extent, in specific phases of teaching. For example, Implementer 1 aims to recruit over 200 future teachers annually, with a target to retain at least 80% through graduation. Similarly, Implementer 5 works with 50 to 70 science, technology, engineering and mathematics education (STEM) graduates every two years and expects at least 70% to remain in the education sector after completing the programme. This strategic focus aligns with broader national priorities to address teacher shortages and improve learner outcomes in critical subject areas, particularly mathematics and science. The table below indicates the main programme goals described across IP documents and the implementers that incorporate these goals into their programme design and planning. Where a goal was not specified within the available resources, this is indicated with a question mark (?).

Table 7: Programme goals and targets

Implementer Code	Increased retention	Increased throughput	Transformative and Inclusive teachers	Improved instruction and classroom management	Social Emotional learning	Technological integration / Digital learning	Placement in schools
Implementer 1	✓	✓	✓	✓	✓	✓	✓
Implementer 2	✓	✓	?	✓	✓	✓	✓
Implementer 3	?	✓	✓	✓	✓	?	✓
Implementer 4	?	?	✓	✓	✓	?	✓
Implementer 5	✓	✓	✓	✓	?	?	✓
Implementer 6	✓	✓	✓	✓	✓	✓	✓
Implementer 7	?	?	?	✓	?	?	✓
Implementer 8	✓	✓	?	✓	?	?	✓
Implementer 9	✓	?	?	✓	?	✓	✓

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Beyond academic outcomes, many programmes also aim to nurture teachers who are reflective, emotionally resilient and socially conscious. There is a deliberate effort to cultivate leadership skills, values-driven teaching practices and a deep sense of purpose. Five of the Implementers view their participants not only as future educators but as change agents who can help transform the schooling experience for learners in marginalised settings. This broader vision informs both recruitment criteria and the types of professional development opportunities offered during the internship period. For instance, partners such as Implementer 3 and Implementer 1 integrate leadership, emotional intelligence and reflective practice into their models, equipping interns to become both effective educators and change agents in their communities. Meanwhile, Implementer 4 and Implementer 7, for example, explicitly seek to produce educators who are committed to driving equity and transformation in education. Tables 8 and 9 below summarise programme values and skills.

Table 8: Programme values

Value / Disposition	Imp. 1	Imp. 2	Imp. 3	Imp. 4	Imp. 5	Imp. 6	Imp. 7	Imp. 8	Imp. 9
Reflective	✓	✓	–	–	–	–	–	–	–
Empathetic / Compassion	✓	–	–	–	–	–	–	–	✓
Collaborative	✓	✓	✓	✓	✓	–	–	–	✓
Community Development	✓	✓	✓	–	✓	✓	✓	✓	–
Innovation / Creativity	–	✓	–	✓	–	–	–	✓	✓
Accountability	–	–	✓	–	✓	–	–	–	–
Growth Mindset/ Life Long learning	–	–	✓	✓	–	–	✓	–	–
Christian Values	–	–	✓	–	–	–	✓	–	–
Change Agents / Transformative	✓	–	✓	✓	–	✓	–	–	✓
Passion / Inspirational	–	–	–	✓	–	✓	✓	✓	–
Integrity	–	–	–	–	✓	–	✓	✓	–
Resilience	–	✓	–	✓	✓	✓	✓	–	–
Equity	–	–	–	✓	–	✓	–	–	–
Cultural Sensitivity	–	–	–	–	✓	–	–	–	–
Personal development	✓	✓	–	✓	–	–	–	–	–
Confidentiality	–	–	–	–	–	–	✓	–	–
Excellence / Trust	–	✓	–	–	–	–	–	✓	–

Table 8 summarises the shared values that underpin the various ESTI programmes and shape their design, recruitment, and operations. These values were drawn from the goals, visions, and objectives of the implementing partners. Implementers place strong emphasis on instilling values in their interns, with the most common being collaboration, community development, transformative change, and resilience. Other common values include passion, innovation, integrity, and a growth mindset. See Figure 3 below for values and their occurrence across the nine implementers.

Implementers' programmes also emphasise the development of specific skill sets in their interns. Table 9 presents the skills explicitly identified by each implementer in their programme documents.

Effective or strong communication is identified as a key skill by six of the nine implementers. Other frequently emphasised skills include leadership, adaptability/flexibility, interpersonal and personal skills, and organisational or planning skills. Figure 4 illustrates the explicitly mentioned skills and their prevalence across the nine implementers.

To operationalise these goals, implementers use a combination of structured plans, performance indicators and outcome targets. These include goals such as ensuring that a high percentage of student teachers complete their degrees, demonstrate improved classroom management and actively participate in mentorship and training sessions. Activity plans typically blend academic support, mentorship from experienced teachers, in-classroom practicum and reflective learning. Interns are also exposed to workshops on inclusive education, social-emotional learning and foundational teaching skills. Implementer 2, for instance, aims to ensure that 85% of its student teachers improve their instructional strategies by the fourth year, with 100% receiving mentoring at least twice per term. Similarly, Implementer 8 and 9 focuses on improving content knowledge in mathematics and uses practical placements and assessments to track interns' progress. Many programmes have integrated feedback loops into their planning cycles. Implementer 1 and Implementer 6, for example, uses a digital tracking platform to monitor participant engagement and programme performance, while Implementer 2 relies on termly review meetings and collaborative school-based reflection sessions.

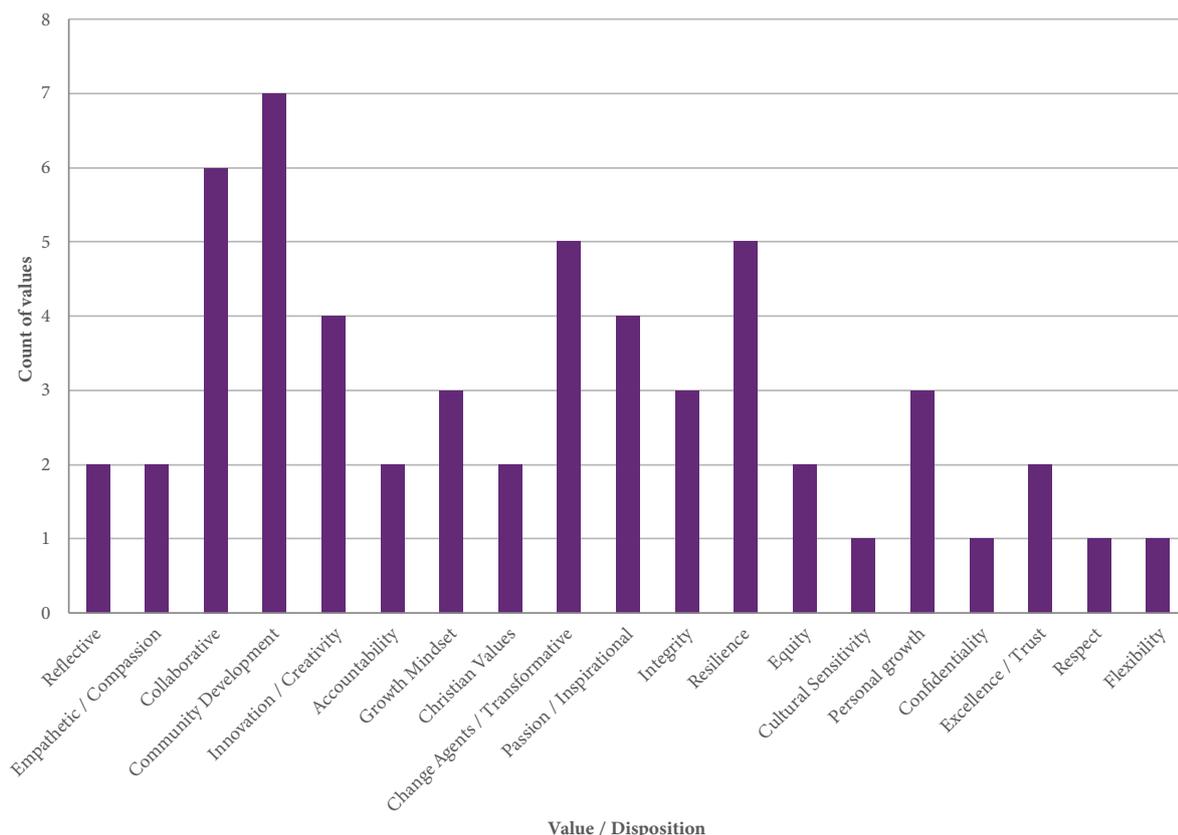**Figure 3: Values across the nine programmes**

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Table 9: Programme skills

Skill Area	Imp. 1	Imp. 2	Imp. 3	Imp. 4	Imp. 5	Imp. 6	Imp. 7	Imp. 8	Imp. 9
Leadership	✓	–	✓	✓	✓	✓	–	–	–
Communication (effective/strong)	–	–	–	✓	✓	✓	✓	✓	✓
Interpersonal	✓	–	–	–	–	✓	✓	✓	–
Digital / Technological	✓	✓	–	–	–	✓	–	–	✓
Emotional Intelligence	–	✓	–	–	–	–	–	–	–
Self-Mastery / Personal Mastery	✓	✓	✓	✓	–	–	–	–	–
Time Management	–	–	✓	–	✓	–	–	–	✓
Organisation / Planning	–	–	✓	✓	–	–	✓	✓	–
Problem Solving	–	–	–	✓	✓	✓	–	–	–
Critical Thinking	–	–	–	–	✓	–	–	–	–
Adaptability / Flexibility	–	–	–	–	✓	✓	✓	✓	✓
Subject Expertise	–	–	–	–	✓	–	–	✓	✓
Academic Skills	–	✓	–	–	–	–	✓	–	–
Initiative	–	–	✓	–	–	–	–	–	–

Adaptations to programme models are widespread and context-specific. Several implementers have modified their activities in response to interns' needs, school feedback or emerging challenges. For instance, Implementer 6 reported strengthening its mentorship model and introducing trauma-informed training for interns after observing interns experiencing challenges in classroom management and emotional regulation. Implementer 1 and 2 added inclusive education modules and social and emotional learning (SEL) workshops in 2022 to better prepare interns for diverse learning environments. Other partners, such as Implementer 5, have introduced supplementary Saturday school sessions, while implementer 2 has broadened its strategy to extend its internship model to new sites. These changes reflect an adaptive management approach and a commitment to continuous learning and improvement.

Monitoring and evaluation mechanisms are integrated into most programmes and serve both accountability and learning purposes. Implementers regularly assess interns' progress using tools such as mentorship reports, academic performance records, classroom observations and self-reflection exercises. These data sources are used to inform planning cycles and adapt implementation strategies as needed. Feedback loops among schools, mentors and interns help ensure that the programmes remain relevant, responsive and aligned with their intended outcomes. Some implementers, like Implementer 7 and Implementer 6, conduct regular classroom observations and performance reviews with school mentors. Others, such as Implementers 1, 2 and 6, incorporate digital tools and structured reflection exercises into their monitoring frameworks. These practices enable implementers to identify trends, address gaps and refine their approaches in real time.

Figure 4: Skills across the nine programmes
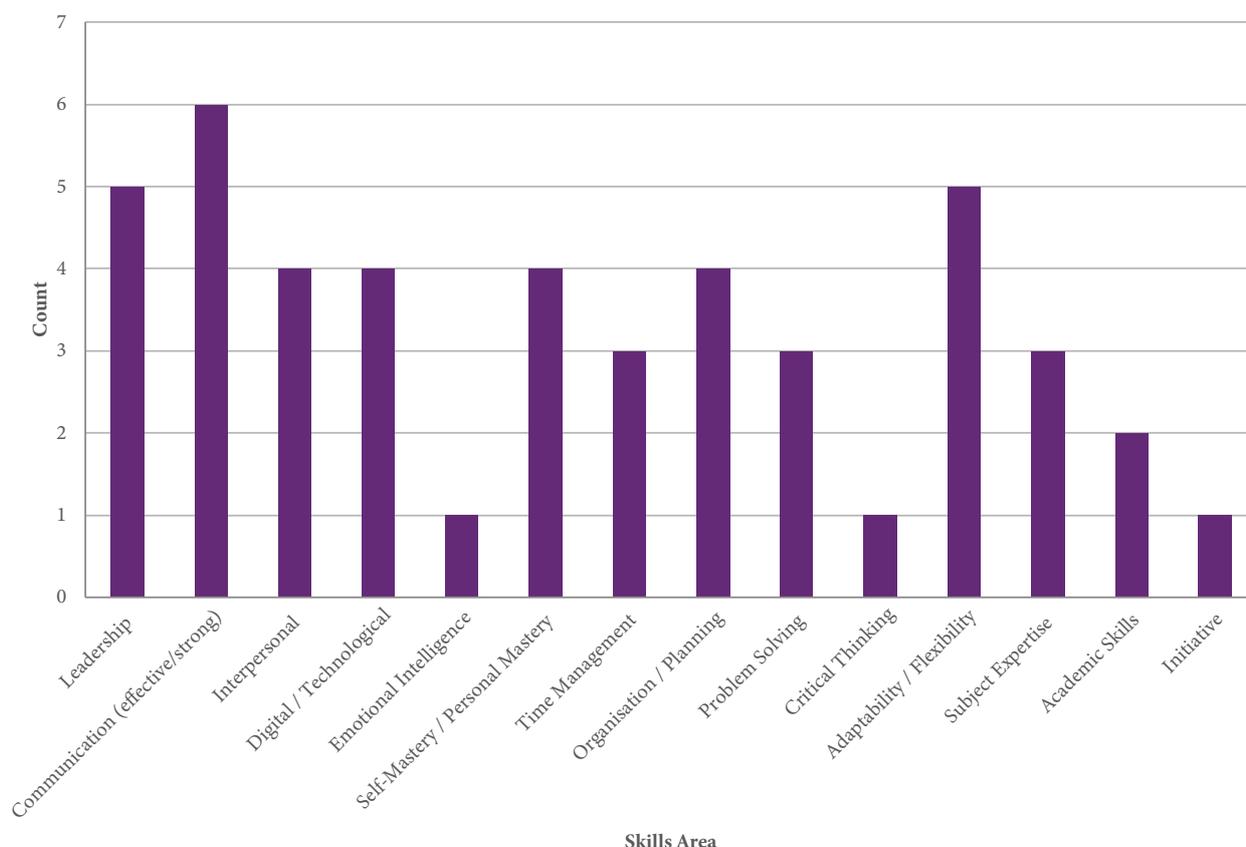
3.4.2 Programme recruitment and selection criteria

Recruitment and selection processes play a pivotal role in determining the success and overall impact of any programme or intervention. While their significance may sometimes be overlooked, these processes are foundational and must be deliberately designed and effectively implemented (Public Service Commission, 2012). Recruitment refers to the strategies employed to attract prospective candidates, whereas selection involves identifying individuals who meet specific eligibility requirements and demonstrate the competencies necessary for success.

In the context of South Africa, ESTI programmes showcase a diverse array of recruitment models, each shaped by the unique mandates, capacities and guiding principles of the implementing partners. These processes are closely aligned with the broader ITE system, particularly in relation to formal qualifications offered through HEIs. Across all models, several core eligibility criteria consistently emerge:

- **Enrolment**: Candidates must either be currently enrolled in or eligible for admission into a B Ed degree or a PGCE at an accredited institution. For PGCE focused ESTI programmes, the candidates need to have an undergraduate degree with at least one teaching subject.
- **Funding**: Access to funding to support both academic studies and other relevant programme requirements is essential.
- **Age limit**: Most models also set an age limit, typically under 35 years, although four models are less prescriptive in this regard.

Other common criteria include subject or phase specialisation, demographic applicability (such as equity-based gender or race targets), alignment with the values of the programme, a demonstrated willingness to work in under-resourced schools, and the possession of specific interpersonal and professional skills necessary for successful participation in the programme, as specified in Table 5 above.

Table 10: Programme recruitment criteria

Implementer Code	Age limit	Funding	Subject Specialisation	Phase specifications	B Ed/ PGCE/ Both
Implementer 1	30	Funza Lushaka/ NSFAS	All subject	All phases	B Ed
Implementer 2	35	NSFAS	Maths and Science, Languages	Foundation phase, Senior and FET	B Ed
Implementer 3	27	Programme Funding	Maths and Science	Early Childhood Development (ECD) - Intermediate	B Ed
Implementer 4	35	Programme Funding	Science, Technology, Engineering, Mathematics for Arts & Culture (STEAMAC) subjects	All phases	Both
Implementer 5	40	Programme Funding	STEM, English subjects	Not specified	PGCE
Implementer 6	Not specified	Bursary Holder	All phase subjects	Foundation and Intermediate	B Ed
Implementer 7	Not specified	Programme funding	Maths, Sciences, Accounting, and Languages	ECD-Further Education and Training (FET) Phase	Both
Implementer 8	35	Programme funding	Mathematics	Intermediate and Senior-FET	Both
Implementer 9	Not specified	Programme funding	Mathematics	Foundation to FET	B Ed

While several core eligibility criteria are consistent across the models, three distinct recruitment approaches emerge from the nine models analysed. These can be categorised as the **competency-based model**, the **phase/subject-specific model** and the **general model**. Although these models may share some overlapping features, they are distinguished by particular characteristics, most notably their recruitment criteria. It is important to note that all implementers incorporate the general model as a foundational approach. However, some implementers apply additional eligibility criteria that align their recruitment practices with either the competency-based model, the subject/phase-specific model or a combination of both.

The **competency-based model** focuses on candidates who have already acquired a certain level of knowledge and skills, typically demonstrated through the completion of an undergraduate degree. It also places value on prior experience or the presence of specific soft skills relevant to teaching. Candidates in this model are generally enrolled in a PGCE programme and are placed in schools located in regions where the implementing programmes operate. This model is also characterised by multiple layered selection processes where candidates move through screening to a number of assessments and interviews.

...selection criteria are based on a three-stage process – 1) Psychometric Test, 2) Technical Assessments, and 3) Panel Interview – to determine if a candidate should be accepted into the Academy Induction Programme (AIP).

Implementer 5

The **phase/subject-specific model** targets candidates who are either eligible for or already enrolled in a B Ed or PGCE programme, with a focus on particular teaching phases or subject specialisations. The phase-specific strand aligns with the government's teacher supply priorities by recruiting candidates for the Foundation Phase, while the subject-specific strand seeks those specialising in STEM subjects, languages, or early childhood development (ECD). A distinguishing feature of this model is its emphasis on assessing candidates' subject matter knowledge and classroom readiness, often through content knowledge tests and classroom observation exercises, as part of the selection process.

Short listed candidates are invited to the school for a week in the classroom. They are assessed by the teacher mentor. In addition, a small presentation is assessed at the end of the week by the Programme Manager. Each section is weighted, and the best candidates are selected and are offered a Memorandum of Agreement.

Implementer 3

Registered with a public tertiary institution and studying part-time towards a 4-year Bachelor of Education (B Ed) in Foundation and Intermediate Phase, Intermediate and Senior Phase, Senior and FET Phase or a 2-year PGCE, majoring in Mathematics, Physical and Life Sciences, Accounting, English and African Languages.

Implementer 7

The **general model**, by contrast, is less restrictive regarding subject or phase specialisation. It is open to all candidates who are either eligible for admission or already enrolled in a Bachelor of Education (B Ed) or Postgraduate Certificate in Education (PGCE) programme at a recognised higher education institution. A central requirement in this model is that candidates must have secured or be eligible for funding, typically through government schemes such as NSFAS or the Funza Lushaka bursary, or any other source that fully covers their academic and related expenses. Additionally, candidates must demonstrate a willingness to teach in under-resourced schools. This model is broadly inclusive, focusing primarily on academic eligibility and demonstrating a need for financial support (or even have access to funding) rather than specific teaching phases or subject areas. The following table summarises selection criteria for each of the implementers.

Table 11: Recruitment and selection process

Implementer Code	Online application	Eligibility	Interviews	Psychometric test/ Assessment	Screening/ Ranking
Implementer 1	Yes	Yes	Yes	Yes	Yes
Implementer 2	Yes	Yes	Yes	Yes	Not specified
Implementer 3	Yes	Yes	Yes	Yes	Not specified
Implementer 4	Yes	Yes	Yes	Yes	Yes
Implementer 5	Yes	Yes	Yes	Yes	Not specified
Implementer 6	Yes	Yes	Not specified	Not specified	Not specified
Implementer 7	Yes	Yes	Yes	Not specified	Not specified
Implementer 8	Yes	Yes	Yes	Yes	Yes
Implementer 9	Yes	Yes	Yes	Not specified	Not specified

The selection criteria used by implementers do not differ significantly; however, the rigour of their processes varies. Some implementers follow straightforward and simple procedures, while others adopt more comprehensive and structured approaches. Typically, the process begins with an online call for applications, where prospective candidates apply via online forms. After receiving applications, implementers usually conduct an eligibility check, then shortlist candidates for interviews, with some conducting two phases of interviews. For some implementers, this stage marks the end of the process before final selection. Others, however, extend the process beyond this point.

Implementers that adopt phase- or subject-specific and competency-based models often include multiple layers of assessment. These can involve tests, ranking systems and additional screening procedures before final selection is made. For example, **Implementer 4** begins by assessing candidates" eligibility and screening candidates based on questions about criminal history, undergraduate qualifications and other background details. The implementers further evaluate candidates' competencies during interviews and through mock classroom exercises designed to test candidates' collaboration skills and ability to engage with diverse stakeholders. Final selections are then made through a ranking system.

This approach closely mirrors the **rigorous model used by Implementer 5**, whose process starts with an online application outlining eligibility criteria. Candidates are then taken through a psychometric test to measure aptitude, linguistic proficiency, cognitive ability and conceptualisation skills. This is followed by a technical assessment that evaluates candidates' subject knowledge in mathematics, physical science, English, pedagogy and information and communication technology (IT) integration. The process concludes with a panel interview before final selections are made.

By comparison, **Implementer 1** supplements eligibility checks with a ranking system categorised as Green, Yellow, or Red, which is managed through their online platform. Candidates who pass this stage move on to take mathematics and language proficiency tests, followed by two interview stages. The ranking system used by Implementer 1 is outlined below.

Recruitment will be aligned with the Funza Lushaka requirements and will be done on Future Leader Information Portal (FLIP). The region is important to determine the category - which may be influenced by funder requirements as well as province requirements. There will be 3 categories:

1. Green – students who are already registered, starting either 2nd or 3rd year, accepted already into the Funza bursary scheme or eligible for a Funza Bursary. Students who have also been accepted into NSFAS will be in this category.

2. Yellow – students who are already registered and who meet all criteria, and either have not yet applied to UNISA and Funza but might still need to submit documents or they do not meet some of the requirements.

3. Red – students not at UNISA who do not meet Funza requirements, not in chosen major or feeder area. Students at UNISA without NSFAS or Funza, or do not meet requirements for this year. Students who are not in the regions we work in or close to host schools.

The various selection processes and criteria used by the nine implementing partners are summarised in Figure 5. Important in these recruitment processes is the recognition that some students may not be 'ideal candidates' on paper but with additional academic support could succeed and thrive professionally; this also means that high completion and graduation rates reported by different implementers should not be assumed to result from selection of only the academically strongest candidates at the outset.

Figure 5: Summary of recruitment and selection criteria

ESTI recruitment and selection criteria

Standard recruitment and selection process

1

Online Application

Adverts are shared on online platforms such as websites and social media, providing details of eligibility requirements along with a link directing interested candidates to the application form.

Eligibility check/ Ranking system/ Screening

Once all applications are received, this step is taken to verify whether candidates meet the requirements before advancing them to the next phase of assessments and tests.

2

3

Psychometric test/ Assessment

Candidates undergo various assessments and tests to evaluate their alignment with the programme's values and to measure their competencies. Especially checking their numeracy (maths) and literacy (English language) skills.

4

Interviews

For some implementers, a single interview session with candidates is sufficient, while others conduct two sessions, particularly when no additional assessments are administered.

5

Mock exercises/ Observation/ Technical test

Although not all implementers include classroom exercises or observations in their selection process, some do. At this stage, candidates are evaluated on how they conduct themselves in a classroom setting and on their demonstrated passion for education.

6

Final Selection

Successful candidates receive confirmation emails and are enrolled into the programme, after which they undergo orientation into the systems.

Rigorous process

3.4.3 Programme implementation

This section presents the duration of the nine ESTI programmes. It also presents the programmes' pillars (see Table 8) and assesses how these pillars align with the professional development aims of HEIs. Further, it examines how implementing partners frame their roles and relationships within the collaborative partnerships with HEIs.

The duration of the ESTI programmes was found to vary greatly across implementers: some implementers work with B Ed student teacher interns from their first to fourth years of study; others begin working with student teacher interns from their second year of study to fourth year; and others work with student teacher interns in the year of PGCE or in the year immediately following their PGCE qualification.

Implementing partners also offer a variety of structured interventions to support student teachers for the duration of the internship. While each partner brings a unique flavour to their programme, several common themes are consistently present. **Structured orientation or induction periods**, usually lasting between three and five days, are standard. These serve to introduce student teachers to school environments, mentors' expectations, professional conduct and academic planning. The presence of mentorship is central to all programmes, with mentors playing a crucial role as instructional coaches, professional role models and emotional support figures. They were described as 'cornerstones' of success by several implementing partners.

Table 12: Duration of programmes and their pillars

Implementer code	Programme Length	Key programme pillars
Implementer 1	Not specified	3-day orientation, focus on values, reflective practice, mentor-mentee dynamics
Implementer 2	2-4 years	5-day onboarding summit, focus on SEL, digital competence, UNISA integration
Implementer 3	4 years	Year-long onboarding with continuous integration, tailored to phase-specific learning
Implementer 4	2 years	2-year fellowship, leadership training, instructional coaching
Implementer 5	2 years	5-day structured orientation, integrated psychosocial support, peer mentoring
Implementer 6	Not specified	Structured orientation, hands-on classroom integration, teaching skills modeling
Implementer 7	4 years B Ed, 2 years PGCE	Professional mentorship and classroom practice
Implementer 8	1 year PGCE, 4 years B Ed	Bootcamp, mentorship, PGCE-aligned training, digital tools (Khan Academy)
Implementer 9	5 years	Academic, emotional, and technological support, experiential learning

Beyond orientation and mentorship, most programmes include regular professional development activities. These range from weekly workshops to quarterly summits and cover areas such as curriculum delivery, classroom management, digital literacy and reflective practice. In some cases, SEL, leadership training and exposure to 21st century competencies are emphasised, reflecting a more holistic approach to teacher development. Programmes like that of Implementer 2 stand out for their structured rotation model, which deliberately balances academic study time with practical school engagement. Others, like Implementer 8, focus on after-school learning environments and offer unique opportunities for student teachers to refine subject-specific coaching, particularly in mathematics.

A key indicator of successful partnerships lies in how well these programmes integrate with the **academic requirements of student teachers' universities**. All partners acknowledge the importance of allocating time for academic responsibilities. In many cases, students are given one or two dedicated days during the school week for coursework and assignments (Table 13). This is particularly crucial for students registered at distance learning institutions like UNISA. Implementing partners supporting such students, including Implementer 2 and 8, have adapted their models to include modules on time management, virtual learning navigation and assignment planning.
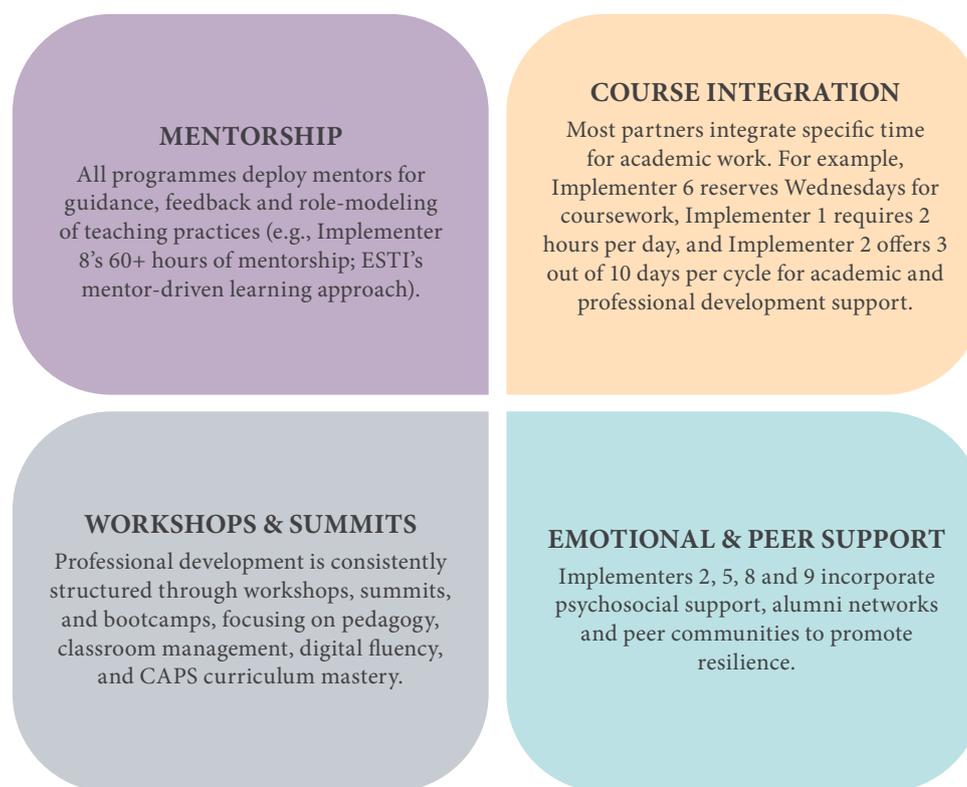
Figure 6: Types of support offered

MENTORSHIP

All programmes deploy mentors for guidance, feedback and role-modeling of teaching practices (e.g., Implementer 8's 60+ hours of mentorship; ESTI's mentor-driven learning approach).

COURSE INTEGRATION

Most partners integrate specific time for academic work. For example, Implementer 6 reserves Wednesdays for coursework, Implementer 1 requires 2 hours per day, and Implementer 2 offers 3 out of 10 days per cycle for academic and professional development support.

WORKSHOPS & SUMMITS

Professional development is consistently structured through workshops, summits, and bootcamps, focusing on pedagogy, classroom management, digital fluency, and CAPS curriculum mastery.

EMOTIONAL & PEER SUPPORT

Implementers 2, 5, 8 and 9 incorporate psychosocial support, alumni networks and peer communities to promote resilience.

Table 13: Time allocation for course work

Implementer code	University Time Model
Implementer 1	2 hours per day scheduled for coursework
Implementer 2	3 days out of 10-day cycle + additional support workshops
Implementer 3	Minimum of 2 days per week as per University of Johannesburg (UJ) Memorandum of Agreement
Implementer 4	Not specified
Implementer 5	PGCE completion is post-placement, not concurrent
Implementer 6	Wednesdays reserved for university work
Implementer 7	Not specified, but interns spends at least 70% of their time in the classroom
Implementer 8	12 hours per week for PGCE studies
Implementer 9	No specified time allocation, additional maths hours and university-aligned academic assessments

Formal and informal collaborations with universities, schools and provinces (shown in Figure 7) further support alignment. Across all partners, the relationships are framed around mutual contribution, shared learning goals, and integrated responsibilities. Implementing partners work collaboratively with HEIs (some with official partnerships formalised through signed memoranda of understanding), schools and provincial education departments (PEDs). Some of the formalised collaborations with HEIs saw implementers and HEIs working together to develop theories of change.

Figure 7: Formal and Informal collaboration and partnerships
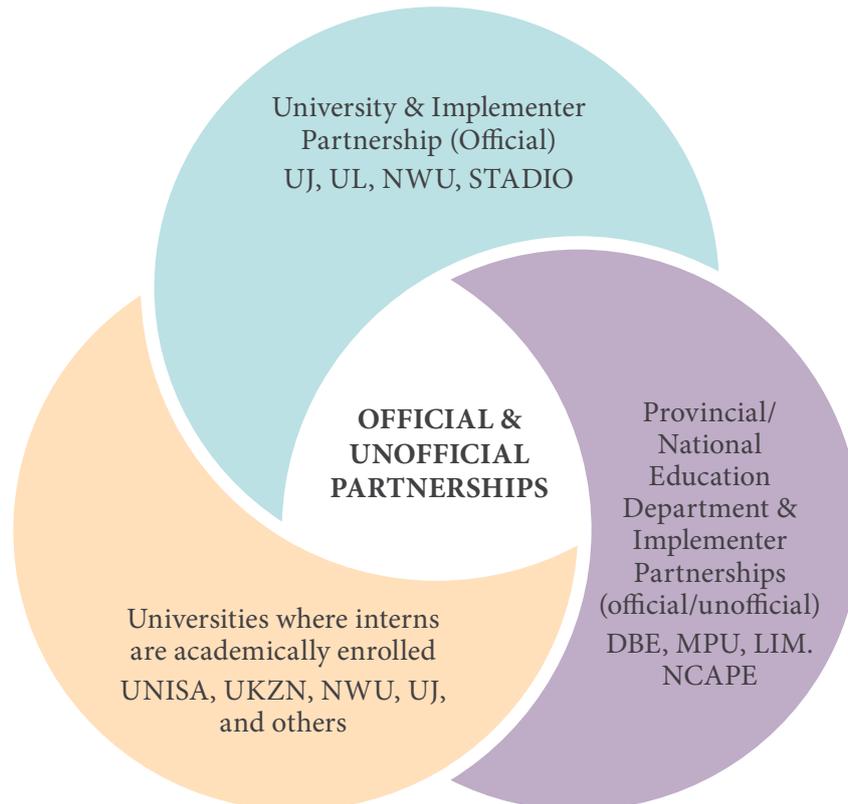
The **framing of roles and responsibilities** within these partnerships further reveals the nature of these collaborations. Implementing partners typically describe themselves as facilitators of experiential learning and professional development. They act as bridges between HEIs and school environments, ensuring that interns are supported, monitored and guided throughout their teaching journeys. Schools, on the other hand, provide the practical setting and assign mentors who work closely with interns. These mentors are responsible not only for modelling good teaching practices but also for providing feedback, coaching and, in some cases, mental health support.

The HEIs, meanwhile, are seen as the academic backbone of the partnerships. Their role is to provide the theoretical and pedagogical knowledge that underpins effective teaching practice.

In the best examples, this role is complemented by consistent dialogue and feedback between the HEIs and implementing partners (for example, Implementer 3 in partnership with UJ). However, not all responses indicated a fully integrated partnership: some programmes operated with general alignment rather than formalised collaboration, pointing to an area for potential development.

Table 14: Framing of stakeholder roles and responsibilities

Stakeholders involved	Framing of relationship and responsibility
Implementing Partners	Act as facilitators of real-world teaching exposure, mentor coordination and professional development.
Higher Education Institutions (HEIs)	Recognised as the academic authority, with partners aligning schedules and outcomes to degree requirements (e.g. integration of UNISA requirements by Implementers 2 and 8).
Mentors (school and project Mentors)	Seen as co-educators shaping practical teaching ability and reflective practice. Most mentors are school-based educators, IPs also bring in project coaches and mentors for support
Interns	Positioned as emerging professionals actively participating in both academic and school environments.

Feedback mechanisms, shown in Table 15, are another important feature of these partnerships. Most programmes use surveys, focus groups or mentor reflections to improve their interventions. For instance, Implementers 1 and 2 use mentor and school principal feedback to inform the design of future workshops and mentoring activities. Some programmes, for example, Implementer 5, have extended these mechanisms through alumni networks and social media groups, ensuring ongoing engagement and support beyond the internship year.

Table 15: Feedback mechanisms used by implementing partners

Ip code	Surveys	Tests (incl. Benchmarks)	Observations	Reflections	Feedback forms	Feedback sessions	Collaboration opportunities	Interviews
1	Mentors			Student interns				Team leaders
2			Student interns (quarterly)		Mentors (quarterly)	Mentors		
3						School management	School management (co-development of programme)	
5					Programme alumni School staff	Student interns and mentors (quarterly)		
6				Student interns		Mentor teachers Student interns (lesson presentations)		
8			Student interns			Student interns (quarterly)	Student interns (peer collaboration)	
9		Student interns				Student interns		

Despite these promising features, a few challenges remain. Not all partners provided the same level of detail regarding academic alignment or post-induction support. Some responses referred vaguely to mentorship or feedback structures without offering clear implementation strategies. In addition, definitional clarity and common terminologies remain central issues in the ESTI discussions. For instance, the interchangeable usage of terms like 'teaching school' and 'professional practice school' suggests further alignment is needed in this regard, especially considering the TICZA agenda regarding the institutionalisation of the ESTIs.

3.4.4   Programme monitoring and evaluation

Ensuring equitable access to teacher development opportunities and measuring their outcomes is vital for strengthening South Africa's education system. This section examines how various implementers collect application and demographic data, support mentors and host schools, and assess programme impact. The analysis reveals strong practices in equity-focused recruitment, comprehensive support systems for interns and established methods of monitoring programme success.

3.4.5   Data collection on applications and demographics

All implementers reviewed in this report systematically collect demographic information during the application process. The data typically includes age, gender, race, geographic location and socio-economic background. For instance, Implementer 1 explicitly prioritises historically disadvantaged candidates, particularly Black African youth from rural or township areas. Similarly, Implementer 6 integrates equity and transformation principles by setting diversity targets and weighting selection criteria that favour inclusion.

Platforms used for data collection vary, from online application forms (as used by Implementers 2 and 4) to internally developed apps such as the Thuto App and FL!P used for integrated tracking, while most implementers select candidates who are particularly young, between ages 18-30 years and coming from underserved communities. These efforts demonstrate a sector-wide commitment to equity, with most programmes achieving high representation of women and candidates from marginalised backgrounds. The demographic composition in terms of gender of Implementer 5's interns was 50% female and 40% male, with the remainder opting not to

respond, perhaps due to the need for additional gender categories. For Implementer 4, the gender distribution for their different cohorts was: cohort 3: 4/4 females; cohort 4: 1/4 females and 3/4 males; cohort 5: 4/6 females and 2/6 males. Implementer 2 interns were 90% female and 10% male, which underscores the high proportions of females within the teaching profession and particularly within junior phases.

Intern support provided by mentors and host schools

Support for interns is a critical pillar for effective implementation, and most programmes have embedded structured mentoring practices. Implementer 1 runs four annual SACE-endorsed workshops and collects regular mentor feedback through observation tools and termly reports. Implementer 2 similarly values school-based mentors as co-educators, providing training in SEL and digital teaching and learning (DTL) and adjusting mentor support workshops based on termly feedback.

Implementer 3's mentoring approach is particularly robust, with a structured mentoring programme aligned with HEI curricula in place since 2023. This model includes daily, weekly and termly classroom monitoring, lesson observation rubrics, and goal setting. Implementer 6 complements this with recorded lesson presentations, feedback sessions and feedback loops involving interns and mentors. These mechanisms ensure that mentors are not only supervisory figures but co-developers of professional identity and teaching competence among interns.

Programme impact measurement and key indicators

Across programmes, impact is tracked through both academic and professional metrics (see Table 16 for key indicators). Most implementers assess student throughput and progress against B Ed or PGCE requirements, using tools such as academic performance dashboards (Implementer 2), feedback-aligned rubrics (Implementer 3), and final-year benchmarking tests (Implementer 9). Interns' teaching practice is monitored through classroom observations, mentor feedback and structured reflection. Implementer 1, for instance, uses monthly tracking on their digital platform, focusing on workshop attendance, mentor evaluations and post-graduation employment. Implementer 2 conducts at least seven lesson observations annually, including digital integration assessments. These tools not only gauge teaching readiness but also help

identify areas requiring targeted intervention.

Employment outcomes are also tracked systematically, although methods vary. Implementer 1 and Implementer 6 employ purpose-built databases and apps, with surveys conducted six to twelve months post-graduation. Implementer 2 updates graduates' employment status quarterly, while others rely on manual tracking through alumni networks. Notably, several programmes boast high retention and absorption rates, some exceeding 80%, and

one achieving an alumni employment rate of 100% (Implementer 9). Beyond metrics, the developmental impact is evident in the qualitative feedback. Interns are said to lead school and community initiatives, gain leadership and classroom management skills and demonstrate increasing confidence and engagement. This is also highlighted by student teacher interns in programme newsletters and testimonials provided. These soft outcomes are critical indicators of long-term teaching effectiveness and commitment.

Table 16: Summary of key indicators of programme impact

Implementer code	Academic progress	Professional growth	Personal growth	Throughput rate	Retention rate	Employment rate
Implementer 1	Yes	Yes	Not specified	Yes	Not specified	Yes
Implementer 2	Yes	Yes	Not specified	Yes	Not specified	Yes
Implementer 3	Yes	Yes	Yes	Yes	Not specified	Yes
Implementer 4	No data	No data	No data	No data	No data	No data
Implementer 5	Not specified	Yes	Not specified	Yes	Yes	Yes
Implementer 6	Yes	Yes	Yes	Yes	Not specified	Yes
Implementer 7	No data	No data	No data	No data	No data	No data
Implementer 8	Yes	Yes	Not specified	Yes	Not specified	Yes
Implementer 9	Yes	Yes	Not specified	Yes	Yes	Yes

3.5   Limitations

While the analysis offers valuable insights into the design, implementation and outcomes of ESTI programmes supported by various implementing partners, several limitations related to the data collected were noted. One key limitation is the lack of standardisation in the data across the nine implementing partners. While some partners submitted complete data sets, others provided only partial information, resulting in inconsistencies that limited the ability to fully understand and compare certain programme models.

Another limitation is that much of the data was drawn from internal documents provided by the implementing partners themselves. As such, the findings rely heavily on self-reported information, which may be influenced by selective reporting or positive bias, as partners may have highlighted aspects they wished to showcase.

Lastly, there was limited input from external stakeholders. Although student testimonials and newsletters offered some additional perspectives, these were only available for a few programmes. Consequently, the findings may not fully capture the diverse realities and experiences across all internship models.

3.6   Conclusion to Part 2

The document analysis has provided details of how ESTI implementing partners in the TICZA ecosystem develop, manage and evaluate their programmes, including the criteria they use to select candidates, how they on-board and support student teacher interns, and what they know about student intern journeys after graduation.

It should be noted that the depth of this review was affected by the level of response to information requests, meaning that further detail on all sub-themes would support greater insights into what makes programmes work. It is evident that implementing partners engaged in regular processes of collaboration and co-creation with partner schools and mentor teachers, recognising the critical role of the school as a learning and professionalisation environment. Development of mentor teachers through workshops and seminars formed a crucial part of ensuring quality and relevant mentorship support for student teacher interns, while also providing practicing teachers with skills they could transfer into their own reflexive practice and professional development.

Of interest to this review process is the question of value – what value ESTIs add to the system and how, and whether the ESTI model improves on current efforts to prepare novice teachers. Several implementing partners also expressed interest in this issue in their responses to the request for materials. It is evident that the ESTIs reviewed differ from traditional contact and distance teacher training in the following ways:

- **Sustained contact:** Student teacher interns spend a greater amount of time in practice schools and take on successively greater teaching and classroom management responsibilities. This ongoing immersion in the schooling context allows student teacher interns to develop a more nuanced understanding of the teaching and learning process; observe learner progress over time; and develop the capacity to reflexively and professionally respond to challenges as they emerge, while supported by a mentor teacher with whom they share an ongoing relationship.

- **Academic and professional support:** Student teacher interns receive academic support and structured time off to fulfil the academic requirements of their degrees. They further receive the support of their mentor teachers alongside different forms of professional and personal development opportunities designed to integrate their practical learning with theoretical and professional understanding.

- **Professional mentorship and development:** Mentorship is a cornerstone activity for all ESTI implementers and is recognised as an effective way of developing student teacher interns as professionals ready for the realities of the classroom. Many implementing partners provide mentorship development for mentor teachers and integrate their feedback into programme design, recognising the value of inputs from practicing teachers working in the classrooms with student teacher interns. This mentorship differs from mentorship in mainstream programmes, where student teachers may have multiple mentor teachers in one year or even practice period, and practice schools have to accommodate multiple student teachers from different institutions. Mentorship is carefully integrated into the design of ESTIs and programmed into collaboration with practice schools, accompanied by regular feedback loops and opportunities for shared engagement.

- **Effective induction:** With system retention being a key goal of several implementing partners, mentorship and professional development forms part of a strategy to induct student teachers more effectively into the profession and prevent early exit. This induction occurs through the integration of student teacher interns into the everyday activities of practice schools, allowing them to observe and understand the working environment, the changing needs and experiences of learners and the effects of socio-economic, community and intercultural dynamics on the classroom. Student teachers also work within peer cohorts that provide closer opportunities for mutual support and shared learning and receive support with, or advice on job applications and career planning.

These issues are highlighted in the systematic review that follows, which draws out key insights from the literature regarding WIL, student teacher mentorship, and issues and challenges in supporting student teachers' field-based learning experiences. The systematic review offers a high-level insight into the global context giving rise to ESTIs as well as the nature of pathways currently available for entry into the teaching profession.
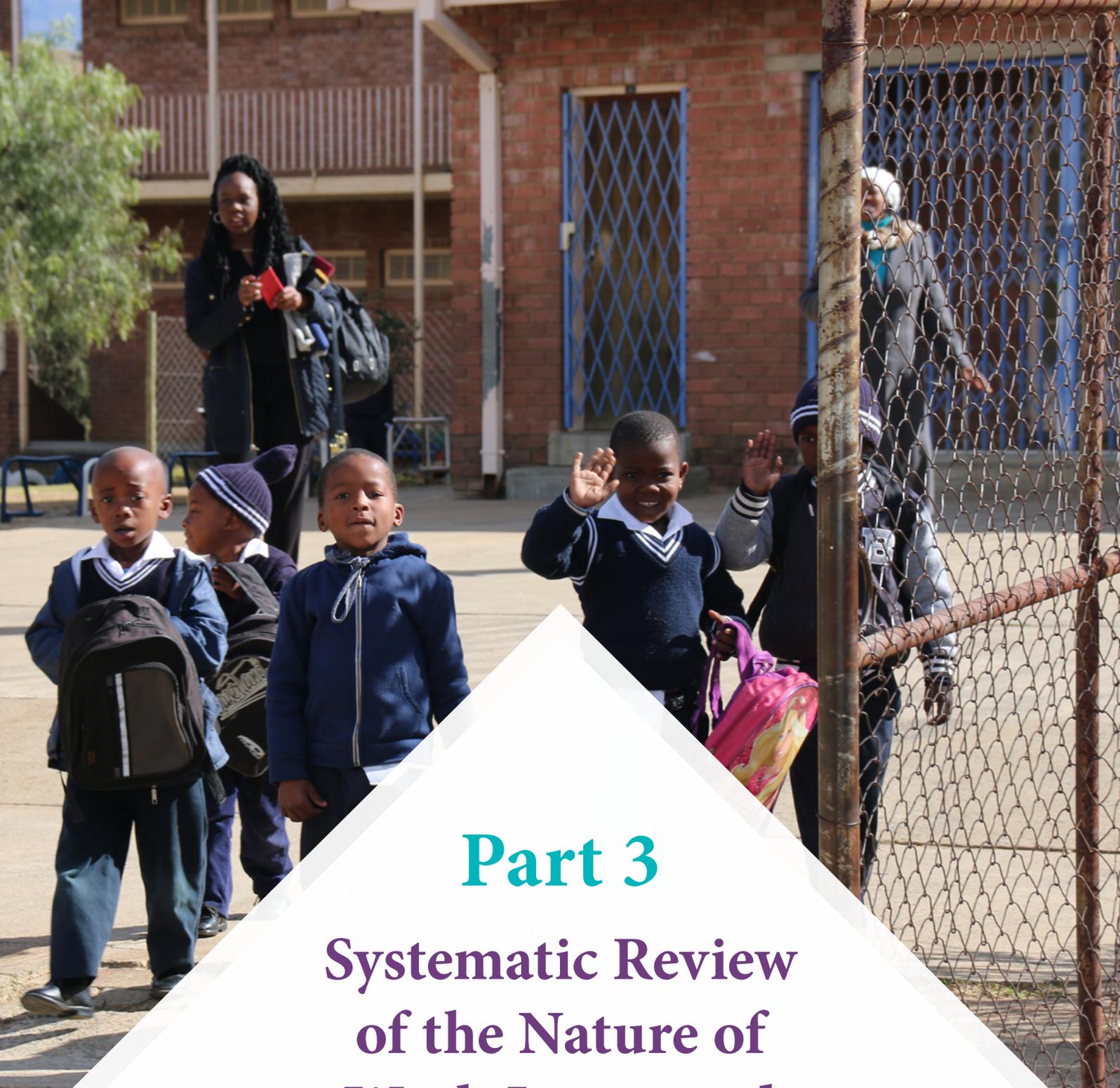
Part 3

Systematic Review of the Nature of Work-Integrated Learning in Initial Teacher Education

4.1   Background to the systematic review

The systematic review component provides a research-based grounding for the critical review of TICZA partners' programme documents and evaluation reporting. This grounding allows for an evidence-informed analysis of partner activities that considers how implementing partners engage with and respond to key issues and challenges shaping student teacher learning, experiences and professionalisation across broader local, regional and global settings.

The literature search focused on research into and evaluation of student teachers' WIL and internship experiences and preparation for the realities of the classroom, as well as the work of mentor teachers and university supervisors. The search also prioritised seeking out examples of ESTIs and other alternative education pathways, looking to surface best practices in approaches to capacitating student teachers at scale.

The review focuses on the professional learning experiences of pre-service teachers with a specific focus on ESTIs as an alternative pathway into the profession, considering whether these alternatives offer improved preparation and professionalisation compared to mainstream teacher education programmes. While the original review criteria set out to focus only on ESTIs, due to limited findings this was expanded to consider research into discrete components of WIL in general, different WIL models and their programmatic linkages, as well as drivers of (i) preservice/newly qualified teachers' motivations to teach and (ii) future retention in the profession.

The review sought to distil evidence of successful WIL interventions in teacher education and the factors creating an enabling environment for their implementation. The time period of the review incorporates more than forty years of teacher education research, recognising key changes to the structure of the profession arising from global political and social shifts. The review criteria are summarised below.

Table 17: Systematic review criteria

Systematic review criteria	
Time period	1980-2025
Population focus	Pre-service teachers
Regional focus	Global (first sift), narrowing to global South with a specific focus on Africa and South Africa
Intervention focus	Extended student teacher internships as an alternative education pathway offering deeper experiential learning; issues, challenges and processes in student teachers' practice-based learning
Comparison	Mainstream teacher education (contact and distance learning) programmes with differentiated models of balancing academic coursework with teaching experience
Outcomes	Evidence of successful extended student teacher internships or similar interventions and the conditions under which they work most effectively

The review was piloted through a dedicated search of one high-impact teacher education journal which delivered 570 article results. It was recognised that the search outcomes would be limited to that particular journal and reflective of a Northern bias in the results; however, this was balanced by the need to establish the dominant trends in the field in order to understand how local needs and priorities differ, eliminating the potential for overreliance on pilot resources in the final review. The pilot results were used to develop relevant general codes for further analysis of the final selection of review materials, which was expanded to include search directories such as JSTOR, Sabinet and ERIC.

Table 18: Summary of the review process

Phase	Purpose	Pilot stage (Northern journal)	Final review (Africa focus)
Identification	Identify articles and other resources broadly relevant to the search criteria.	N = 577 Total number of articles procured from journal.	N = 543
Screening (1st sift)	Screen articles for <u>relevance</u> to specific content criteria	N = 460 Articles sifted for general relevance to search criteria	N = 385
Eligibility (2nd sift)	Screen articles for <u>eligibility</u> based on parameters of inclusion: publication year, publication type, publication criteria	N = 212 Articles sifted for relevance to content and/or inclusion criteria	N = 224

Beginning from a base of approximately 500 resources in both processes, the first sift aimed to reduce for relevance by 20-30%, removing all resources that did not directly fit the search parameters and criteria (such as being outdated or tangentially relevant to the review topic). The second sift sorted for eligibility based on the criteria identified above, focusing on quality, empirical value and contextual relevance. Other systematic reviews, meta-analyses and evidence syntheses were included where relevant. This process was unfortunately limited to Anglophone Africa due to translation limitations.

The pilot review was based on keyword search strings made up of the following keywords:

Table 19: Keywords for the search

Student teacher internship	Teacher education internship	Teacher education partnership
Maths interventions in teacher education **Literacy interventions in teacher education**	Coaching in teacher education	Mentor teachers in teacher education
Wraparound support teacher education	Teacher education pathways	Student teacher experiential/ practice/ field-based learning

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A Critical Review of Extended Student Internships and Work Integrated Learning in South African Initial Teacher Education

The subject focus of the keywords included mathematics (later extended to all STEM subjects) and literacy due to the stated focus of TICZA and several individual implementing partners on strengthening mathematics and literacy outcomes, particularly in early-years education. Relevant research on this topic was included in the review process.

Further modifications to the search strings were made based on, for example, the addition of a country or regional location. The final stage of the review snowballed from the bibliographies of materials reviewed to ensure comprehensive coverage of related literature, as well as to identify potential research networks informed by shared theoretical, epistemic or professional positions.

The sifting process is important for arriving at resources that relate specifically to the review criteria. In the first phase of the review pilot, this sifting process reduced the number of resources from 570 to 460. The topics of the articles removed at this stage included in-service teacher professional development, research on English as foreign language (EFL) teacher education, and research on general skills such as student teacher writing or ICT capacity.

In narrowing the focus to Africa and African states, it was also important to sift (i.e. isolate and remove from the initial set of resources) for *in-service teacher mentorship*, a professional development approach in a considerable number of countries, as well as for research focused on teacher education through technical and vocational education (TVET) pathways. While the latter is relevant to the broader discussion about ESTIs in South Africa, it represents a significant body of work that could not be accommodated within the constraints of the current review. Resources on the former topic are included in this review only where in-service teacher mentorship dovetails with supporting in-service teachers to act as more effective mentors to student teachers undertaking WIL.

While general research into student teacher professionalisation and motivation to teach was also excluded at this stage, we included research into how practicum and school-based experiences shaped or changed these dimensions of student teacher development in Africa and the rest of the world. The sift also narrowed the curriculum focus to include teacher education interventions in science, technology and mathematics, and literacy education, as well as in assessment and socio-cultural development (such as through critical or humanising pedagogies, 21st century skills or social justice education). Most articles on study abroad experiences were excluded, except where student teachers reflected on significant cross-cultural differences and experiences of discomfort, adaptation and integration relevant to student teachers in ESTIs. However, we did include a small number of studies from the United States on preparing student teachers for high-need or high-complexity schools serving impoverished urban communities, as this relates to the goal of several ESTI partners to prepare student teachers for socio-economically and structurally disadvantaged schooling contexts, specifically. The notion of a 'high complexity' school is euphemistic, but indicates a site where multiple inequalities and social challenges intersect, such as community poverty, gangsterism or localised crime, parental unemployment or absenteeism due to work, and resource shortages, teacher turnover, and poor learner performance. These dynamics are also identified in Africa-based research in certain instances, although for understandable reasons supply-side challenges in ITE tend to feature more significantly in research from the continent. The notion of a 'high complexity' school is thus relevant to the South African context, although requires nuanced interpretation in respect of local educational settings.

Findings from the pilot review were merged with the results of the expanded search conducted through the academic directories identified above, and including other key resources such as the Council for the Development of Social Science Research in Africa (CODESRIA) and the African Journal of Teacher Education (AJOTE). This stage followed the same process of sifting for eligibility based on search criteria.

Search criteria needed to be used flexibly in order to widen the potential of finding relevant resources. Limitations were due to a lack of standardisation of ESTIs as a model, despite a range of interventions existing in the literature that would qualify under the definition of an extended student teacher internship. In order to overcome the limitations, the original review criteria were expanded from their focus on ESTIs only, and included consideration of research into different models of WIL and their programmatic linkages; drivers of the motivations to teach of preservice and newly qualified teachers' and retention in the profession.

The following sections present the findings of the systematic review in relation to the components of student teacher interns' WIL and the factors influencing their progress and success.

4.2   Systematic review findings

4.2.1   Framings of teacher education

The pilot stage reviewed an initial list of some 300 articles identified in the second sifting. Bibliometric analysis indicated that the majority of research in this selection (>80%) was conducted in the United States and United Kingdom, as well as European states including Spain, the Netherlands, Finland and Germany. This is consistent with the expanded funding and institutional support that has underpinned research and science systems in these states for a number of decades. The second phase of the review focused specifically on literature and research on student teacher experiences of WIL from African countries, including South Africa, Zimbabwe, Lesotho, Kenya, Uganda and Nigeria. Bibliometric analysis for this component aimed for a similar level of saturation (500 resources, with a final sift accounting for about 40% of the original total).

Research on the topic of student teacher experience is still emergent in many African states for reasons including 1) the initially minimal development of local institutions of higher learning under colonialism; 2) the historic location of teacher education and training within vocational 'colleges' rather than universities; and 3) the influence of structural adjustment, policy migration and global developmental discourse on national and regional policy formulation over time (De Kock et al., 2024; Hoffmann, 2017). Hoffmann's (2017) vital research on the development of African 'knowledge commons' also provides insight into the asymmetrical distribution of funding, citation and research support that undercuts the opportunities for and impact of work conducted in Africa and by African thinkers, teachers and scholars.

Weak tertiary institutional development also meant that post-independence states needed to expand higher education systems beyond prestige institutions such as the University of Makerere in Uganda and the University of Dar es Salaam in Tanzania, which historically serviced the training needs of a small class of colonial elites and local functionaries (De

Kock et al., 2024). The college model of teacher training was also borrowed from the British education system at the time and implemented differently in its former colonies – for example, some colleges were originally missionary-funded and -run before being absorbed into national systems, resulting in a mix of public and private training institutions; while the growth in educational research over the 20th century resulted in the establishment of small, mostly research-driven schools of education in post-independence universities (Ajayi et al., 1996; Fenwick, 2009; Mereku, 2019; Mngomezulu, 2012). These schools initially awarded postgraduate certificates and degrees before sometimes expanding to take on small cohorts of undergraduate students, compared to larger colleges which were responsible for producing the majority of teachers in these states.

This context matters because, as in the South African experience, it produced two dominant (yet contested) epistemological framings of teacher education:

1. That teaching is a vocational and practice-based occupation best learned through ongoing exposure and experience, such as through teacher colleges;

2. That teaching is an intellectual, academic and analytical profession underpinned by important educational theory, philosophy and methodologies, emerging and refined through research, and taught in universities.

These framings tend to compete for legitimacy within contemporary discourse in South Africa, given the post-democratic closure of teaching colleges or their absorption into university education departments (Maunganidze, 2015; Ong'ondo & Borg, 2011; Tillin, 2023). They are also contested framings because the implication is that vocational approaches lack theoretical grounding, and that university-led approaches do not deliver the necessary practical experience, when evidence suggests it is the specific design and combination of academic learning and practical experience that matters, more so than the institutional arrangement through which it is delivered (Burns, 2023; Christiansen & Bertram, 2019; Gravett & Kroon, 2021; Menter et al, 2019; Ndebele et al, 2024). In spite of this, the high level of feminisation in the teaching profession, and the origins of teacher education within a previously 'vocational' model in pre-democratic South Africa, accords the field subordinate status in higher

education which is reflected in support for research and scholarship of teaching and learning.

In the literature, this subordinate status was found to negatively influence administrative support for ITE and WIL experiences, as well as the motivation of university supervisors and examiners to fulfil their duties in the field (Lawson et al., 2015; Ong'ondo & Borg, 2011). It also contributed to a sense of operational slippage between universities as student teachers' awarding institutions, and schools, as the field sites for student teachers' experiential learning.

Scott (2013) identifies five object types visible in the social world, from a critical realist perspective. These objects take structural form in particular ways identified below, and are activated and deployed on the basis of existing, disruptive or regenerative exercises of power. They do not inherently hold power of their own in the sense that it is through activation and deployment of their structural forms that their immanent potential is realised. In this way, for example, the discursive power of race is not inherently a structure of either transformation or oppression, but is activated towards these ends through actors who are themselves socially, economically and discursively positioned within the material world (Scott, 2013). Moreover, the actions of individual agents, and the motivation behind them, are time- and place-bound, in the sense that the range of possibilities available to different actors is also always a function of their contextual location, expressing both its limits and its potential for change.

We interpret Scott's five structural types into the following corresponding operational themes relevant to ITE:

1. Academic & Curriculum structures (including individual HEI programmes, curriculum planning and design (including WIL))

2. Epistemic & Discursive structures (taking specific approaches to curriculum or WIL design; the effect of artificial intelligence or decolonisation initiatives on programmes; attitudes to WIL, including mentor teacher attitudes to PSTs)

3. Structures of agency (such as mentorship and wraparound support interventions; supportive professional or peer networks; access to job readiness and career development resources; knowledge about career planning and enabling interventions that support PSTs' resilience and throughput)

4. Institutional and Systemic structures (individual HEI funding and governance, school governance, DHET and DBE policies including ITE and CPD policies, provincial education department policies, qualifications authorities, public financing and bursary funding, unions and professional bodies)

5. Markers of social differentiation (including race, gender, class, geography (rural/ urban location), and religion; teaching in specific school types)

It is useful to consider how these structures enable, constrain and shape ITE experiences in different contexts globally and in Africa, as research indicates the ongoing and dynamic interplay between historical conditions and contemporary changes in higher education, society and economy, and where more than one structural force is at work in the shifts taking place in teacher education in any one location. The discussion provides more insight into the dynamics and conditions underpinning practical experiences in teacher education, before using Scott's framework to develop an analytical summary of key findings from the research reviewed.

4.2.2 Programme approaches to work-integrated learning in initial teacher education

A systematic review by Williams and Sembiante (2022) considered the programmatic elements of effective experiential learning interventions in ITE in the United States, of which internships formed one example. Their review found that robust field-based experiences were critical for developing pre-service teacher identities and crafting contextually-embedded professional practices, and they proposed the term 'service learning communities' to describe the interconnection of lecture-based instruction with schools as community-embedded sites. Within this framework, student teachers' professional learning was scaffolded with participation in school-community dialogues around shared challenges such as learner safety, supplementary academic programmes and mutual support for infrastructure or fundraising projects (Williams & Sembiante, 2022). This experience offered student teachers the opportunity to regularly reflect on their own biases and deficit modes of thinking towards specific school communities, while also engaging, reflecting and revisiting key issues within supportive

professional communities, guided by mentor teachers and university supervisors.

Ellis and Childs (2019) offer a useful historical account of the framing underlying the design of a more work-integrated teacher education programme, in their discussion of the development of the Oxford Internship Scheme (OIS) – one of the first PGCE programmes introduced in the United Kingdom between 1975 and 1983. The OIS operated as a school-based programme initiated by the university's education department as a way of providing graduate PSTs with a grounded foundation in local classroom realities. This was complemented by government funding for in-service teachers to complete professional diplomas or postgraduate research degrees; teachers enrolling in these programmes participated in action research projects in collaboration with Oxford academics, contributing critical field-based knowledge that informed further refinement of the OIS model. Ellis and Childs (2019) argue that a vital component of the early success of the OIS was its emphasis on stimulating in-service teachers as the missing link in both mentorship and education research. The model also grappled with how to balance quality in strengthening field-based experience while still retaining a focus on core educational theories, the sociology of education and educational psychology.

In the South African context, scholars have recognised the potential issues associated with the duration of the PGCE, despite this being one of the key forms of initial teacher preparation on offer in the post-democratic period (Kroon, 2020; Tabe, 2024; Verbeek, 2014). Notable among these challenges is the potential for 'wash-out', where student teachers do not receive sufficient opportunity to integrate theoretical knowledge with practical experiences, and gradually revert to teaching strategies more

familiar to their own educational experiences (Kroon, 2020). Qualitative research by Kortjass (2015) found that participants, who were South African PGCE graduates working in a range of school types, felt that they received sufficient knowledge in the programme but few opportunities to apply, test and reflect on what they learned, especially with assessment and classroom management. Because the PGCE is one year long, balancing foundational educational knowledge with reflexive application becomes a recurring challenge that affects the motivation and retention of newly-qualified teachers (Kortjass, 2015; Kroon, 2020; Mukeredzi & Sibanda, 2016; Tabe, 2024). While continuing professional development is intended to address the ongoing learning needs of teachers throughout their professional life-stages, it is unclear to what extent dedicated CPD programming exists to bridge content and pedagogic knowledge gaps for PGCE graduates specifically.

4.2.3   Typology of programme structures

Because the research on WIL experiences, mentoring and quality supervision of student teachers spans a variety of programme types, it was evident that a typology of common programme structure needed to be developed in order to account for some of the diversity at work within this domain. The table below defines the main programme types reviewed in the literature and expands on White and Forgasz's (2016) three-part typology of WIL structure: 1) the extended single placement; 2) several placement blocks over a programme's duration; and 3) hybrid part-time placement combining school-based internship and coursework. A fourth type was added called the 'sandwich' model, also discussed below.

Table 20: WIL programme types found in the literature review

Qualification	Programme Duration	Part/Full Time (PT/FT)	WIL Structure	Type
B Ed **Diploma**	4 years 2 years	FT FT	Scaffolded teaching blocks of two or more sessions (16-32 weeks) over programme duration.	**Traditional Professional**
B Ed **PGCE (3+1)**	4 years 1 year	FT FT	Coursework block followed by extended single WIL period. Usually concludes programmes followed by examinations.	**Traditional Academic**
B Ed **Diploma** **PGCE**	4 year 2 year 1 year	PT – usually through distance education	Distance-led coursework with WIL blocks scaffolded over the programme. Can include a residential experience.	**Distance Professional**
			Combination of distance and on-site coursework with student teachers embedded in practice schools as intern professionals for an extended stay (usually residential)	**Distance Intern**
Professional certification/ fellowship	Programme dependent, from 4 weeks to 3 years	Hybrid	Usually involves short, intensive coursework blocks followed by longer WIL experience; aim is to get more teachers into the classroom soon by recruiting existing degree holders in key demographic/ academic target areas.	**Alternative Vocational**

The Traditional Professional and Traditional Academic models reflect the most common ITE qualifications found in the review. Four-year B Ed and two-year Diploma qualifications were common undergraduate qualifications offered, while a one-year PGCE or similar could 'cap' the academic specialisation of an initial undergraduate degree (Gravett & Kroon, 2021; Hofmeyr, 2016; Matsko et al., 2021; Onyefulu et al., 2019). It is also common for a postgraduate initial teacher qualification to go up to Master's level over two years of combined coursework, research and practice teaching (Dawborn-Gundlach, 2025).

Differences tended to occur in how work-integrated learning is built into the academic component of the programme, reflecting the distinction between

Academic and **Professional**: in Kenya and South Africa, student teachers in B Ed programmes undergo several periods of WIL. In four-year degrees, it is common to have three or four WIL blocks scaffolded from observation to shared teaching to one or more extended periods of progressively more teaching responsibility (Wei et al., 2022; Mumo et al., 2024). In some institutions in Zimbabwe and Malawi, undergraduate degree or diploma qualifications can also follow a 'sandwich' model, where two coursework blocks are separated by an extended period of WIL, with the final coursework block including practicum reflection and final assessments (Maphosa et al., 2007; Maunganidze, 2015; Wei et al., 2022). This follows the guided professional approach to student teachers' professional development over time.

However, countries such as China require an intensive period of standalone coursework before students are allowed to participate in WIL, with the final year of the four-year degree allocated to WIL experience (Wei et al., 2022). Onyefulu et al. (2019) similarly reported that preservice teachers completing the B Ed at the University of Technology, Jamaica, must pass two methodology courses to qualify for their WIL component, alongside passing courses in their subject specialisation. This approach emphasises the completion of academic coursework as a necessary condition for progression to WIL, signalling the importance of the academic foundation for continuation into the practice setting. While China was only considered in the first sift of the pilot review, Wei et al.'s (2022) research provides another example of how the traditional academic approach would unfold practically.

These approaches signal different responses to the adaptation of a more clinical model of university-based teacher preparation which draws from the medical field. Within this overarching model, students are required to complete core and elective academic/methodological modules alongside participating in clinical practice blocks where they take on progressively more sophisticated duties under the supervision of experienced practitioners who serve as mentors and professional guides. The clinical model recommends the progressive scaffolding approach as both ethical and practical, allowing student teachers to develop the necessary skills to take over as lead teachers while not compromising the learning programme of the classroom, and also providing ongoing opportunities for reflection, peer- and mentor-engagement, and the gradual development of pedagogic reasoning (Wei et al., 2022; Rusznyak & Österling, 2024).

Part-time study towards education qualifications is a critical contributor to the pool of NQTs in countries including South Africa, and notable variation within part-time programmes was observed. This motivated the expansion of White and Forgasz's (2016) typology to articulate the variety in part-time PST preparation, given the differing rationales, funding mechanisms and target cohorts of these programmes. The **Distance Professional** (or Professional / Vocational, depending on programme target criteria) type includes part-time distance education programmes that follow a similar clinical model of embedding WIL across the programme duration. Candidates fulfil their coursework and assessment requirements within a designated academic session before undertaking work-integrated learning, which, similar to traditional programmes, can require practice time in schools fulfilling specific socio-economic, developmental and/or academic criteria. In South Africa, this would include students undertaking part-time distance education through institutions such as UNISA. The Distance Professional type differs from the **Distance Intern** model, where candidates tend to work within one dedicated school site for the duration of and often exceeding their WIL component, with the remaining time allocation committed to their coursework. The Intern model also hinges on a longer period of WIL and school-based practice spanning four months to one year or more at the end of the student teacher's preparation. ESTIs would fall under the Distance Intern model.

This approach to WIL differs from the last model in the typology, **Alternative Vocational**. This model also represents the space of alternative teaching pathways (ATPs) in the typology. ATPs offer non-traditional, usually accelerated modes of entry into the teaching profession for at least two main cohort types. The first cohort generally includes experienced professionals from other fields pivoting to a career in teaching (Reese, 2010). The second cohort includes emergency expansion efforts to fast-track the output of newly-qualified teachers in the system, such as through recruiting new graduates and members of underrepresented groups (Haj-Broussard et al., 2015; Matsko et al., 2021; Mattson, 2006).

While there is overlap in the programme structure and WIL component of these programmes, they differ in focus, duration and overall aims. The first cohort type includes experienced professionals usually offering scarce subjects in the sciences, commerce and technology content areas. These career professionals are assumed to have valuable industry or academic experience alongside basic, if not advanced, qualifications in their field. The coursework offered to career-change teachers focuses on concrete topics such as classroom management, subject pedagogy, assessment and educational methodology, with a limited (if any) focus on educational theory and psychology (Dawborn-Gundlach, 2025; Matsko et al., 2021; Reese, 2010).

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Standalone coursework blocks tend to be intensive and short, from one month to less than a year, with the aim of getting career-change teachers into classrooms as soon as possible to complete their WIL component. The duration of this component can also vary and may not necessarily be longer than WIL blocks in traditional programmes.

The second cohort of candidates is more diverse and can include people from a range of underrepresented groups, linguistic backgrounds, socio-economic contexts and working histories, depending on the overall aim of the specific programme. ATPs are offered, in this scenario, to diversify the profile of the teaching corps; funnel promising candidates into struggling urban schools; improve retention of teacher candidates through targeted funding and support; and, in certain cases, to speed up the output rate of qualified teachers in a system battling chronic shortage, such as in the aftermath of instituting Universal Primary Education (Hofmeyr, 2016; Matsko et al., 2021). In the case of developmental and residential programmes, the programme duration can include part-time teaching responsibilities for an extended period. This mirrors the transformative recruitment model followed by most implementing partners covered in Part 2, although due to the requirement for degree completion, these ESTIs are better characterised structurally as the **Alternative Intern** pathway.

These **Alternative Professional** programmes are part of expanding the professional and vocational profile of the teaching corps by drawing in a broader selection of eligible candidates than the school-to-undergraduate pipeline. ATPs differ from traditional pathways because in certain country contexts, a hybrid training and development model is substituted for an academic, university-driven programme. In these cases, participants can still be recognised as Fellows of specific programmes known for training career-change professionals (Matsko et al., 2021). One well-known example is the Teach First initiative in the United Kingdom, modelled on Teach for America, which places degree-holders as intern teachers in schools following a six-week intensive training course. After two years of extensive workplace learning and a tailored development programme, candidates graduate with a Postgraduate Diploma in Education & Leadership (Spicksley, 2019), which affords them Qualified Teacher Status (QTS) to teach

in UK schools. While working as intern teachers, candidates are paid according to the *unqualified* band on the ordinary teacher salary scale.

Alternative Vocational programmes also differ from the **Distance Intern** model, where candidates are expected to complete a teaching degree via distance learning at an accredited higher education institution in conjunction with their ongoing WIL on-site. The second cohort of ATP candidates may actually include candidates undertaking some form of the Distance Intern model, but this group also includes promising candidates with prior work or childcare experience being supported through a hybrid academic-WIL offering which may take place over one year or even longer. The difference is that candidates in the traditional models tend to be recruited directly from the school-leaver pipeline and supported through the funding and policy mechanisms designed to attract them to the teaching profession, while alternative entry candidates have different motivations for entry, and opportunities and sources of enrolment support available to them (such as self-funding or private philanthropic funding) (Spicksley, 2019). ATP candidates are also more likely to undergo accelerated training and development with the aim of getting into the classroom as soon as possible, and are therefore not undertaking standard university-driven teacher education qualifications focused on educational theory, psychology and methodology. ATP entrants in the second cohort are also more likely to be funneled towards specific educational needs, such as rural schools.

Retention was a key challenge flagged in the literature on ATPs. In cases where 'talent' is recruited from other sectors or teaching is framed as a stepping stone towards other career opportunities, an unsustainable revolving door is created where the funding put behind ATPs does not result in strengthened teacher retention or improved teacher numbers overall and over time (Matsko et al., 2021; Tillin, 2023). One common reason given for poor retention in ATPs was the lack of a sound foundation in educational theory, alongside limited preparation of ATP candidates to work in high-complexity, high-need schools. Respondents in Tillin's (2023) research suggested that despite the overall positive experiences of Teach First, participants preferred the rigour of courses designed by their host university, and saw the importance of developing their research and

analytical skills to support their practical work in the classroom. In a survey of 767 newly-qualified teachers in Chicago from traditional, residential (ESTI) and non-traditional (alternative) programmes, Matsko et al. (2021) further found that more PSTs from traditional and residential programmes intended to stay in the teaching profession for up to ten years or more, than PSTs from alternative programmes. Additionally, graduates from residential and alternative programmes were more likely to be ethnically and socio-economically diverse, and more likely to be committed to working in urban and high-need schools specifically, which is a key aim of these programmes. By comparison, graduates from traditional programmes were less likely to be interested in working in schools with diverse learning needs and learner populations.

This typology establishes the general context of which ESTIs form part. Given the definitions provided above, the ESTIs at work in the TICZA ecosystem occupy more than one programmatic type, while the Essential Wraparound Support for ESTI model represents one mode of implementing the Distance Intern model. This is because the internship model does not do away with the need for a formal undergraduate teaching qualification, but supplements it with mentorship, supervision and support to strengthen the professional development of student teacher interns, alongside an extended work-integrated learning component.

4.2.4   Factors and actors in implementation

This section spotlights the factors, processes and agents involved in the implementation of teacher education and student teachers' work-integrated learning specifically. Core factors in the implementation of ESTIs include the provision of wraparound and/or academic support, mentorship by school-based teachers, peer support and engagement, and the preparation of teacher educators. General research on issues such as mentorship, coaching and peer support featured significantly in the final selection of literature reviewed. The infographic presented summarises the key themes that emerged from this selection of resources, aligning these to Scott's (2010) critical realist typology of social structures.

Scott (2010) identifies five forms that structures can take: embodied, discursive, structures of agency,

institutional and systemic, and social markers. Embodied structures are physical and materially constrain and shape movement through time and space, but they also structure time, the way timetables and course plans do. Discursive structures reflect how language, narrative and ideation shape individual and collective perceptions and enactments of agency, while structures of agency are those forces that enable, constrain or permit specific behaviours and actions in the realisation of particular outcomes (Scott, 2013; Stutchbury, 2022). Discourses of deficiency or lack may constrain the structures of agency that some student teachers may recognise as available to them, even while institutional and systemic structures exist to promote transformation and inclusion and thus further actualise their agency in the sector (such as NSFAS and other redistributive policies). Discursive structures can also shape the realm of possible alternatives, or in the case of teacher education in South Africa, produce polarising views of the epistemic and organisational arrangements needed for effective teacher education, even from academics within the same institutional structure.

These discursive structures thus also do not exist in isolation from other related systemic structures, such as the National Treasury or the Council on Higher Education. Moreover, social markers such as gender and race form another structuring apparatus that serves to differentiate individuals, functioning to limit or expand possibilities for individuals and groups under different societal conditions (Scott, 2010; Stutchbury, 2022). Structures can also span more than one form: a university is an embodied structure as a physical institution, but arguably also operates at the level of each of the remaining structures in the typology.

The table below presents high-level insights from the systematic review, aligning these to Scott's typology of structures, and framing the perspectives presented in terms of how stakeholder agency was enabled, constrained or actualised through particular interventions. This approach highlights how individuals have the potential to interact with and transform structures even as they are transformed by their interactions with and within these structures, and how their experiences reflect choices and actions taken within particular contextual conditions. Developing the professional agency and capacity of student teachers formed part of the aims of

ESTI providers identified in the previous section of this report. It is critical to consider how student teacher agency has been enabled and limited in their experiences of work-integrated learning and its alignment to the academic programme of their degrees, as this provides insight into current systemic gaps. Additionally, the agency of mentor teachers, teacher educators, programme coordinators and other stakeholders also shapes the unfolding of particular phenomena identified in the research.

The table below summarises the high-level findings of the review in terms of Scott's typology of structures, and provides a selection of references and contextual information for each. The full bibliography is provided as an appendix and reflects the total resources reviewed for both components (the pilot and focused review stages).

Table 21: Summary of typologies of structures

Key findings	Notable references	Implications
Academic & Curriculum		
National government steering of teacher education policy is a key influence on the degree of alignment of programmes across different institutions, but individual student teachers also have different choices and options available to them. The degree of subject knowledge of teacher educators matters as much as it does with mentor teachers; if teacher educators are not confident in a particular subject area but are expected to evaluate students' performance, their feedback may not offer the depth and specificity needed to shift student teacher practices. Some student teachers graduate programmes knowing an extensive amount, but do not feel capable to do independently, causing them to revert to familiar teaching habits and practices.	Gravett & Kroon (2021) on PGCE student teacher experiences of WIL, and 'cognitive apprenticeship' in RSA Badenhorst & Badenhorst (2011) on student teacher experiences of mentorship in low-income schools in RSA Bouwer et al (2021) on remodelling WIL for Grade R PSTs in South Africa Rusznyak & Bertram (2021) on conceptualising WIL in RSA to support the development of pedagogic reasoning Khoza (2022) on developing science teacher identity through content modules	South Africa's minimum standards approach provides flexibility in implementation of ITE policy, but also leaves space for weak quality to be overlooked if statutory requirements are met. Current WIL arrangements in contact programmes still leave student teachers feeling underprepared to do things on their own.

Key findings	Notable references	Implications
Epistemic & Discursive		
While government policy formulation shapes how HEIs provide teacher education, the epistemic foundations of different ITE programmes are not clear or necessarily even aligned. Teacher educators are rarely consulted before key reforms take place in ITE, and mentor teachers/ practice schools also report being left out of the policy development process. Different qualifications carry different path connotations, as the B Ed degree was associated with a fully professionalised teacher in more than one context where other options (such as diplomas or PGCEs) were available. Major curriculum changes (either the school-based curriculum or ITE programmes) are not planned for across systemic actors and structures, but tend to be cascaded down.	Nel & Marais (2010) on collaboration between teacher educators and mentor teachers Rusznyak and Österling (2024) on epistemic relations in the design of practicum assessments and 'cognitive modelling' Leke-ateh et al (2013) on weaknesses in a 21st century ITE curriculum in RSA Musingafi & Mafumbate (2014) on mentor-PST relations in Zimbabwean practice schools	The assumption in certain contexts that the B Ed is the ideal professional qualification exerts pressure on B Ed graduates to perform optimally from early in their careers, and requires institutions to be willing to strengthen programme implementation and outcomes to this end. Policy-level separation between basic and higher education also contributes to operational misalignment, lags in implementation, and potential contradictions between e.g. ITE policy and the basic education curriculum. This suggests that enhanced coordination at the level of individual HEIs and schools may actually require modelling of high-level coordination between government departments, institutions and stakeholders. Cascade models of development and systems communication require greater, not less, administrative and support capacity to function optimally.
Structures of Agency and Support		
'Who student teachers are' is a vital dimension of how they experience their professional training, as the educational foundations of PSTs differ greatly depending on their historic and socio-economic realities. PSTs also need time to adapt to the realities and challenges of real-world schooling contexts, meaning that statutory WIL time may be insufficient for the development of professional resilience.	Esau & Maarman (2021) research on support for beginner teachers in South Africa Mok and Staub (2021) review of quasi-experimental studies for the effects of coaching, mentoring and supervision on perceptions of readiness by pre-service teachers	More than one 'structure of agency' supports the creation of an effective and developmental WIL experience. Student teachers, mentor teachers, and teacher educators all need to be capacitated to realise and actualise their agency within their individual roles.

Key findings	Notable references	Implications
Structures of Agency and Support (continued)		
Mentors and teacher educators are critical stakeholders in student teacher development, but they are also implicated in their own structures of agency that shape their decision-making, Many mentor teachers in cited research noted that they did not know the requirements of the role, or did not receive the necessary development to perform their mentorship function effectively.	Levine (2011) on the applicability of school-based professional learning communities for the development of teacher educator knowledge Maphosa et al.'s (2007) study of Zimbabwean PSTs on WIL and practices that undercut student teacher development	Moreover, resource shortages and other infrastructural/contextual limitations may also act as limitations on student teacher agency, undercutting their efforts. For example, a PST may have practiced a set of exciting natural science activities involving running water with their WIL mentor, but then is first employed at a school without any safe water points on site.
Institutional & Systemic		
Steering and coordination influence the alignment between ITE programmes, but also set limits on the scope for schools to impact and shape WIL experiences and the design of mentorship and instructional leadership. Teacher educators may be responsible for evaluating students' practical performance despite having limited or dated teaching experience of their own, or external evaluators may be brought in to supplement shortages of university supervisors. Subjective or superficial scoring of practicum observations is a challenge worsened by having supervisors without subject-specific knowledge. This increases the likelihood of underprepared teachers entering the profession.	Introduction of alternative pathways to resolve chronic teacher shortages resulting from the expansion of universal basic education in Africa (Maphosa et al., 2007; Mohono-Mahlatsi & van Tonder, 2006; Ong'ondo & Borg, 2011) Sedumedi and Mundalamo (2014) on the importance of subject specialisation for both mentors and teacher educators Karugu & Chege (2019) Kenyatta University ITE pilot to strengthen quality of WIL Ndebele et al (2024) on reframing ITE in SA for transformative potential	Schools are treated as passive recipients of PSTs for WIL, rather than active and experienced contributors to shaping the professional skills and identities of future teachers. Capacity gaps across stakeholders are reflected in the complexity of planning, implementing and evaluating student teacher WIL.

Key findings	Notable references	Implications
Markers of differentiation		
Socio-economic inequality, location and class status can influence where graduate teachers teach, creating a vicious cycle where affluent NQTs go on to teach in affluent schools because they know the codes and mores that abide in these environments (whether in the USA or South Africa). With the right supports in place, student teachers can develop passion, resilience and motivation to teach in high-need, low-income and rural contexts. It is not necessarily or solely the level of need of the school and its learners that affects their motivation: it tends to be the lack of support, lack of recourse for sensitive and illegal situations, and lack of latitude for teachers to stimulate positive changes in their environment.	Importance of collaborative partnerships between universities, schools and education departments to support school-based professional development in resource constrained contexts (Moemeke et al., 2012; Mukeredzi, 2016; Rebecca & Musisi, 2022) Melesse (2014) on weaknesses of teaching practice in interior Ethiopia Barnett & Botes (2022) on transforming the teaching of natural sciences in SA Musiimenta et al. (2024) on the lack of instructional leadership in practice schools	Teacher employment is not simply a matter of individual excellence, as other social, cultural, and at times prejudicial considerations can influence hiring processes. Where a teacher ends up may be less about their individual capacity and more likely related to their own educational experiences. Breaking the cycle of educational inequality also means capacitating high quality teachers to work in schools most in need.

Contemporary research on student teacher experiences highlights the effect of mentorship on the quality of student teachers' WIL experiences, but also underscores the effect of underqualified mentor teachers on the stability of the mentorship relationships. The lack of robust oversight and the effect of teacher shortages in schools undermines the purpose of WIL and mentorship, intended to provide student teachers with field experience under the supervision and guidance of an experienced professional. Mentorship is emphasised as one of the most critical dimensions influencing student teacher experiences of WIL, their sense of preparation to teach and their ability to synthesise theory and practice in real-world settings.

The structure and nature of the mentorship relationship also underlies how programmes are designed, as Nel and Marais (2021) argued that mentors and supervisors should be providing student teachers with feedback that they are able to apply and then use to reflect on changes and differences in what they observe. Moreover, they argued that student teachers, mentors and university supervisors constituted communities of practice that had the potential for mutual learning and development from practice (Nel & Marais, 2021). Musiimenta et al. (2024) considered this issue in respect of student teacher WIL in Uganda, arguing that the instructional leadership of practice schools was critical to cultivating coherent and rigorous WIL experiences, involving student teachers meaningfully in curriculum and collegial matters, and ensuring the necessary administrative and operational support for their time on site (Musiimenta et al., 2024).

Staffing shortages among university supervisors, whose role is to observe student teachers in the field, can also exacerbate this challenge. Ong'ondo and Borg (2011), Onyefulu et al. (2019) and Wei et al. (2022) showed that supervisor visits can vary by country, institution, subject specialisation and school district, from as low as one visit per student teacher for the entire practicum period, to up to five visits per student teacher. The suitability of university supervisors was also identified as an issue, as student teachers were sometimes supervised by professionals outside the student teacher's area of subject specialisation, meaning that the feedback and input received was generalised and not specifically tailored

towards the pedagogy and content considerations of their subjects. Respondents in Ong'ondo and Borg's (2011) research described incomplete supervisory processes where supervisors travelled between multiple schools for observation in a day and led abbreviated observation and feedback sessions with student teachers. In one example, the student teacher held the class back for an hour to demonstrate their model lesson to the university supervisor. Under these conditions, time available for robust reflection and feedback is diminished, including receiving input from mentor teachers who can offer a more holistic take on student teachers' daily performance.

It is evident that in different higher education systems, capacity and implementation gaps exist which undercut the quality and effectiveness of teacher education, and particularly the practical component, which consolidates student teachers' application and integration of theoretical knowledge. This component is not only essential to ensuring that student teachers understand how to act, think on their feet, troubleshoot with colleagues and resolve educational dilemmas on their own; it is also the period in which student teachers cultivate the initial sense of professional agency that they bring into their early career experiences, and interactions with learners, parents and colleagues. If this agency and its attendant capacities are weakly developed upon initial entry into the profession, student teachers may struggle to adapt and even consider exiting the profession.

A number of high-level findings can be distilled from this stage of the review. These are indicated below.

- Teacher education and WIL cut across the fields of basic and higher education. **Universities and schools have mutually reinforcing roles to play in supporting the practical and professional development of preservice teachers**.

- **Instructional leadership of school leaders and university teachers** should guide the planning of WIL experiences, the role of school staff, the nature of formative and summative assessment, and the framework of collaboration that develops between HEIs and schools.

- **Effective planning, communication and shared goal-setting between these institutions should be prioritised in the arrangement of WIL experiences** and supported by regional and local educational authorities through incentives and linkages to existing promotion and career

progression modalities. For example, local education authorities in China record school and teacher participation in WIL for future consideration for awards, special grants and teacher promotion opportunities (Wei et al., 2022).

- **Effective mentorship is a critical component of WIL, and practicing teachers should receive expert training and support to be good mentors**. Moemeke et al.'s (2012) quasi-experimental study of 240 Nigerian PSTs found a statistically significant relationship between student teacher competency and the expertise of their mentors. Student teachers who received expert mentorship rather than peer mentorship performed higher on competency assessments and demonstrated better professional capacity, suggesting that mentor capacity is a crucial determinant of WIL experience.

- **Many mentor teachers are also likely subject specialists** and can meet some of the specific guidance needs of PSTs in circumstances where university supervisors lack subject-specific knowledge. Capacitating mentor teachers to share their expert knowledge and practice experiences forms part of providing PSTs with a rigorous WIL experience.

- **Student teachers develop pedagogic reasoning through observing, reflecting on and responding to educational situations in the classroom.** This reasoning is formed reflexively, that is, through student teachers reflecting on the external and internal influences on their choices, understanding how specific choices resulted in a set of outcomes, and modifying their approach to produce more desirable results. Pedagogic reasoning can also be disrupted through ineffective mentorship and supervision focused on compliance or performing tasks 'correctly', where student teachers become preoccupied with demonstrating specific behaviours rather than grasping the underlying rationale.

- **Pedagogic reasoning can also be interrupted by weak field experiences,** including taking on the role of supply teacher, where student teachers step into the role of main teacher prematurely due to teacher shortages in host schools. This change in their role results in less time spent observing mentor teachers and having opportunities to ask questions and reflect, and a higher likelihood of reverting to familiar teaching strategies

to get through the curriculum, rather than feeling equipped to introduce new practices and activities.

- **Practical experience cannot replace the theoretical foundation of what teachers do, nor can theory provide the full preparation for the realities teachers will face in the classroom.** Any alternative to traditional teacher education pathways must balance short-term recruitment needs with the long-term effects of an inadequate or selective instructional foundation.

4.3 Implications for ESTIs based on the systematic review

The systematic review highlights the importance of coherent, well-planned and mutually-supported student teacher WIL experiences for providing the necessary professional grounding for their future practice. It is evident that inter- and intra-institutional dynamics and challenges are a key factor underpinning how WIL is implemented, whether by teacher education programmes or in practice schools. Effective communication and support are critical to maintaining coherent programmatic standards across practice sites.

One of the key arguments made by ESTI implementing partners is that student teacher interns achieve greater success through their programmes due to the provision of more robust academic, professional and psychosocial support that undergirds the extended period spent in schools. Findings from the systematic review support the idea that improving the quality and integration of school-based mentorship and support and with dedicated support on-site can be an effective way of ensuring that student teachers remain immersed in their professional environments, with more time to develop their confidence and capacity to teach. Moreover, challenges reported in the provision of mentoring in the systematic review suggest that weak planning, mentor development and ongoing communication can undermine the fidelity of the mentorship relationship and the balance of practice and reflexive learning required for student teachers to successfully scaffold their knowledge over time.

Communication between teacher education institutions (HEIs) and practice schools is also a significant influence on the overall alignment of programme standards with practice experiences and

mentorship support. The systematic review found that poor communication between institutions and schools reduces the space for holding mentor teachers and student teachers accountable, and also limits the real depth of assessment by university supervisors, who are often oversubscribed and need to observe and evaluate multiple students at a time or on a given day. Strengthened communication between WIL partners, as reported by ESTI implementing partners in the meta-review, can improve programme responsiveness and ensure continued alignment to the needs of student teachers, addressing challenges as they arise and ensuring practice experiences continue to meet the requirements of teacher education programmes.

The systematic review further emphasises the importance of WIL being matched by a sound foundation in educational theory, allowing student teachers multiple opportunities to integrate their theoretical knowledge with practical experiences that enable them to test, observe and reflect on what they do. Different approaches to WIL can be found in higher education systems around the world, and it is crucial to recognise that these approaches emerge in specific socio-political and historical contexts, often with specific intentions and intended to address specific needs in the systems. ESTI providers in the meta-review argued for the importance of student teacher interns following the traditional qualification pathway, even within an alternative WIL experience, noting that a strengthened WIL experience would be ineffective without student teachers having the capacity to think critically and analytically about their work from an informed perspective and with the necessary tools to navigate classroom realities. In this way, HEIs form the backbone of the ESTI approach, providing the quality management, policy and theoretical grounding necessary for student teacher interns to be valuable contributors to their practice schools.

Some research, such as Lucksnat et al.'s (2022) large-scale analysis of teacher motivation and potential attrition, indicated that alternatively-qualified teachers did not perform less favourably than their traditionally-qualified counterparts, particularly where teachers taking alternative pathways had deeper opportunities to develop relevant curriculum and teaching strategies, build collegial networks and make smoother transitions from novice to competent practitioner.

Way forward

The analysis across multiple implementing partners reveals thoughtful and innovative approaches to student teacher recruitment, programme design, support and impact measurement. However, there is a clear need for greater **alignment, coherence, and systematisation** to maximise the reach, equity, and effectiveness of these ESTI initiatives.

While ESTIs exist for a number of purposes and service a range of teaching and learning needs in the system, the review of IP resources indicated that space exists to align the structure, processes and monitoring mechanisms of programmes to support more effective implementation. This is because the capacity to expand their programmes to larger numbers of student teachers is dependent on implementers' capacity to streamline core functions, managing and monitoring for quality and rigor on a regular basis. It is clear from larger implementers that alignment to policy and maintaining pace with professional standards is key to ensuring continued relevance of their graduates to the sector.

It is also vital for the ESTI model to be articulated coherently in relation to national policy, in order to establish parity in future programme design and alignment with the provisions of the updated MRTEQ as well as requirements of individual programmes. An ESTI is not an alternative teaching pathway, as it remains grounded within the requirement for student interns to complete an initial teaching qualification through an accredited higher education institution. While ESTIs may also prove useful within the TVET teacher education terrain, ESTIs are not inherently vocational in nature: their aim is to deepen opportunities for student interns to integrate theoretical knowledge through ongoing, guided practical experiences, supported by peers, mentor teachers and university supervisors. This further means that both the policies governing ITE curriculum and the basic education curriculum become more practically influential on what student teachers do, rather than the latter becoming more focal to their practice after graduation. Schools become critical sites of ESTI delivery and operation, and ensuring unambiguous articulation of objectives, roles, relationships and milestones between schools, HEIs and NGO partners was a key strategy identified by implementers to support the day-to-day management of their programmes.

Systematisation would also support improving alignment and coherence, by articulating the ESTI within national policy and identifying actors and mechanisms at provincial and sub-provincial levels in basic education to work with the higher education sector in regular recruitment, placement, programme development and monitoring of ESTIs. Knowledge and data gaps can limit the pool of potential recruits available to IPs, including promising candidates who would also concretely benefit from an extended WIL experience, while uneven monitoring of student intern throughput makes it difficult to determine the full impact of internship experiences, especially in terms of shifting the demographic profile of the profession, staffing low-income and rural schools, and retaining newly-qualified teachers in the sector over the medium-to-long term. These are issues that implementers noted were important factors in their throughput monitoring, whether reflecting on current monitoring practices or discussing current efforts to design more effective monitoring systems for the future. Systematisation would also allow ESTIs to be used by education authorities as targeted interventions to stimulate school improvement and alignment in coordination with HEIs, particularly in high-need areas or rural communities.

It is also important that further data can be sourced to clarify some of the pertinent issues in each model and to firmly clarify whether ESTIs produce more and better teachers at an affordable cost. What is evident from the analysis of IP documents, and the systematic review, is that core gaps exist within the design and implementation of initial teacher education programmes, and WIL in particular, in contexts around the world. The presence of more than one of these gaps can weaken the overall structure of a programme and the quality of its graduates, whether university staffing shortages, non-functional practice schools, ineffective supervision or school-based mentorship, weak articulation of academic content with practical experiences, or superficial evaluation and observation practices. In several African countries, the pressure to expand teacher education (including alternative teaching pathways, in some cases) was driven by the need to provide universal basic education and ensure sufficient teachers available to meet growing system demands. It was evident from the resources reviewed that at some point, quality in the system should be anchored by shared structures, guidelines and standards that support rigorous co-learning from the field. ESTIs provide an opportunity for this level of engagement as they bring schools and universities closer, and require improved coordination between stakeholders across different public and private sectors. This increases the complexity of

interventions, but it has also demonstrated the potential for change that can be stimulated through alignment and support.

The following strategic directions are proposed to strengthen the way forward:

1. **Standardise recruitment processes with a focus on equity and transparency:** Different implementers use different recruitment criteria and processes to select each cohort of interns. While some of these criteria are relevant to programme design and objectives, and should remain where they strengthen the quality of the candidate pool, it is possible that other recruitment criteria can be standardised according to national statistics or sector guidelines. This may support, for example, attracting more male or non-binary teachers to certain programmes.

2. **Align programme design with core teacher competency frameworks:** National policy and teaching standards have been generated through successive processes of dialogue and public engagement, and speak to core priorities within the sector. While it is critical for implementers to develop programmes that align with their ethical, moral and institutional values, these should still be embedded within the provisions of the public system in which most student teachers are prepared to work, and which governs, monitors and accredits issues of teacher quality and capacity development.

3. **Strengthen monitoring and evaluation through digital integration:** Several implementers noted the use of digital dashboards to monitor intern progress, access feedback from interns and mentors, and track graduates. This kind of digital integration also includes linking digital and online learning experiences to student interns' profiles, allowing IPs to monitor participation, engagement and time spent on certain activities. Moreover, this allows IPs and involved stakeholders to readily access snapshots of programme operations, spot anomalies, and pick up on challenges before they emerge. Improving monitoring across implementers also allows for enhanced knowledge sharing and understanding of the drivers of change and improvement in different programmes.

4. **Deepen mentor professionalisation and support mechanisms:** Mentor teachers were a vital resource identified in both the IP data analysis and the systematic review. As experienced school-based teachers, their guidance, insight and support to student teachers can be a critical lever influencing student teachers' learning, professional identity formation, and overall impressions of the career. Implementers indicated the importance of capacitating mentor teachers to effectively support student interns by engaging with their ideas, lesson plans and teaching approaches; questioning, problematising and challenging interns, while encouraging them to reflect on their practices; offering professional insight during key moments; and monitoring their performance, conduct, and engagement with learners. Mentor teachers also need time and support to fulfill these responsibilities, requiring schools and universities to work together to craft effective WIL experiences. Moreover, as potential subject specialists, they should be more involved in supervision and observation of student teachers for evaluation purposes, as they tend to work more closely with them on an everyday basis.

5. **Foster national collaboration and shared learning:** While ESTIs as an intervention require particular forms of participation and resourcing, many of the interventions and practices of implementers emerge from or align with national policies, standards and professional norms, and offer renewed insight into how teacher education programmes and work-integrated learning can be strengthened. If the aim is to enhance the number of teacher graduates and retain them in the system, ensuring quality ITE experiences should be the shared goal of stakeholders working in the sector. Resolving and addressing cumulative gaps from graduate teachers' foundational and initial teacher education at the NQT level means subjecting learners to being the laboratory for improving weak teaching, with the alternative being to find ways to strengthen existing ITE programmes, align them to system needs, and work collaboratively to sustain and expand the potential of promising interventions.

By consolidating strengths in recruitment, designing impactful and inclusive programme structures, building robust mentorship, tracking outcomes, and fostering national collaboration, student teacher internship initiatives can be scaled and strengthened.