African Population and Health Research Center

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The Practicum in Teacher Education for Foundational Literacy and Numeracy: Lessons from North-West University

Amani Karisa, Mchungwani Rashid, Davis Musyoki, Kennedy Kamau, Jesse Mabongah, Lydia Namatende-Sakwa, and Moses Ngware.

Contents

List of Acronyms

APHRC	African Population and Health Research Center
ATP	Annual Teaching Plan
CAPS	Curriculum and Assessment Policy Statement
CPD	Continuing Professional Development
DBE	Department of Basic Education
DHET	Department of Higher Education and Training
FITLP	Faculty Integrated Teaching and Learning Plans
FLN	Foundational Literacy and Numeracy
MRS	Mixed Reality Simulation
NWU PDE	North-West University Provincial Department of Basic Education
POP	Professional Orientation Program
RQ	Research Question
SACE	South African Council for Educators
SA-SAMS	South African School Administration and Management System
SSA	Sub-Saharan Africa
TPED	Teacher Professional Education and Development
WIL	Work-Integrated Learning

Executive Summary

This working paper examines the implementation of the pre-service teacher education practicum at North-West University (NWU) in South Africa, illuminating its contribution both to strengthening the teaching of foundational literacy and numeracy (FLN) , as well as its support for broader educational reforms. The analysis, which draws on systematic review and an exploratory case study involving student teachers, faculty, school coordinators and mentors, responds to two key research questions:

1. What aspects of the practicum contribute to improved FLN teaching and what factors shape their effectiveness?
2. How can such a practicum model support broader reforms such as curriculum implementation, scaling evidence-based teaching approaches, and classroom data use?

Key Findings

- Mentorship is pivotal in FLN teaching as it provides curriculum guidance, model lessons, co-teaching, and emotional support.
- Peer support and reflection through informal peer communities, peer observation, and reflection on teaching experiences reinforce learning building confidence, particularly in teaching reading and early math.
- Extended practicum placements exposed students to real classroom dynamics, equipping them with practical strategies for FLN instruction, lesson planning, and learner assessment.
- Teacher preparation gaps persist, particularly in administration, discipline, inclusive education, exposure to systems, such as the South African School Administration and Management System (SA-SAMS). This includes broader structural issues such as mentorship overload, informal placement arrangements, and uneven school support. This has hampered effective FLN teaching, underscoring the need to better align university coursework with real classroom demands and provide more hands-on practice.
- Mixed-reality simulation (MRS) can be used to provide student teachers with opportunities to rehearse FLN lesson segments in a controlled environment. This practice, which is considered an "approximation of teaching" can be beneficial for preparing student teachers to manage classroom tasks such as the instruction of phonics or responding to learner behavior.
- Structured practicum strengthens FLN readiness. The progressive practicum design of NWU, which was mapped over four years and linked to core practices, provided a strong foundation for student teachers to cultivate FLN competencies. This model provides a blueprint for sub-Saharan Africa (SSA) countries in expanding the effectiveness of teacher preparation.
- Structured lesson planning and assessment standards can support FLN readiness. This suggests that explicit focus on structured planning and assessment could be a transferable approach for strengthening FLN teaching in other contexts.
- Student teachers learn most effectively when mentors employ a scaffolded approach which begins with observation, progresses through co-teaching, and culminates in independent instruction. This approach supported by real-time feedback structured guidance helps in the internalization of key FLN instructional practices.

- The NWU practicum model is designed to align teacher preparation with specific instructional goals targeting FLN. This targeted approach is consistent with the broader body of evidence that indicates that focused, content-specific Teacher Professional Development (TPD) is more effective than general training.

Policy and Program Recommendations

The following policy and program recommendations, grounded in the study's findings, aim to strengthen practicum-based teacher preparation for FLN and contribute to broader education reform.

1. National Policy and Structural Reforms

- Establish a national mentorship policy for preservice teachers, including criteria, training, and incentives.
- Extend practicum duration to a full school term, especially in the final year.
- Promote regional collaboration among SSA countries to share innovations in FLN-focused teacher development.
- Mobilize funding and partnerships specifically directed toward FLN.
- Advocate for the replication of effective models like NWU in other regions.

2. Practicum Design and Coordination

- Align practicums and coursework with the instructional goals of FLN.
- Strengthen coordination among universities, schools, and education authorities.
- Adapt practicum and TPD programs to reflect country-specific FLN gaps, language contexts, and curriculum standards.
- Monitor practicum outcomes linked to FLN teaching quality to support continuous improvement.

3. Pedagogical Content and Inclusive Strategies

- Increase emphasis on structured lesson planning and formative assessment in teacher preparation.
- Ensure teacher education programs address inclusive strategies for supporting learners with special needs.
- Include content on administrative, behavioral, and inclusive teaching practices in coursework.

4. Practice-Based Learning Innovations

- Expand guided practice approaches, including structured observation, co-teaching, and technology-supported learning.
- Introduce tools such as MRS and video-based modeling to support rehearsal before placement.
- Provide practical training in teaching foundational skills like decoding, comprehension, number operations, and formative assessment.

5. Curriculum and Standards Integration

- Integrate FLN teaching strategies into national teacher standards, certification requirements, and curriculum reforms.
- Revise preservice training to include practical modules on classroom management, administrative tasks, and inclusive instruction for diverse classrooms.

Conclusion

The NWU model provides compelling evidence that practicum-based teacher education, characterized by strong mentorship, peer learning, and structured reflection, can produce teachers who are capable of advancing FLN goals and are confident in the classroom. However, there is a need for systemic adjustments, particularly in the areas of mentor support, curricular alignment, and institutional partnerships, in order to fully realize its benefits. Consequently, the foundational learning crisis across sub-Saharan Africa can be effectively addressed by strengthening the practicum component of teacher education which is both practical and scalable.

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Data Availability Statement
The datasets used and/or analyzed during the current study are available from https://aphrc.org/microdata-portal.

Introduction

Teacher quality is widely acknowledged as the most significant school-based factor affecting student learning outcomes. In sub-Saharan Africa (SSA), numerous education systems face a learning crisis. It is estimated that globally, approximately 70% of 10-year-olds are unable to comprehend a simple text, while in SSA, the rate is as high as 88%. Improving foundational literacy and numeracy (FLN) outcomes has become an urgent priority (UNICEF, 2022). This has brought attention to the effectiveness of teacher education programs in preparing educators to teach early grades especially in foundational literacy and numeracy.

The school-based practicum is a critical component of pre-service teacher education, in which student teachers apply theory in real classrooms under the supervision and support of instructors and regular teachers. Effective practicums provide "hands-on experience" and extended practice of pedagogical skills. Nevertheless, a significant number of African pre-service programs continue to provide relatively short practicums (often lasting only a single term or a few months) or rely heavily on workshop-style in-service training that is disconnected from classroom contexts (APHRC, 2024; Cobbold, 2011). With several countries instituting competency-based curricula and other reforms, there is growing recognition that teacher preparation must become more practical, school-based, and aligned with the actual demands of the classroom.

As Piper et al. (2018) observe, targeted and practice-focused teacher education programs are more likely to yield better learning outcomes than generic training, particularly when embedded in government systems for scale and sustainability. Such targeted approaches may focus on specific teaching subjects, tailor support to particular teacher profiles (such as novice or less experienced educators) or include structured packages of instructional materials. Supporting this, Popova et al. (2022) found that programs lacking a subject-specific focus had an average learning impact that was 0.24 standard deviations lower than those that were targeted.

Therefore, this working paper examines a promising practicum-based pre-service teacher education model for FLN in South Africa, exploring the ways in which it enhances teaching practices for FLN and supports broader educational reforms. The analysis is guided by two key research questions (RQs):

- **RQ1:** *What aspects of the school-based practicum for a teacher education program contribute to enhanced teaching practices and improved learning outcomes in FLN, and what factors contribute to their effectiveness?*
- **RQ2:** *How can the school-based practicum teacher education program support broader educational reforms, such as implementing a new curriculum, scaling evidence-based FLN teaching approaches, or generating classroom data for decision-making?*

To answer these questions, we draw on a case study of the North-West University (NWU) in South Africa – a large-scale pre-service teacher education program known for its extensive Work-Integrated Learning (WIL) (i.e., practicum) component. We highlight the ways in which NWU's practicum model strengthens FLN teaching and can be replicated across SSA to inform policy and practice for scaling up quality teacher preparation.

The working paper comprises nine sections. Section 1 provides the introduction, including the contextual factors and conceptual framing of the study. Section 2 explains the methodology

of the case study. Section 3 presents a comprehensive analysis of the findings, and Section 4 discusses their implications for research, policy and practice. Section 5 provides conclusions and lastly, Section 9 offers actionable recommendations for funders and policymakers to enhance the quality of practicum-based teacher education for FLN at scale.

1.1 Contextual Landscape of Teacher Education in South Africa

In South Africa, teacher education is guided by national policies developed by the Department of Basic Education (DBE) and the Department of Higher Education and Training (DHET) (2011), which shape the structure of the four-year Bachelor of Education (B.Ed.) program for both primary and secondary teachers. A central feature of this program is the requirement for pre-service teachers to complete between 20 and 32 weeks of supervised, school-based practicum—also known as Work-Integrated Learning (WIL)—over the duration of their degree. This practicum is intended to be conducted in functional schools committed to mentoring student teachers, and it must be formally assessed as part of the qualification process. The goal is to bridge the gap between theoretical coursework and practical classroom experience.

Historically, however, teacher education programs in South Africa and many parts of sub-Saharan Africa offered only minimal practicum exposure—often just a few weeks per year—with inconsistent mentoring quality (APHRC, 2024; Cobbold, 2011). Recognizing the limitations of this approach, several countries including South Africa, Kenya, Rwanda, and Ghana have initiated reforms aimed at making teacher preparation more school-based and competency-driven (APHRC, 2024).

South Africa's Curriculum and Assessment Policy Statement (CAPS), while not a new curriculum, reinforces the importance of structured lesson planning and standardized assessment—core competencies that student teachers are expected to develop and apply during their practicum (DBE, 2011). Yet, effectively implementing CAPS in real classrooms presents challenges such as large class sizes, diverse learner needs, and significant administrative duties. These are areas where many novice teachers report feeling underprepared, underscoring the ongoing disconnect between university-based training, practicum experiences, and the practical demands of teaching in South African schools (Allen, 2009).

1.1.1.North-West University Practicum Model

North-West University (NWU) was selected as a case study due to its robust practicum program, as implemented across multiple campuses. NWU's B.Ed. Foundation Phase program is designed to prepare teachers for Grades R (reception year) through 3, with a particular focus on FLN (NWU, 2020). The foundation phase teachers are expected to teach FLN and life skills. The program serves a diverse student body across three campuses (Potchefstroom, Mafikeng, and Vanderbijlpark) as well as through distance learning. The NWU model is further expounded on in the findings section, providing details about its structure and milestones.

1.2 Conceptual Framework

This study is guided by a conceptual framework built around five promising features identified as critical to effective practicum-based teacher education in Africa, based on a recent systematic review (APHRC., , 2024). Each is briefly defined below:

- **School-Based Mentorship:** This entails the pairing student teachers with mentors who provide guidance, feedback, and models effective teaching. Effective mentorship can bridge theory and practice by socializing novices into the full teacher role (Betteney, et al., 2018; Paula & Grīnfelde, 2018). Prior research stresses that mentors should be well-trained and supported (Arnsby, et al., 2023; Hayes & Pridham, 2019), yet in practice many African contexts lack formal mentor training or incentives (APHRC, 2024).
- **Communities of Practice (CoPs):** This involves collaborative peer learning groups in which student teachers (and sometimes their mentors or lecturers) regularly share experiences, observe each other's lessons, and reflect together. These communities encourage continuous professional growth through mutual support and knowledge exchange (Lave & Wenger, 1991).
- **Peer Observation:** Closely aligned with CoPs, peer observation entails student teachers observing one another teach, offering constructive feedback. This process enhances critical reflection skills.
- **Reflective Practice:** Is the process by which teachers critically evaluate their own lessons, decisions, and student responses in order to continuously improve. Nurturing reflective practitioners who learn from experience is considered a hallmark of effective teacher education (Schön, 1983).
- **Diverse Practicum Placements:** Exposure to a variety of school contexts – urban and rural, well-resourced and under-resourced, including different languages and cultures – is believed to produce more adaptable and innovative teachers. Zeichner, 2012; Zeichner et al., 2015). Such diversity enables teachers to handle a variety of situations and learner needs (Gay, 2018).

Overall, by examining NWU's practicum through these five lenses, we identified which aspects are most effective for enhancing FLN teaching practices (RQ1). Furthermore, this framework facilitated the exploration of the practicum's contribution to broader system goals (RQ2), including curriculum implementation, scaling of best practices, and data use.

Methodology

This study adopted an exploratory case study approach (Stake, 1995), with qualitative and quantitative methods used to gather data on NWU's practicum-based teacher education program.

Population and Sampling

The study targeted four categories of informants at NWU: student teachers ('students') enrolled in the B.Ed. Foundation Phase program across NWU's campuses and learning modalities, including on-site and distance., school-based mentors, school coordinators, and NWU faculty ('lecturers') involved in teaching student teachers and supervising practicum students. To determine the sample size for the quantitative survey of student teachers, the Cochran (1977) formula with a finite population correction was employed. We considered a target population of about 2500 teacher students in the foundational learning track according to the student population, with a conservative estimated proportion (p) of 10% (0.10) for a key variable of interest. To ensure high statistical power and a lower margin of error, an oversample was factored in. The large population formula used was:

$$n = (Z^2 * p * q) / e^2$$

Where:
n = sample size
Z = Z-score, which we used 1.96 for 95% confidence
p = estimated proportion of the population that possesses the characteristic in question
q = 1 - p (the estimated proportion that does not possess the characteristic)
e = margin of error
Plugging in the values, we obtained a sample size of 138. Applying the finite population correction:
n_adjusted = n / (1 + (n-1)/N)`

Where n = 138 and N estimated to be 2500.

Using these values, we obtained a proposed sample size of 130.8, which was adjusted to 160 to oversample, with the aim of enhancing the precision of the estimates and ensure robust statistical analysis. Therefore, 160 early-grade student teachers who went through the practicum program, from each of the four 'sites of delivery': Potchefstroom, Mafikeng and Vanderbijlpark campuses, as well as the distance learning program, were targeted for the survey only. However, since the survey had an option for a self-administered questionnaire especially targeting the distance learning students, 216 ended up participating in the study. The survey mainly captured the experiences of participants in various practicum activities.

About 86% of the respondents in the quantitative survey identified as female, 13% male, and 1% as other.

For qualitative insights, 54 students (96.3% female, 3.7 male) were interviewed individually, generating evidence on their practicum experiences, including mentorship, challenges, and recommendations.

In the end, the total sample of student teachers was 270 (216 surveys, 54 interviews). The majority of participants were recruited from the Potchefstroom and Mafikeng campuses, which accounted for 45% and 40% of respondents, respectively. The distance learning program contributed 13% of the participants while only 2% came from Vanderbijlpark. Recruitment proved challenging for the distance learning program as a result of limited contact information and the dispersed nature of students. Similarly, engagement was limited at the Vanderbijlpark campus despite numerous outreach efforts. All four year-cohorts were represented: 28% first-years, 20% second-years, 36% third-years, and 17% fourth-years.

	Group	Number of Participants	% of participants
Study Tool	Surveys	216	80%
	Interviews	54	20%
Campus	Potchefstroom Campus	122	45%
	Mafikeng Campus	108	40%
	Distance Learning	35	13%
	Vanderbijlpark Campus	5	2%
Cohort	First Year	76	28%
	Second Year	54	20%
	Third Year	97	36%
	Fourth Year	46	17%
Gender	Female	238	88%
	Male	30	11%
	Other	2	1%

Table 1: Sample Distribution of Student Teachers (N = 270)

In addition, 17 school coordinators (12 female, 5 male), 16 school mentors (15 female, 1 male), and 5 NWU faculty (female) were interviewed—providing perspectives on practicum's implementation, including its challenges and successes. Notably, the sample was predominantly female, reflecting broader gendered staffing patterns in the Foundation Phase. While this limited the ability to explore male educators' perspectives, the study included available male stakeholders and triangulated across roles (mentors, coordinators, faculty). The aim was not to generalize by gender but to understand system-level patterns and perspectives on practicum implementation.

Role	Total	Female	Male
School Coordinators	17	12	5
School Mentors	16	15	1
NWU Faculty	5	5	0
Total	38	32	6

Table 2: In depth interview/ other stakeholders Participants by Role and Gender (N = 38)

Data Collection

Surveys were conducted using a structured questionnaire which was administered either on paper or electronically, depending on the participant's availability. The questionnaire included a combination of closed-ended items (Likert scales, frequency of activities) and a few open-ended questions.

Key informant interviews were conducted using a semi-structured interview guide for student teachers, mentors, school coordinators, university staff—lecturers and a WIL coordinator (Appendix E. The interview for student teachers covered mentorship experience, peer interactions, reflective practice, use of teaching strategies, and perceived alignment of theory and practice. Mentors were asked about their approaches to mentoring, the support they receive, workload, co-teaching, and feedback processes. Faculty were asked about supervision practices, expertise relative to subjects, and the program's alignment with education department policies. The interviews, which lasted between 30–60 minutes, were conducted in English. They were audio-recorded and later transcribed verbatim.

Document analysis was also conducted with a focus on university documents: including course outlines for Foundation Phase modules, practicum handbooks detailing supervisory processes and student expectations, and assessment rubrics specifying the criteria for evaluating teaching competencies. Together, these documents were analyzed to understand how expectations for teaching practice were structured, communicated, and assessed. In addition, two key policy documents were examined: the National Policy Framework for Teacher Education and Development (Department of Higher Education and Training), which outlines South Africa's overarching strategy for recruitment, retention, and professional development of teachers, and the updated 2022 version of the framework which provides the overarching strategic direction for teacher preparation in South Africa. The purpose of examining these documents was to identify alignment between institutional practicum implementation, defined learning outcomes, and national teacher education priorities, particularly regarding the preparation of teachers for diverse 21st-century classroom environments.

Ethical considerations: This study received ethical approval from the African Population and Health Research Center (APHRC) Ethical Review Committee and the North-West University (NWU) Research Data Gatekeeper Committee. Prior to data collection, all participants were provided with detailed information about the study's purpose, procedures, and their rights, including the right to withdraw at any time without consequence. Informed consent was obtained from all participants, and strict measures were taken to ensure confidentiality, data security, and anonymity throughout the research process.

Data Analysis: Quantitative survey data were analyzed using descriptive statistics (percentages) in STATA. These summarized key indicators (e.g., proportion of students engaging in co-teaching, frequency of collaboration, sources of feedback). Qualitative data were analyzed thematically using NVivo software. The research team developed a coding framework deductively, aligned with the research questions and the five feature areas. Initial codes were applied to transcripts, from which sub-themes were identified and then categorized into broader themes such as "mentor support," "peer collaboration," "theory-practice gaps," and "curriculum implementation." Triangulation was done by comparing perspectives across students, mentors, and faculty on similar issues to determine where they converged or diverged.

Findings

We begin by outlining NWU's practicum to provide context for our findings. We then examine specific elements of NWU's teacher education program that contribute to improved teaching practices and learning outcomes in foundational literacy and numeracy (RQ1). Finally, we focus on how NWU's school-based practicum model supports broader educational reforms (RQ2).

3.1 NWU's Practicum

NWU's Bachelor of Education (Foundation Phase) is designed to progressively develop student teachers' practical competence over four years (NWU, 2014). The program is built around a structured Work-Integrated Learning (WIL) model that incorporates four interconnected phases: Introduce (modeling of core teaching practices), Prepare (simulation and approximation), Enact (implementation in classrooms), and Analyze (reflection and feedback). This approach blends traditional school-based placements with technology-enhanced methods such as online platforms, mobile coaching, and mixed reality simulations (MRS) (currently being piloted), ensuring frequent and deliberate practice opportunities. Student teachers gradually take on more responsibility as they transition from novices to advanced beginners.

Each academic year includes a period of school placement. A university Work-Integrated Learning coordinator and team of lecturers oversee the process, while each partner school has a school coordinator and one or more mentor teachers who guide the students in daily practice. School coordinators work with all the mentors in the school and provide the university with a single point of contact for the school. They receive information from the university and disseminate it to mentors and students, as needed. They also serve as a superior form of authority to which students can appeal for assistance. The practicum is conducted twice during the academic year, amounting to two blocks. Each block is roughly three to four weeks, contingent upon the school calendar. However, in the first year, students complete a two-week placement in the second semester, following a non-placement Professional Orientation Program (POP) in the first semester (see text box below for clarification on the orientation changes introduced in 2022). The surveyed students, some of whom were registered before the 2022 orientation changes, reported that during the POP first-year students were required to register at a local school, preferably in their home area and spend the first week of the practical period there completing observation activities, which form part of their portfolio of evidence. The remainder of the period involves a compulsory, campus-based non-placement program. Attendance for both components is mandatory, as they count toward the minimum practicum duration. Missing either part may result in failing the module. Distance students follow a similar structure: they complete four days of school observation and then participate in an online version of the POP.

During the school-based placements, first-year students typically spend the practicum time in a school mostly observing classes and assisting the teacher with basic tasks. By the second year, they begin planning and delivering parts of lessons (often through co-teaching with the mentor). In their third year, students are expected to teach lessons independently, and in fourth year they are expected to operate in a capacity similar to that of an "intern teacher," overseeing a class for an extended period under supervision. The NWU model is distinguished by this gradual increase of responsibility, ensuring that novice teachers are adequately challenged by the end of their training, rather than overwhelmed early on. A school coordinator interviewed described this progression as follows: First-year students "always observe" and take notes;

some eager ones may attempt to teach by the end of the month, but generally "the first years always observe… towards the end… they want to try… we do not restrict them." In contrast, by the fourth year, students are frequently teaching full lessons and even units. At the end of each placement period, students are assessed by their mentor using a structured rubric that has been developed by university faculty.

Ideally, formal assessment of the practicum by university lecturers occurs twice, once in the second semester of third year and once in the first semester of fourth year (see text box below for clarification). The precise timing may vary depending on school availability. Some partner schools and NWU staff have called for an extension of the duration to ensure students gain more experience. In fact, a few mentors expressed that the student teachers should "stay longer" because the current period felt too short and having them in class was beneficial. Logistically, NWU maintains a balance between practicum time and on-campus coursework. Some mentors suggest extending the final-year placement to a full school term as a way to increase total practicum weeks without overburdening the academic calendar.

Clarifying Orientation and Assessment Changes Affecting the Surveyed Cohort

The cohort of NWU students surveyed were students finalising their degree in the 2024/2025 academic years. Depending on their first year of registration, this entails that they would have participated in the first-year orientation programmes between 2020 and 2022. Two major changes occurred since 2022 for first year orientations. First, during the first semester, first year students do not attend teaching practice at schools, for observation or otherwise. Second, students participate in a full orientation programme in the first semester teaching practice block of their first year, hosted physically on campus for contact students and online for distance students. First year students are therefore deemed unprepared to enter schools until they participated in the robust Professional Orientation Programme (POP) in the first semester of their first year, this allows for disruption of established 'layman' ideas regarding teaching that students developed as learners and for proper instruction on ethical matters prior to entering schools.

In terms of In Situ assessment (school-based assessment during teaching practice) of students by lecturers, as of 2021 only a single assessment occurs either in the 3rd or 4th year of study. The second semester of the final year of study is retained for remediation purposes for struggling students. Although some Faculty of Education campuses conducted two assessments prior to the 2018 alignment, the subsequent alignment and the systemic growth of the student pool made this practice logistically and financially untenable. The development and assessment of teaching practice are now shaped by revisions to the faculty's teaching and learning plans. All faculties at the NWU were instructed to develop Faculty Integrated Teaching and Learning Plans (FITLP) in 2018, officially adopted in 2020 by senate (NWU, 2020). The Faculty of Education FITLP includes a full adaptation of all teaching subject-related modules to incorporate didactic training. Didactic training is not considered a separate function in the NWU B.Ed curriculum and occurs throughout the programme. The B.Ed curriculum is tailored to sequentially and consistently develop teaching practice skills throughout all teaching subject-related modules, which includes the implementation of micro-lessons and other teaching-practice related activities and assessments. Lesson presentation for and assessment by lecturers therefore occurs throughout the B.Ed programme over the four years of study. These assessments can take the form micro-teaching, simulated lessons, avatar training, team-teaching, and so forth. Thus, learning from practice should inform learning in practice and vice versa. This practice is further supported by the Faculty of Education's endorsement of an in situ model, in which the faculty's own staff serve as assessors (NWU, 2020).

Placement Process and Diversity of Contexts: Placements are centrally managed through the university's Work Integrated Service Learning system, which involves matching student teachers with schools from an approved database. While students have the option to select their preferences from the list that is available, the university is responsible for all formal communication and placement arrangements. Each student is assigned a mentor teacher for the whole duration of a given practicum period. Typically, rotation should not occur during a placement period. However, across the four years of training, students are placed in different schools and grade levels to ensure exposure to a wide range of classroom settings, teaching styles, and learner populations.

NWU's placement process involves coordination with hundreds of primary schools in the North-West Province and beyond. While NWU maintains a database of willing schools, students often take the initiative to identify a school that meets the requisites. The university may include the school in their database if it meets the criteria. Before the final university confirmation, the student fills out an online self-placement form indicating their preferred school from the list or proposes a new school. Because many students opt for schools near their home, a variety of urban township, peri-urban, and rural schools end up hosting NWU students.

This means student teachers are exposed to a range of classroom environments, some of which are well-equipped and others that have minimal resources. In a particular school, students have the option to rotate between different grade levels during their practicum. As one coordinator explained, "If a student is there for 4 weeks, they might spend a week in Grade 1, then Grade 2, and then Grade 3 to learn different strategies of teaching from different teachers." However, this is often a school arrangement and not a university requirement. Rotation in this manner ensures that by graduation a student teacher has taught across the Foundation Phase spectrum (Grades R–3) and encountered a variety of mentor styles. The benefit is adaptability, as a school coordinator noted, "No two teachers teach the same way," so observing several teachers helps students learn various approaches. The potential drawback is reduced continuity within a single classroom; however, mentors often coordinate so that students follow the curriculum progression in each grade.

Mentor Selection and Training: In the absence of a formal national mentorship accreditation in South Africa, NWU depends on schools to nominate experienced teachers to serve as mentors. According to the NWU guidelines, eligible mentors should be Foundation Phase Heads of Department (Grades R-3), or qualified teachers for Grades R–3 with at least five years of teaching experience. Mentors may supervise multiple students, providing guidance by first allowing them to observe their teaching, then co-teaching lessons with the student. They gradually assign students more responsibility, eventually having them teach entire lessons or series of lessons independently. Mentors are also required to participate in NWU's Mentorship Training Program and must carry out all necessary student teacher assessments (including assessments of students' performance at the end of the placement period) even if they are still in the process of completing the training themselves (NWU, 2016). While this may be the approach outlined in theory, in practice, school coordinators reported basing mentor selection primarily on teaching experience, requiring a minimum of five years for those assigned to student teachers. The underlying assumption is that veteran teachers possess the classroom management skills and pedagogical depth needed to support novice teachers effectively. As one coordinator explained, "We will never place somebody with a mentor who has one or two years of experience… it must be 5 or more years." While this approach helps ensure that mentors are experienced, there is no formal training provided to these mentors in how to mentor. Some mentors emphasized the importance of tailoring the training to the specific needs of each mentor, as not all mentors require the same level of coaching.

For example, experienced mentors may not need training, while those who are newly appointed would benefit more from it. Mentors are not formally evaluated or certified for their mentorship duties. A faculty member also observed that NWU had previously offered mentor training to ensure consistent supervision quality. However, this initiative was discontinued after the rollout of a national teacher induction policy in 2020. That policy was inconsistently implemented and has since dissipated, leaving mentors without systematic support. NWU does supply a mentor's report template and guidelines, which mentors are expected to use to provide structured feedback and to formally evaluate the student at the end of the practicum. School coordinators collect these mentor reports and review them for completeness and any discrepancies. However, this is more of an administrative oversight than mentorship training. Essentially, NWU's model relies on the mentors' professional goodwill and existing expertise to provide support to student teachers. This informal approach is common in SSA and highlights the need for more systematic mentorship policies or programs (as discussed in Section 6).

University Supervision and Support: Despite the fact that NWU has over 12,000 education students across campuses, the university tries to maintain a link with each student during practicum. NWU lecturers (or hired supervisors) visit each student teacher at least once in the field during their third and fourth years to observe a lesson and offer feedback. Mentors are responsible for the primary supervisory function during first - and second - year placements as university visits may not be conducted. A faculty interview revealed that in practice a student may only be formally evaluated by a lecturer once or twice over the entire four-year program. For example, one student observed, "You are evaluated only once during your four years of practicals." This strong reliance on mentors' central role in providing continuous feedback highlights the importance of carefully considering a mentor selection process within the practicum model. NWU has established a communication portal to assist students encountering significant obstacles during their placements.

The Student Helpdesk, which is accessible via the Student Engagement Portal, allows students to submit requests or report issues related to their academic or university experience. This ensures that concerns are directed to the appropriate department for resolution. However, because of the extensive scope of the program, students are responsible for self-reporting any issues. According to a program leader, "Due to exceptionally high student numbers…it is currently the responsibility of the individual student to indicate that they might need assistance. A communication portal has been designed where students are guided to identify areas they need support." In addition, NWU offers preparatory workshops during the first year, such as, board-writing and handwriting workshops during the POP to boost practical skills.
Policy and Government Engagement: The duration and nature of practicums are stipulated in South Africa's Minimum Requirements for Teacher Education Qualifications (DHET, 2015). It mandates that practicums be conducted in functional schools and that appropriate supervision be provided; however, it defers the implementation details and the specifics to the institutions. While South Africa recognizes the importance of mentorship in teacher development (e.g., the country has developed a mentor teacher training guide), there is currently no distinct mentorship implementation policy that details the manner in which mentor teachers should be trained or incentivized.

The NWU practicum is only lightly influenced by the DBE and the North-West Provincial Department of Basic Education (PDE) which sets policy and manages schools respectively. According to respondents, the PDE's role has been largely administrative, with the primary objective of "granting permission" for schools to host students via official circulars. Some respondents did mention that PDE subject advisors occasionally check in or that the PDE provides workbooks used by learners in classrooms, although the majority (60%) of respondents described PDE's role as passive. Fifty percent of respondents expressed a desire for increased PDE involvement, particularly in the provision of uniform resources across schools. One coordinator suggested, "If there was uniformity in terms of everything, this particular student teacher will leave knowing that there is what we call a Maths Lab." This signals an opportunity for the PDE to increase its involvement in teacher education. One potential strategy could be involving PDE's district subject advisors as additional mentors or observers in order to strengthen the support network for student teachers (we will revisit this in recommendations). In summary, NWU operates within a policy framework that values practicums but relies heavily on university-school partnerships to ensure their success. The NWU case offers a microcosm of the potential of a large-scale practicum to function in an African context. It includes notable strengths (strong mentorship culture, integration of practice across years) and challenges (limited formal mentor training, gaps between university and school expectations). The findings section (Section 5) probes how these dynamics play out and what impact they have on teaching practices and broader educational goals.Having described the structure and nature of the practicum at NWU, the focus turns to addressing the specific RQs.

3.2 Practicum Practices that Enhance FLN Teaching Pedagogies

Mentorship as the Cornerstone of Practicum in FLN Teaching

Across all stakeholder groups, school-based mentorship was identified as the most critical factor influencing the success of the practicum experience, particularly in early grade classrooms where FLN teaching is central. Student teachers overwhelmingly placed a high value on the guidance of their mentors, who were instrumental in helping them navigate the unique

demands of teaching FLN. Of the 51 student teachers interviewed, 49 reported having a mentor and found the experience to be beneficial. Among the students, only one reported lacking a mentor, and another described their mentorship as unhelpful.
Mentors were particularly important in guiding student teachers through curriculum implementation, particularly in terms of planning for teaching. As one student explained,

"Most of the time I am directed by my mentor. She would tell me what we do for a week – the theme and what we are focusing on." This was reiterated by another student teacher, affirming that the mentors not only supported planning but also lesson delivery: "guiding me in everything, how to teach, how to prepare a lesson… even helping me with the learners."

This was corroborated by the mentors, affirming their role as involving a multifaceted induction of the student into the teaching profession. They described working across four dimensions of teacher readiness: pedagogical skills, subject matter knowledge, emotional preparedness, and logistical/administrative know-how. Importantly, in the context of FLN, mentors emphasized foundational skills such as lesson planning aligned with literacy and numeracy objectives, pacing suitable for young learners, and interactive methods like storytelling, songs, games, and manipulatives. One mentor described her structured approach to building these skills over time: "In the later stages of the practicum, mentors prioritize active teaching by student teachers while they observe and provide targeted coaching." Many mentors emphasized that effective FLN instruction depends heavily on structured lesson planning and alignment with the curriculum. They strongly advocated for the consistent use of official Annual Teaching Plans (ATPs) and advance preparation of lessons, stressing that entering a classroom unprepared—especially in the context of foundational learning—is both frustrating and unacceptable. Notably, 27% of mentors and school coordinators explicitly mentioned ensuring that student teachers were working from the ATP and aligning their lessons with national curriculum guidelines, such as the CAPS framework. This helped ensure that early grade learners were consistently exposed to age-appropriate FLN content.

Additionally, student teachers applauded mentors for supporting classroom management, particularly in deterring disruptions to the student teachers' lessons and as such building their confidence. This is well asserted in one narrative in which a student teacher referred to her mentor as a "body guard": She was just there… when I was teaching, she would act as my bodyguard, looking out for learners so that they wouldn't disrupt the lesson." These narratives show how mentors not only provided pedagogical support, but also emotional backing that strengthened student teachers' confidence.

Further, in providing logistical and administrative readiness, mentors played a critical role in ensuring student teachers were smoothly integrated into school routines – ranging from marking classroom attendance to accessing teaching materials. Indeed, about 18% of mentors highlighted the importance of ensuring students had the necessary textbooks, FLN teaching aids, and even basic operational skills such as how to use a photocopier. In corroborating this, one mentor who also served as a practicum coordinator, explained for example, that he always checked with student teachers to ensure they had access to required instructional materials: "Are there available learning and teaching support materials to support this student teacher? We then make them as comfortable as possible." Such logistical support was seen as essential to addressing practical challenges, easing the transition into classroom teaching, which helped student teachers focus on the core task of effective FLN delivery.

Beyond pedagogy, some mentors provided emotional and material support. As one explained, "I normally help with food, sometimes I give them a lift after school… we make sure they feel welcomed." Mentors often viewed student teachers as junior colleagues, fostering deep and lasting bonds. A student echoed this sentiment, noting that they "still have a relationship with [their mentor] now," long after the practicum ended. This relational dimension of mentoring as the mentors indicated, plays a crucial role in building the confidence and sense of belonging of novice teachers.

The mentors further elaborated their role in attending to emotional preparedness and professionalism. A recurring issue noted in the mentors' narratives was the lack of confidence or enthusiasm for teaching amongst some of the student teachers. Indeed, about 16% of the mentors reported encountering insecure or unmotivated student teachers. One mentor said, "Sometimes I can discern that the student is insecure, unprepared or… not really interested in becoming a teacher and just doing it because they have to." In such cases, mentors dedicated time to counsel and motivate the student. One mentor described an initial interview with new student teachers: "We ask them why they are here, what encourages you to follow this career? … We advise them, we mentor them… after observation, we ask how they feel. We build them in totality." This practice of engaging in reflective conversations as asserted by one of the mentors, supported in instilling a sense of purpose, addressing attitudinal issues early, demonstrating the mentor role as career coaches—rather than merely instructional coaches.

Importantly, mentors at NWU demonstrated diverse mentorship styles, often going above and beyond official duties. Some mentors took a very hands-on, nurturing approach. For instance, one mentor expressed her pride, "I was taught by the best… I'm teaching them and mentoring them the way I was mentored," indicating she passes down the same "old school" FLN methods she had learned. However, this well-intentioned approach can risk perpetuating outdated or less effective FLN practices, potentially limiting student teachers' exposure to more evidence-based approaches.

Furthermore, the role of mentorship in enhancing FLN teaching skills over the course of the practicum was illuminated particularly within the student teacher narratives. By being immersed in actual classrooms, they acquired concrete techniques to teach foundational literacy and numeracy more effectively. For example, a student teacher disclosed a phonics teaching "trick" she learned from her mentor: "When you're conducting a phonics lesson, ask the learners, do you know what sound this is? … Basically making life easier for the learners." Similarly, for early math, she learned that it is more effective to use a number chart and have learners "count up" instead of counting one-by-one for subtraction. This is a strategy she had not previously considered: "...if they are doing subtraction sums and you say, you give them 30 minus 10. On a number chart, just instruct the learners to count 10 to the top of the number chart. They don't have to count one by one…" Mentors, as the student teachers explained, also emphasized interactive and evidence-based methods: some taught student teachers on the use of small-group instruction in reading and numeracy. One student described how they conducted literacy stations: "We have a corporate team… doing financial awareness with learners in smaller groups while others do reading… We try to do it practically on the carpet." This integrated approach which according to the mentors is promoted by NWU supports contextual learning, in which real-life situations help learners connect literacy and numeracy concepts to their everyday experiences.

In addition, approximately one-third of the students who were interviewed reported that they learned to adjust lessons based on learner understanding – an aspect of adaptive teaching. For example, one student said, "You have to assess the learners and determine their level before you choose what you're going to teach them." She explained that she would adjust her approach based on the students' comprehension of a concept. This reflects a transition from a scripted approach to a more learner-centered one, as corroborated by the mentors who encouraged real-time assessment of learner progress through exercises and records to track evidence of learning. Indeed, mentors tried to instill an evidence-based mindset, as one of them explained: "They [student teachers should] observe how learners are learning… come up with methods to improve learning. … Record-keeping… is essential." By the end of the practicum, many student teachers acknowledged competence in using learners' written work and responses to gauge understanding and provide remedial teaching where necessary. Embedding such adaptive practices into teacher training, as the mentors explained, strengthened the ability of future educators to address diverse learner needs, contributing to global efforts to improve FLN learning outcomes.

Following successive practicum placements, many student teachers were reported to exhibit a strong sense of autonomy and growing confidence in their teaching abilities. Mentors observed that by the fourth year, several student teachers could competently perform many of the responsibilities expected of qualified teachers. As one explained, the practicum "gives them the necessary confidence and experience to understand what is expected when they become qualified." Student teachers themselves recognized this development, with one reflecting, "I have come a long way… I can see improvement," particularly in lesson planning and delivery. Moreover, the practicum experience revealed a strong dimension of reciprocal or bi-directional learning, as mentors not only guided student teachers but also gained new skills and insights from them. While mentors modeled effective pedagogical practices, they also benefited from the fresh perspectives student teachers brought into their classrooms. School coordinators noted that student teachers often introduced new ideas into schools, as one of them explained, "These [student] teachers come with new trends… they also share their knowledge with the teachers here." Notably, student teachers were often more tech-savvy in technology integration. As one coordinator explained, "These students are more into technology. They encounter older educators who are not so proficient in technology; teachers learn from them, and they also learn from us." This two-way interaction positioned the practicum as a catalyst for school-based innovation—especially in advancing FLN outcomes as student teachers contributed to contemporary pedagogical approaches through digital strategies, but also the capacity to deliver high-quality foundational education.

Co-Teaching and Gradual Release

An effective strategy widely reported at NWU is co-teaching, where the mentor and FLN student teacher share instruction. About 85% of the interviewed students said that they engaged in co-teaching at some stage, most often (73%) with their mentor teacher. While some mentors described co-teaching in the formal sense—jointly planning and delivering parts of a lesson—others used the term more loosely to refer to situations where the trainee assumed responsibility for teaching independently when the mentor was absent. Strictly speaking, the latter may not meet established definitions of co-teaching, which emphasize collaborative planning, instruction, and reflection between two educators (Friend et al., 2010). This variation

in interpretation may highlight the need for clearer guidance and training on effective FLN co-teaching practices in the practicum. However, most of the mentors perceived co-teaching as a "transitional phase" between observation and full teaching responsibility, as one mentor explained: "We are interacting… I give her instructions to say, you can do from here to here… maybe she must just repeat the lesson to see how she understood, and then next time you give feedback." This scaffolded approach, which involves guided practice with immediate feedback, aligns with structured pedagogy models that have been shown to improve FLN outcomes.

Students found co-teaching to be highly beneficial in building confidence and competence for FLN instructional practices. One student detailed her co-teaching routine: "We'd be doing spelling; she'd say one word, I'd say the other… Or in math, she helps one side of the class, I help the other. After school we sit down and plan: tomorrow we'll do this… and talk about how we like to approach it." Through such coordinated planning, teaching, and debriefing, the student was essentially apprenticing. She concluded it helped her become "more familiar with teaching on your own as well. You gain more confidence."

Co-teaching was also used to illuminate student teachers areas for improvement given the mentor's presence which allowed for exploration of different approaches to FLN, with feedback. In the survey, 47% of student teachers reported co-teaching "often" or "very often," while 53% did so only sometimes or rarely. Qualitative findings reveal that the student teachers mostly co-taught primarily with their mentors, though the practice was inconsistently implemented—ranging from structured collaborative models to more informal support. Despite this variation, most student teachers highlighted the value of co-teaching for their skill development, describing experiences such as alternating lesson delivery, dividing classroom responsibilities, and jointly planning future sessions with one noting. For instance, one student noted, "If we're doing math, maybe she helps that side of the class, I help the other side…after school, we'll sit down and talk about how to approach the next day".

Despite its advantages, students reported that co-teaching was often limited by time constraints and mentors' focus on covering the curriculum efficiently.Some students expressed a particular desire for additional co-teaching opportunities, as one said, "I feel like as a third year, you really need more co-teaching moments. But I also understand from the teacher's perspective, there's not a lot of time in the day." Overall, when implemented, co-teaching proved to be a powerful pedagogical strategy that allowed mentors to model FLN teaching techniques while providing student teachers with a safe environment to practice. The key message is the importance of guided teaching as a scaffold until students attain professional competence.

Communities of Practice and Peer Support

The NWU practicum incorporates formal communities of practice (CoP) (also referred to as study circles, or collaborative teacher inquiry groups) into modules dealing with MRS. Some student teachers used the Teacher Professional Education and Development (TPED) module assignments as a basis for discussing their practicum experiences with peers—often outside formal university structures. Additionally, informal peer support is prevalent. In the interviews, 57% of students reported that they participated in some form of group discussion or sharing with fellow FLN student teachers about their practicum. These ranged from ad hoc conversations with friends to more structured interactions. For example, some students

mentioned a WhatsApp or Facebook group for their cohort where they "ask for advice… if they have problems with their mentor teacher, they will just ask there." Others described meeting "every second week to discuss how we can assist each other," or even working together after school on lesson planning and assignments. Interestingly, a number of students who initially said they were not in any "formal" CoP went on to describe these collaborative behaviours, indicating they did not regard friend groups as professional CoPs, despite the fact that they functioned as such.

Peer collaboration included sharing experiences (both successes and challenges at different schools), comparing how different schools operated, and helping each other with assignments or resource ideas. One student said, "We just share ideas and help each other out... we share our experiences during our practices," noting that such platforms were not formally required in the FLN practicum, but provided a supportive network. Another student explained how the university's TPED module at NWU, which structures and supports teaching practice sessions, effectively became a community of practice: "We discuss our practicals and … different experiences, like they get to explain to you how FLN things are done differently in other schools." This exposure to multiple contexts through peer discussion can be considered a proxy for diverse placements and helps broaden student teachers' perspectives for FLN. While it is unclear to what extent student teachers implemented the information they were given, these peer exchanges created a reflective culture that exposed them to a variety of school practices, helping normalize problem-solving in the context of classroom challenges.

Furthermore, CoPs enabled access to resources through sharing amongst the members, as articulated by one of the student teachers: "If you are struggling to get resources, they can help you… Say what they use so you can look into similar sites." In the foundation phase, where teachers often require creative teaching aids and techniques to teach reading and math, such resource-sharing is invaluable.

Additionally, another key advantage was the moral support derived from peer interactions—the reassurance that one is "not the only one" facing certain challenges. As one student expressed, "We are all learning every day… sharing knowledge and helping each other."

Indeed, CoPs built a culture of collaboration—Students reported various frequencies of peer collaboration. Some met on a nearly daily basis, while others met on a weekly or biweekly basis. The survey data revealed a very high overall collaboration rate: 97% of surveyed student teachers reported that they engage in some form of collaboration with either peers or mentors, and 64.5% said they collaborate frequently (38% daily, 26% weekly). Only a small minority (3.8%) rarely collaborated. This implies that NWU's practicum cultivates a culture in which student teachers do not operate in isolation but rely on their mentors and peers. The benefits of these communities were clearly articulated, as one student elaborated: "(it) helps me for my growth because once I hear my friends say something I was not aware of, I'll be able to improve."

Peer Observation and Feedback

Peer observation reinforced student teacher learning through different lenses. According to the survey, 69% of students had engaged in peer observation, giving feedback to colleagues either at the university within the MRS environment (formal) and/or during the teaching practicum period (informal). During the teaching practicum period, the frequency varied from once or twice a week, a month, or a term. Others had more regular sessions, particularly if they were in the same school. For instance, if two NWU students were placed in the same school (or same approximate area), they occasionally observed each other's lessons. One student recounted, "The class I was placed in had two student teachers, so I had to present my math lesson and she was there during my presentation." Another said, "Only my friend could come and observe me because I did not usually have time to go observe them." – suggesting that while scheduling was a challenge, a reciprocal observation with a peer did occur. Moreover, certain modules required peer observation or marking among students on campus prior to the practicum. The on-campus peer reviews enabled student teachers to critique each other's lesson plans, consequently improving FLN pedagogical practices. It was also a component of CoP, which directly prepared them for classroom observation and feedback roles during the practicum.

Peer observation during practicum was viewed as valuable by student teachers, offering opportunities for constructive feedback and the exchange of new teaching ideas– often complementary to mentor feedback. A student shared, "I observed my fellow students… they were teaching, and I asked for more clarification." Similarly, in reflecting on feedback from reciprocal peer observation, she noted that those who observed her offered helpful tips on maintaining classroom discipline and engaging learners' attention. Likewise, one student stated that upon observing a peer's approach, she came to the realization that she needed to become more specific—rather than generic in her lesson planning. Furthermore, another student teacher reported acquiring disciplinary strategies from a peer. These instances illustrate how the mentor-student dyad can be enriched by peer learning, offering diverse opportunities to enhance FLN pedagogical practices through observations, feedback, and collaborative reflection, ultimately enriching the practicum experience.

Reflective Practice – Learning from Experience

NWU explicitly aims to instill reflection; students are required to complete written reflections in a practicum workbook and are encouraged to maintain journals. This approach enables student teachers to engage in reflective practice, especially after delivering lessons or receiving feedback from mentors. Reflective practice also takes place in a structured manner through the embedded signature assessments (ESA). At NWU, ESA is a structured, formative task integrated into the WIL modules. It is designed to collect evidence of a student teacher's development across key professional competencies aligned with the professional teaching standards of the South African Council for Educators (SACE). Each ESA focuses on a specific area of teacher development, such as professionalism and ethics, learner development, lesson planning and preparation, and instruction and assessment. Nevertheless, the extent and consistency of reflection can differ among individuals. MRS aims to address this gap, particularly in the language modules, with a specific emphasis on FLN instruction.

The data shows most FLN teacher students embraced the concept of reflecting on their teaching, albeit typically in response to specific events or feedback. Only two of the 51 students

interviewed reported not engaging in reflective practice at all, which is surprising, since each ESA contains a reflective exercise. The vast majority (95%) provided examples of how they reflected on their lessons or progress. Generally, student teachers reported that they engaged in reflecting during or after lessons taught in the practicum, often prompted by mentor feedback. About 45% said their reflection was prompted by feedback from mentors—reflecting on what worked and/or what did not work during the lesson. This type of in-action and on-action reflection (Schön, 1983) was generally confined to the four-week school placement periods.

Written reflection was pervasive, as the student teachers used NWU's practicum workbook, which explicitly requires students to write reflections on certain aspects, such as the lesson planning process, as one student explained, "reflect on how you made your lesson plan. How did you feel while doing it? Did you find it difficult?" Another student remarked that these guided questions helped her track her improvement: "In first year, [because of] those reflections… now I can see there is improvement," indicating she compared reflections year over year. Another student kept a personal diary: "I have a diary where I write down how my day went with regards to teaching; I reflect on a lot of things such as the paperwork… we are not taught about [that] at school." Through introspection, she identified a gap in her formal training, particularly in regard to handling administrative paperwork, learning from the practicum how to appreciate tasks related to documentation. Ongoing reflective practices provided student teachers with opportunities to acquire knowledge and develop skills that may have been overlooked during their training, significantly enhancing their ability to deliver effective FLN instruction.

Reflection held greater meaning during practicum although some students reported using it when completing or receiving university assignments. As one student candidly noted, "I only do reflection at the end of the practical, because in between there are assignments and tests… so I do the reflection at the end of the practical," suggesting that the immediacy and demands of the classroom experience more strongly prompt reflective thinking than theoretical academic tasks. Reflection also fostered critical self-evaluation. One student offered a powerful example, admitting a serious lapse in judgment: she had been distracted by her phone while supervising children during recess, and as a result, a child was injured. As she recounted, "I was not disciplined because I was busy on my phone… a learner ran and fell, hitting their head on a rock; had I been aware, I would have told them not to run… I neglected the learner… I even took the blame for that." This student explained that the incident taught her the importance of vigilance and the rationale behind rules such as "no cell phones during class." Such critical self-examination, which involves acknowledging fault and extracting a lesson, exemplifies the kind of reflective practitioner that the program aims to develop.

However, not all reflections were as extensive. Many student teachers limited their reflections to the technical aspects (e.g., "I realized I should use more visual aids next time because many learners didn't understand my first explanation"). The frequency of reflection also varied: many students (45%) said that they reflected a few times per week during practicum, often informally after each lesson or at the end of the day, rather than in structured ways such as through daily journals. Only a small number (4%) opted to engage in daily journaling. This suggests that enhancing reflective practice could support student teachers in internalizing key pedagogical elements—such as classroom management and learner engagement which are critical for effective delivery of FLN instruction.

In essence, reflective practice was prevalent and was tied to practicum events. NWU's requirement of a critical reflection task after each component of ESA ensures every student retrospectively analyzes their experience. This was corroborated by the survey findings that 85% of students believed that their theoretical knowledge from coursework ultimately did connect to practice in some way. The factor is attributable to reflecting on practice—enabling them to recognize those connections. However, as we will show in the next section, a substantial number also felt that there were gaps where theory did not adequately prepare them, as evidenced by their reflections. The student teachers' experiences highlight self-evaluation through reflective practices as essential for improving FLN teaching methods.

In summary, the school-based practicum at NWU enhanced student teachers' pedagogical skills, content application, and professional disposition for FLN teaching. Participants highlighted sustained mentorship as an important factor, providing modeling, feedback, and emotional support. Co-teaching, peer interactions and reflective practice further reinforced learning. In the next section, we address certain gaps, challenges and opportunities highlighted in the practicum, particularly in the areas of broader system integration and theory-practice alignment.

3.3 Supporting Broader Educational Reforms and Addressing Gaps

In addition to improving individual teaching skills, an effective practicum should ideally contribute to broader educational reform goals such as implementing new curricula in classrooms, scaling up evidence-based teaching methods, and utilizing classroom data for decision-making. This section provides evidence as regards how NWU's practicum program supported such broader outcomes. The findings indicate that NWU's practicum, while not explicitly designed as a reform instrument, has several indirect effects on teaching practice. These include bridging the gap between theory and practice, scaling evidence-based teaching approaches, and providing data for classroom decision-making. We will explore these and other factors in detail.

Bridging Theory and Practice: The South African CAPS curriculum for the Foundation Phase is content-rich and structured, with weekly themes and specific learning outcomes. Student teachers are required to learn how to implement CAPS in actual classrooms – a key test of bridging theory and practice. One student confirmed, "I use the CAPS document, and my mentor provided me with the annual plan the teachers were using." This practical application of national curriculum documents in lesson delivery solidifies their ability to implement the curriculum – a skill that cannot be fully acquired through simulations at university. In fact, in the survey, 85% of students agreed that their theoretical knowledge from coursework was being applied in practice. Additionally, 25% of students felt that there was a strong alignment between theory and practice, indicating their training had adequately prepared them for what they encountered. For instance, students mentioned that the methods they learned in their courses such as how to teach reading through phonics or early math concepts were exactly what they needed in the classroom. One student said, "It does align, because everything they teach us – in English we do decoding and how to teach learners to read – that is what we basically do in the foundation phase… It is aligned… classroom management, yes, everything." Another student concurred that coursework on child psychology and learning strategies was directly applicable, "especially the psychological part, where we learn about kids… and strategies to enhance thinking abilities." This alignment, according to the student teachers, reinforced their capacity

to apply and adapt effective FLN methods in actual classroom settings, positioning them as reformers.

While the majority of students felt that teaching practice was effectively integrated into what happened in the lecture hall, the alignment between theory and practice was not seamless. Approximately 41% of students reported experiencing misalignments, with certain theoretical concepts not reflected in practical settings, or vice versa. Additionally, 34% indicated a fundamental difference between their theoretical knowledge and practical experience. Notably, only 12% of students who reported misalignments had used MRS for practice, indicating limited exposure to digital tools that could help bridge the gap between theory and practice. Most of these students (85%) were on-site learners, and frequent mentorship engagement (66% participating weekly or daily) may have contributed to generally positive perceptions despite the reported discrepancies.

These findings suggest that although integration is rated highly, many students still perceived a disconnect between what is taught in theory and what is experienced in practice. A lecturer emphasized a key challenge: student teachers are not adequately prepared to teach FLN, largely due to insufficient pedagogical content knowledge. They noted that student teachers are often told how to teach, but not shown how. As a result, the lecturer called for more practical approaches to be used to inculcate pedagogical competences during teacher training—such as modeling, teaching videos, and structured practice—to build mastery of the skills needed for effective FLN instruction. The lecturer stressed that effective teaching requires more than knowing instructional methods; it demands the ability to enact those methods confidently and contextually, which was a critical gap in the current preservice program.

Several respondents pointed out other specific omissions in their training (the theory) that became apparent during practicum (the practice):

- **Behavior Management:** This gap was well articulated by a student teacher explaining that while the university had taught them how to develop lesson activities, there were concerns with classroom management: "but not help with the behavior [management] or anything related to behavior management." As such, student teachers generally struggled in the face of real classroom discipline issues, which the theory had not prepared them for.
- **Administrative Skills:** Several student teachers realized that they had to learn how to handle administrative tasks on the spot, such as recording grades, filling forms, and using school information systems like the South African School Administration and Management System (SA-SAMS) – a comprehensive, government-provided software platform, designed to assist South African schools with various administrative and management tasks. As one said, "The other stuff, like administration, we do not have a subject that provides you with the experience to cope with the administration pressure."
- **Special Needs and Inclusion:** Handling learners with special educational needs was repeatedly mentioned as a challenge. A coordinator observed that "the department is not helping us on [learners with barriers]. We fill out forms and submit them, they take time to place the learner." Student teachers often encountered learners who were struggling or those with cognitive disabilities, and they felt underprepared to support them. University courses may discuss inclusive education, but in practice, student teachers felt a sense of disorientation, which was exacerbated by the limited school-based resources to support them in this regard (e.g., lack of school-based counselors) .

These gaps indicate that although NWU's practicum supports curriculum implementation by enhancing content delivery, there is a need to strengthen teacher education in areas like classroom management, administrative responsibilities, and special needs education.

The findings imply that the practicum can function as a mirror, exposing the mismatch between training and practice. This renders it a valuable diagnostic tool for improving the entire teacher professional development system. While competences linked to practice can be learned during practicum, early exposure through coursework could enable student teachers to anticipate and effectively navigate classroom realities. Formal preparation supports more confident and deliberate practice during placements as corroborated by a faculty member emphasizing the deeper need to **realign teacher preparation with evolving school demands**. In their view, the disconnect is partially caused by the fact that lecturers are often far removed from classroom realities. Integrating simulated teaching experiences and stronger school-university partnerships was recommended to ensure theory is not just relevant but visibly linked to everyday classroom demands. This indicates that if the goal is to use practicums to support broader reforms like a new curriculum, the university curriculum must be aligned with classroom-level dynamics. In addition, it was apparent that students had few structured opportunities to practice the FLN instructional methods with the exception of the practicum. As already suggested, coursework often provided the students with the "what" without adequately equipping them with the "how." According to one lecturer, addressing this gap requires integrating structured rehearsal spaces—such as MRS—into coursework. NWU has begun to adopt this practice in order to better prepare students for real-world classroom experiences.

NWU's structured practicum model presents a practical framework that other SSA countries can adopt to improve the preparedness of pre-service teachers for FLN teaching. The clear developmental sequence—from observation in Year 1 to whole-class teaching in Year 4—is underpinned by core teaching practices and aligned to formal professional standards. Unlike fragmented or last-minute school placements, this model embeds repeated practice into the formal curriculum, giving student teachers time and support to internalize FLN content and pedagogy. In regions where foundational learning gaps are urgent, adopting such a scaffolded, standards-driven practicum could equip future teachers with the confidence and competence necessary to effectively teach reading, phonics, and early numeracy.

Scaling Evidence-Based Teaching Approaches

For teacher education programs to support system reform, they should promote instructional methods grounded in both the Science of Reading and the broader Science of Learning. This approach draws on evidence that supports improved learning while recognizing the need for contextual adaptation and professional judgment (Moats, 2020; Newcombe, 2023). The NWU practicum provides a channel for such practices to be modeled and promoted. For example, some mentors emphasized phonics as part of early literacy teaching—a key element within broader evidence-based reading frameworks (Education Endowment Foundation, 2021; National Reading Panel, 2000). They implemented continuous assessment, which involved evaluating comprehension through questions and written assignments) and differentiated instruction for different learner levels.

In interviews, faculty, mentors, and coordinators discussed the importance of nurturing student teachers' ability to "read the room" and track evidence of learning. One coordinator described it as the process of allowing student teachers to observe how learners respond and modify their teaching accordingly. Mentors recommended specific techniques like using reading cards to keep track of learners' reading progress and ensuring that each lesson produced some form of evidence of student work. Some coordinators highlighted this structured evidence collection during the reading process. This instils in novice teachers the habit of evidence-based practice which is essential for data-driven decision-making in classrooms. This involves gathering data (even informally) on student performance and the subsequent reflection on it.

The practicum indirectly supported scaling effective approaches by creating a feedback loop between current educational best practices and teacher training. For instance, student teachers were provided opportunities to experiment with and potentially share with their peers or lecturers, new and/or contemporary approaches, including the use of digital tools or literacy games. We observed that student teachers introduced new trends and technologies into schools, and conversely, also drew from schools the practical knowledge of routine and structured pedagogy that may not be entirely covered in college. One of NWU's benefits from its close partnership with numerous schools was the possibilities and opportunities provided to scale proven practices. If a school demonstrates a successful FLN teaching approach, student teachers placed in that school learned it, and as they engaged with peers and mentors at other schools, that technique was disseminated. Indeed, as a coordinator observed, the practicum fosters a culture of sharing strategies throughout the school and beyond: "teachers develop a sense of shared responsibility for learner outcomes through collaboration." This is confirmed in our data showing that 97% of student teachers reported collaborations, involving discussions on how to make lessons more engaging. Due to its collaborative ethos, the NWU practicum served as a conduit for scaling successful practices.

This study does not explicitly measure the rigorous evidence that links the practicum to improved learner outcomes – a gap that is also noted in the literature (Popova et al., 2022). The systematic review found few studies in Africa that quantitatively correlate specific practicum approaches to student learning gains (APHRC, 2024). The case of NWU provides suggestive evidence: mentors observe improvement in student teachers, which should result in improved teaching for learners, and mentors sometimes learn new methods from the student teachers, which could improve their own teaching. For example, mentors said having student teachers helped them reduce their workload and, in some cases, improve their practice provided that the student was competent. A mentor expressed, "Getting an A student in class helps because I can transfer some of my workload to them… I enjoyed the experience," noting that a good student teacher can assume responsibility for certain teaching aspects of the curriculum, thereby enabling the mentor to focus on other responsibilities. This suggests that the presence of well-prepared student teachers can in the short-term bolster classroom instruction (two teachers can effectively teach in a single class) and potentially improve learner attention and support. However, as another mentor explained, "Most of the students that we've mentored before—you have to repeat and repeat and repeat. You don't observe a significant increase in growth from the time they get here and the time they leave." This highlights a key limitation: the practicum may not be sufficient to drive meaningful growth when student teachers arrive underprepared. In the absence of stronger pre-placement preparation and targeted in-school support, mentors often struggle to advance weaker students beyond basic competence.

Data for Classroom Decision-Making

In the NWU context, the "data" is often the observations and assessment results student teachers collect on learners. As part of their practice, many student teachers evaluated their pupils by grading their classwork and administering short tests. Mentors guided them to keep records (attendance, grades), which is a basic aspect of data management. As previously noted, student teachers learned to track learners who were struggling in reading or math through continuous assessment. A student described how the records/data was used to categorise students in order to provide differentiated support for learning: "in grade 3, they gave learners papers for reading; out of those learners, only 19 could read properly, and 16 needed help… My mentor placed [the struggling ones] at the same table, six at each table" . This illustrates data-driven grouping – identifying learners with similar needs (data analysis) and modifying classroom arrangement (decision/action). The student teacher was involved in the implementation, thereby learning how to use simple data (reading proficiency levels) to inform teaching tactics. Additionally, NWU used practicum feedback data to improve its programs. School coordinators compiled mentor reports on student teachers and discussed them, including as one mentor explained, "negative feedback… not to harm but to build them." Some coordinators held debrief meetings with the student teachers at the end of the practicum to enquire about the progress made in order to establish, "What have they learnt, how do they see teaching as a profession, and how we can develop?" These reflections could be interpreted as generating qualitative data on the practicum experience, which was used to inform both school practices and NWU's curriculum (see Appendix for the NWU Faculty of Education Teaching Practice Curriculum).

However, a more structured approach (like quantitative performance data of student teachers or feedback from schools) was not readily apparent. The university may soon be able to collect more consistent performance data using technology such as the MRS, which is currently being piloted at NWU. Indeed as a faculty leader suggested that using simulation sessions observed jointly by lecturers and mentors, followed by structured debriefs, promises to leverage more expertise through observations conducted by diverse actors [teachers, mentors, students in the analysis of pedagogical strategies.

Frequency and Duration of Practicum

As previously noted, NWU conducts its practicum twice each academic year, with each semester offering a block of roughly four weeks. As a result, students are required to complete a total of approximately 32 weeks of practicum placement over their Bachelor of Education Foundation Phase degree. While some student teachers approved of the frequency as sufficient, they recommended for the duration to be extended in later years. One final-year student mentioned they were only evaluated by a lecturer in their third year and expected to be evaluated again in their fourth year, implying that a formal observation is conducted once a year during the final half of the program. Some mentors, as previously noted, expressed their desire for the students to remain for an extended period in order to integrate more fully into the teaching routines. This was especially relevant for FLN, where—as the mentors explained, sustained exposure and repeated practice are essential to building confidence in early-grade instructional strategies. To address this issue, some school coordinators and mentors proposed that students be permitted to participate in schools even during non-official official practicum periods. For example, they could conduct informal visits to schools to observe or teach short FLN lessons. Others

suggested creating opportunities for more hands-on exposure, such as bringing foundation phase learners to university lecture rooms for modelled lessons by faculty to demonstrate how theory is translated into practice. There were also proposals of dividing the four-week placement into shorter blocks at different times in order to increase exposure.They recommended breaking the four-week placement into shorter blocks spread across the year to increase exposure. While participants did not explicitly call for a longer practicum (e.g., a continuous final-year placement), they emphasized the need for more sustained and continuous engagement. For example, a student suggested more co-teaching, especially in the third year, which might require adjusting schedules to allow repeated classroom practice beyond a single four-week block.

Time Allocation to Issues/Topics

Within the practicum period, how was time spent? Did student teachers prioritize certain FLN skills over others? The findings indicate that NWU's approach is an integrated one rather than segmented by skill type. When asked if student teachers were told to focus on either instructional skills or classroom management first, a coordinator said bluntly, "There is no such thing. They just pour [the students] into the deep end, and they have to swim." In other words, student teachers had to learn competences simultaneously by participating in the daily routine of the school. A mentor echoed that "Everything… is included in the period, basically". This lack of isolated focus can be overwhelming, as four respondents cautioned that in the absence of structured focus, some students get overwhelmed. To mitigate against this, one coordinator suggested a potential strategy: the student teacher should focus on a single subject for a certain period (e.g., during the initial practicum, emphasize teaching one subject, then broaden over a subsequent period). While this is feasible in the intermediate and senior phases, it is not applicable in the foundation phase, where teachers—and by extension, student teachers—are expected to teach literacy, numeracy, and life skills concurrently. In reality, student teachers taught various subjects during their placement according to the host teacher's schedule, so one might teach a math lesson, then later a literacy lesson—all within the same week.

As for priorities, it appears most time was spent on practicing instructional delivery and classroom management, since these are integral components of daily teaching. Less time was formally allocated for the discussion of problems or theory during the practicum, except in the presence of mentors who provided feedback. Some schools did involve student teachers in broader school activities to provide opportunities for interaction and participation in school events as one mentor affirmed: "they interact with staff and participate in almost everything the school does – especially sports and extracurriculars." This meant student teachers experienced the full teacher role, including time spent on non-teaching duties (meetings, playground duty, coaching). Participating in staff meetings was another aspect: "We have meetings, we involve them, so they must know the situation in the school." This provided exposure into the way teachers collaborate and discuss school issues, which is relevant to understanding education reform implementation at the ground level. For example, as one mentor explained, if a new curriculum was being introduced, they might attend staff meetings to hear discussions). This full immersion approach provides student teachers broad exposure; however, the absence of focused time on FLN-specific pedagogy posed a risk that the core instructional strategies for early literacy and numeracy may receive insufficient attention during practicum.

Partnerships and Collaborations

On a larger scale, the NWU practicum model supported reform by producing graduates who were more "classroom-ready" to implement changes such as new FLN curricula or teaching approaches. The multi-stakeholder approach (university, school, student teacher) is indicative of a partnership model that reform initiatives (like those funded by the government or donors) often advocate. However, participants signalled that more robust partnerships and formal structures could amplify this impact. School coordinators did not all perceive their relationship with NWU as a true partnership: "I will not say it is a partnership… we have that community responsibility to take those learners [student teachers] on board… it's not a partnership as such." Only one coordinator, who had been hosting students "forever," remarked, "I could almost say this is now a partnership because it is now forever that we are taking the students of the university," and described filling out a form for the university listing the number of students they could take per grade. For broader reforms like scaling up a new method nationally, formal partnerships and communication channels between universities and schools (and the education department) are important. NWU possesses the necessary components, but many connections are informal. A coordinator pointed out the lack of systematic contact: "The relationship with the university is telephonic and ends just after they bring in students … there is no other support or follow up." This suggests a missed opportunity. In order for practicums to serve as levers for systemic reform, there is need for more continuous engagement and structured feedback loops —not just between schools and universities but also with the Department of Basic Education, which is responsible for developing and coordinating education reforms (we address this in our recommendations).

Further, from a partnership and communication perspective, NWU's practicum insights remain underutilized by the DBE and DHET, whose engagement has so far focused mainly on meeting qualification requirements. Yet, feedback from mentors and students points to significant opportunities for collaborative policy development—particularly the establishment of a national mentorship policy for pre-service teachers. Mentors consistently reported feeling unsupported by the university, citing limited guidance and feedback: 'There is no support, especially from the university. From the school, we receive support from the principal… we just fill in forms… but no feedback from the university…'. Many were unclear about assessment expectations and called for stronger communication channels and clearer instructions from NWU. Heavy workloads compounded these challenges, with 69% of mentors describing the mentorship role as overwhelming, especially when combined with full teaching duties and the supervision of multiple student teachers at once. Given that mentors currently volunteer their time and expertise, participants identified a policy gap around mentor support. Suggested measures included financial stipends, formal recognition, and targeted training, ideally coordinated in partnership with the Department of Education. One coordinator recommended that 'the department must engage its subject advisors in mentoring the students,' a move that could integrate official pedagogical leaders into the process. If scaled, such collaboration could standardize quality, enhance communication between universities and schools, and align practicum experiences with national teaching standards."

In conclusion, NWU's practicum model supports broader educational reforms in several implicit ways: by equipping new teachers to implement the CAPS curriculum and modern pedagogies in their future classrooms, fostering a culture of collaboration and continuous improvement that can be replicated across schools, and by highlighting on-the-ground challenges (such as large

classes and special needs) that reforms must address. The practicum's bi-annual frequency and integrated nature provide student teachers with multiple opportunities to interact with the actual reform implementation (e.g., exposure to how reading programs are run in schools). However, to fully realize this potential, it is necessary to establish stronger structural linkages and address identified gaps such as mentor support, aligning university coursework with school reality. NWU's experience offers valuable lessons for scaling up practicum-based teacher education across SSA: success hinges on quality of mentorship, collaboration, and closing the theory-practice gap, all of which require supportive policy and resource investment.

Discussion

This section first discusses the findings in relation to existing scholarship on aspects of school-based practicum that strengthen teaching practices and improve learning outcomes in FLN, highlighting the factors that contribute to their effectiveness. It then examines how school-based practicum teacher education programs support broader educational reforms, as evidenced by the findings and relevant literature.

Aspects of school-based practicum that strengthen teaching and improve FLN

The evidence from NWU reinforces the five prospective approaches highlighted by APHRC's (2024) systematic review: school-based mentorship, communities of practice, peer observation, reflective practice, and diverse context exposure as illuminated in this section

Mentorship: NWU places a high value on mentorship as mentors are central to delivering quality teaching practice preparation. They coach student teachers on lesson planning, class management, and curriculum adaptation. NWU's experience is consistent with the extensive literature that has established mentorship as the linchpin of effective practice-based teacher education. Prior studies in sub-Saharan Africa found that effective mentorship leads to better bridging of theory and practice, offers psychosocial support, and helps induct new teachers into professional norms (Hudson, 2013; Kiggundu & Nayimuli, 2009; Mwanza, 2017; Ochanji & Barasa, 2015). Mentors mitigated student teachers' readiness gaps and improved their instructional skills and confidence, illustrating the "hands-on experience" and "reflection" aspects cited as strengths of mentorship approaches.

However, the limitations observed, such as heavy mentor workloads, the absence of mentor training or incentives, are consistent with those documented in the literature. Studies conducted across Africa have noted that mentors often receive inadequate preparation for the role and are expected to mentor in addition to teaching full time, which can compromise the quality of support (Ochanji et al., 2017; Njenga, 2023). NWU mentors echoed these challenges, with 69% of the respondents describing the workload as overwhelming and stating that they did not receive adequate support such as incentives, training, or psychosocial support. Several mentors expressed uncertainty regarding the university's expectations regarding assessment and professional guidance. One described a situation where mentors were left to "just fill in forms" without any feedback or follow-up from university faculty. This implies that the quality of mentor support can be improved by implementing a structured mentor preparation program that addresses key challenges such as heavy workloads, limited training opportunities, and incentive issues. This investment can incorporate a monitoring mechanism that will provide a feedback loop between mentors and faculty so that mentoring practices are not only implemented but also evaluated and improved collaboratively. This underscores a policy implication: formalizing mentor selection, training, and support is important. The university can explore newer methods—such as simulation-based mentoring—to jointly involve students, mentors, and lecturers in shared learning environments. This would contribute to the alignment between expectations of the school and university. A national mentorship policy for preservice teachers could address this by establishing criteria for mentor teachers, providing training modules, and potentially offering stipends or reduced teaching loads for those who mentor. A point also emphasized by Ochanji et al. (2017) in their study on teacher mentoring in Kenya. The DBE could take the lead to engage the related stakeholders to operationalize the mentor preparation program. Such policy moves would institutionalize what is currently an ad hoc arrangement, ensuring more consistency and sustainability in mentorship.

Further as demonstrated in previous research (APHRC, 2024; Echaune & Maiyo, 2023), the practicum at NWU demonstrates that consistent school-based mentorship is a central mechanism through which student teachers acquire the instructional, emotional, and administrative skills needed to teach foundational literacy and numeracy effectively. Mentors model lesson planning, guide student teachers through daily routines, co-teach lessons, and provide feedback tailored to the specific needs of the classroom. Despite disparities in mentor training, the system functions because mentorship is integrated into the practicum's structure. This model shows that strong mentorship does not require an overhaul of the curriculum, rather, it requires defined roles, expectations, and recognition of mentors as integral components of the teacher preparation ecosystem. The quality of FLN instruction could be considerably improved in SSA countries by adopting a similar structure, backed by national guidelines or incentives to guarantee that each student teacher is apprenticed into effective teaching.

Communities of Practice: The importance of collaborative peer learning observed at NWU is consistent with the broader evidence that CoPs foster continuous professional development and reduce teacher isolation (Wenger, 1998; Akyeampong, 2017; Carr, 2024). The systematic review found that CoPs in practicums encourage sharing of diverse feedback and co-teaching experiences. At NWU, even without formal structures, over half the student teachers actively engaged in peer support groups or discussions, benefiting their practice and problem-solving skills. This suggests that teacher education programs should deliberately nurture CoPs – for instance, by scheduling regular group reflection sessions during practicums or maintaining online forums for student teachers, they can amplify the benefits of informal peer learning by fostering a culture of continuous professional growth. Such a design has the potential to amplify the informal activities that are currently taking place. Policy-wise, teacher training institutions may incorporate peer-led seminars or learning circles as a formal component of WIL, guided by a facilitator. This approach is particularly valuable in contexts where trainees may enter teacher training institutions with low academic qualifications, as is often the case in several sub-Saharan African education systems.

By institutionalizing peer reflection and support, teacher training institutions can strengthen FLN instructional quality, bridge preparation gaps, and build teacher confidence through shared learning and incremental skill development. This would be consistent with adult learning theories that emphasize social learning contexts (Lave & Wenger, 1991). Furthermore, CoPs are established in the modules that have integrated mixed reality simulation (MRS). In these modules, the students, the lecturer, and frequently selected mentor teachers convene on a Zoom platform to conduct after-action reviews of lesson segments presented in the mixed reality simulation environment. This is perceived as an approximation of practice (Grossman et al., 2009a; Grossman, 2018). MRS aims to cultivate specific skills of student teachers, for instance handling disruptive behavior, differentiating instruction, or implementing specific reading literacy practices such as the explicit instruction of vocabulary. This innovative concept, although in its early stages, suggests that data-driven feedback can be enhanced by creating a controlled environment to measure and discuss teaching performance. If scaled, it would augment the utilization of practicum data (in the form of demonstrated teaching skills in simulation and class) for formative development. Additionally, involving student teachers in the collection and anonymization FLN-related data (e.g., Early Grade Reading Assessment scores) for the purpose of reflection with lecturers and feedback to schools, could deepen learning and strengthen school–university collaboration. Mentors can also contribute by generating classroom observation data, including notes on student teacher instructional moves and learner

responses, which can be shared with university lecturers for analysis. These practices have the potential to enrich the practicum by linking field-based insights to academic reflection and course improvement.

Peer Observation: These are frequent in the NWU program, occurring both through formal processes such as MRS and informally, such as when two student teachers are placed in the same school or when they visit each other's classrooms. Those participating in peer observation found it beneficial for improving their FLN pedagogical skills, perspectives, and discipline strategies. These findings are consistent with those from other contexts which have shown that peer observation can build reflective skills and collective knowledge (Corcelles et al., 2024; Hamdan & Lo, 2024). The systematic review noted that the success of peer observation was attributed to collaboration and diverse feedback (APHRC, 2024). However, one limitation could be logistical in nature: how to enable peer visits when placements are spread out. NWU overcame this challenge partly because some students attended the same schools. Implications for policy and practice could be to:

- Cluster placements: Place student teachers in small groups within the same or nearby schools to enable peer observation and joint reflection.
- Mandate peer observation: Require each student to complete at least one peer-observation assignment during practicum, focused on improving FLN strategies.
- Use technology: When physical visits are not feasible, encourage the use of video-recorded lessons shared among peers for remote observation and feedback.

Reflective Practice: The NWU program's emphasis on reflection (through journals and debriefs) aligns with global best practices in teacher education that consider reflection important for learning from experience (Schön, 1983; Korthagen, 2017). The literature review found that reflective practice is effective when combined with coaching. NWU mentors often acted as facilitators for reflection by engaging students in post-lesson discussions, fulfilling this role. A particularly noteworthy example in our findings was of a student's critical reflection on a lapse that resulted in a learner's injury. This was a result of a reflective culture that allows student teachers to acknowledge mistakes. This demonstrates that structured reflection opportunities yield deep learning. Policy should ensure that teacher education curricula incorporate systematic reflection components, such as, requiring a reflective portfolio, and that mentors and supervisors are adequately trained to conduct reflective dialogues. Encouragingly, 95% of NWU student teachers who participated in the study engaged in reflection, suggesting the program is succeeding in this regard. The challenge is to sustain this habit during novice teacher years; induction programs could build on it by continuing mentorship and reflection circles for new graduates (Ingersoll & Strong, 2011).

Diverse Practicum Placements: The review identified exposure to diverse teaching contexts as promising due to its ability to build adaptive expertise and prepare teachers for inclusive education (APHRC, 2024). NWU offers internal diversity through the rotation of teachers and grades, and some external diversity through the variation of school contexts across years. The strengths identified include the learning of different strategies from each teacher, which aligns with the notion that that varied experiences are better than a one-size-fits-all approach to teaching. Limitations, as the literature suggests, can be inconsistent and logistical complexity (APHRC, 2024). Inconsistent communication with some school results in some students occasionally ending up in grades different from what the university expected. To optimize this

feature, partnerships could be made more structured through, for example, formal agreements with schools to offer certain experiences. In addition to formal diversity strategies, some mentors proposed that students participate in informal school visits during academic breaks, allowing them to observe or co-teach without requiring full practicum credit. Others suggested short-term learner visits to university lecture halls to observe live teaching demos. These low-cost innovations could complement structured placements and broaden student exposure across contexts without imposing additional demands on the academic calendar. Similarly, policy could encourage urban-rural exchange placements or require that at least one practicum be in a high-need environment (e.g., rural or low-resourced school) to ensure all graduates receive exposure. Indeed, some mentors advocated for the placement of students in both rural and urban schools to broaden their experience of teaching in diverse contexts. Additional evidence from South Africa shows that structured rural practicum experiences can positively influence teacher deployment. Student teachers who participated in a rural teaching experience program reported increased willingness to work in underserved areas (Masinire, 2015). However, such initiatives must have adequate support to be sustainable. The NWU case shows that students are inclined to select convenient locations (27% selected based on proximity), which is logical given the fact that students' accommodation far from home is not subsidized. A policy that required that student placements align with national equity goals would need significant subsidization.

School-Based Practicum and Broader Educational Reforms

The evidence from NWU illuminates several issues that address broader educational reforms:

Bridging the Theory-Practice Gap: A dominant theme in both our findings and the literature is the gap between university coursework (theory) and actual classroom practice; a long-standing issue in teacher education worldwide (Allen, 2009; Korthagen, 2010). This feedback creates an opportunity for teacher training institutions to reassess and align their teacher preparation curriculum with the practical demands of contemporary classrooms. Research shows that novice teachers often find their training too theoretical and struggle to apply it (Allen & Wright, 2014). We acknowledge that the challenge of bridging the divide between theory and practice cuts across the globe, but it may be more pronounced in under-resourced settings in sub-Saharan African contexts (Mavuso et al., 2024; Owuor, 2023). Nevertheless, in South Africa, the DBE plays an essential role in evaluating and providing oversight for preservice teachers to ensure that they are responsive and practice-oriented, thereby preparing competent student teachers who can effectively support foundational learning. In fact, 25% of NWU students reported that there was a strong alignment between theory and practice, indicating the gap is not universal among student teachers and that some coursework (like methods for teaching reading) did translate well. The mixed responses from our study suggest that the theory and the manner in which it is taught matter. The literature suggests several ways to bridge this gap:

- Practice-centered curricula: Integrating more practical simulations, micro-teaching, and clinical experiences throughout the teacher education program, rather than solely during final practicum, can benefit student teachers. There is a need to focus not only on teaching the FLN methods but also to integrate hands-on components that convert abstract concepts into concrete experiences. For example, lecturers could incorporate sessions that model to student teachers' practical approaches like using phonics in teaching reading. This approach bridges the gap between "hearing about" effective teaching and actually "doing" it, creating a seamless progression from theory

to application. It is for this reason that NWU is piloting the Mursion simulation . Such innovations align with initiatives in countries such as the United States of America to establish teaching schools or year-long residencies where theory is learned in situ (Darling-Hammond, 2014; Guha et al., 2012).

- Mentor-educator collaboration: Bringing school mentors into the university classroom or having teacher educators co-supervise in schools can create a feedback loop (Zeichner, 2010; 2022). The NWU idea of joint mentor-lecturer observation in simulations is a form of this. If scaled, it could reduce the "two worlds" problem by establishing a common language and expectations between academia and school practice.
- Curriculum revision: Universities need to continuously update their curricula to incorporate current school initiatives, such as training inclusive education strategies and education data systems. NWU students' feedback about lacking preparation in handling special needs and administrative tasks is instructive. Although administrative tasks such as managing attendance, preparing records, or navigating school routines, may often be learned during practicum, early exposure through coursework could help student teachers anticipate and engage with these responsibilities more deliberately. Policy could mandate inclusion of these practical components in pre-service programs. Similarly, Kenya's new competency-based curriculum reform prompted demands for an overhaul of teacher education to include more formative assessment and differentiated instruction training (Moraa et al., 2024; Mugambi & Chepkonga, 2024).

  NWU's structured practicum model presents a practical framework that other SSA countries can adapt to improve the readiness of pre-service teacher for FLN teaching. The clear developmental sequence—from observation in Year 1 to whole-class teaching in Year 4—is underpinned by core teaching practices and aligned to formal professional standards. Unlike fragmented or last-minute school placements, this model embeds repeated practice into the formal curriculum, giving student teachers time and support to internalize FLN content and pedagogy. In regions where foundational learning gaps are prevalent, adopting such a scaffolded, standards-driven practicum could equip future teachers with both the confidence and competence to teach reading, phonics, and early numeracy effectively.

Policy Alignment and the Government's Role: The findings highlight a disconnect between the teacher education program and the active involvement of education authorities. The Provincial Department of Basic Education's role was mostly passive, limited only to approving placements. This issue is not unique to NWU; many African countries do not have strong coordination between teacher training institutions and the ministries/school systems (Moon, 2007). Yet, research indicates that anchoring teacher education in government systems is key to scaling and sustainability (Piper et al., 2018). In Kenya, for example, the nationally driven Teacher Professional Development protocols attempt to formalize mentorship and in-school support for beginning teachers, although implementation is nascent (Echaune & Maiyo, 2023). South Africa's National Policy Framework for Teacher Education and Development (2007) recognized the need for more robust partnerships between colleges and schools, but operationalizing that aspect remains a challenge.

The NWU case suggests specific policy actions:

- **Establish a formal induction program:** A national program could ensure that after graduation, new teachers continue to receive mentorship, possibly from the same pool of experienced teachers, thereby leveraging existing resources to ensure sustainability at no additional cost. This continuous support during the initial 1–2 years would be critical for strengthening teacher competencies in delivering high-quality foundational learning. This way, teachers would leverage the knowledge learned during their practicums and extend support into full-time teaching. Evidence from a comprehensive review (Ingersoll & Strong, 2011) shows that beginning teachers who receive induction perform better in key aspects of teaching, including maintaining classroom focus, planning lessons, questioning effectively, adapting to learner needs, and managing classrooms, in comparison to those who do not receive induction. Moreover, most studies in the review also found that their students attained higher test scores, although there were a few exceptions, particularly in large, low-income urban settings (Ingersoll & Strong, 2011). While the DBE has piloted a new teacher induction program in South Africa (Department of Basic Education, no date; Mabunda and McKay, 2024), the status of its implementation at the time of this writing is unclear.
- **Mentor Training and Recognition:** As previously discussed, creating training modules (possibly online) for mentor teachers and awarding certificates or Continuing Professional Development (CPD) credit for mentorship would professionalize the role. The South African Council for Educators (SACE, n.d.) already recognizes mentorship as a valid activity for earning CPD points. Additionally, initiatives like the Newly Qualified Teacher Mentorship Program offer accredited short courses for mentor teachers in South Africa. Embedding such efforts within national frameworks with a particular focus on foundational learning could enhance consistency and instructional quality.
- **Resource Allocation:** The recommendation from coordinators that the government provide stipends or uniform resources (like establishing demonstration classrooms with ample materials – "a Maths Lab" as one individual put it) is indicative of equity. In schools that lack basic resources, student teachers tend to have less experience, especially in delivering foundational learning instructions in areas such as early literacy and numeracy. Policy could be designed to ensure all practicum schools meet a minimum resource standard, possibly by providing kits for student teachers or offering grants to host schools. In addition, compensating host schools or mentors (even modestly) could incentivize participation and signal that mentorship is valued work (Hanover Research, 2014).

Scaling Considerations: The Gates Foundation and other funders who are interested in scaling successful teacher education models should take note of the successes and constraints of NWU's model. NWU demonstrates that a large-scale practicum program (with thousands of student placements) is feasible with proper coordination and buy-in from schools. A clear structure over four years, a culture of mentorship, and the flexibility for students to choose schools are the elements that made it work. These elements could be adapted to strengthen foundational learning in other settings. However, scaling beyond a single university to a nationwide system means addressing structural issues, including:

- Quality control across diverse schools requires standards and training for mentors to support foundational learning outcomes.
- Support mechanisms for overload to reduce student-to-mentor ratios in order to support foundational learning competencies.
- Monitoring and evaluation of outcomes that tracks not only student teacher performance

but ultimately their impact on pupil foundational learning outcomes once they become teachers, to justify the intensive practicum model.

Popova et al. (2022) note that globally, many teacher education programs are not evidence-aligned, and the gap between "what works" and typical practice is substantial. They emphasize that targeted interventions such as training focused on specific subject matter (like FLN) and specific teacher profiles have significantly greater impact (effect sizes) than generic training. NWU's program is inherently targeted (Foundation Phase specialization), which may explain why mentors and students were able to delve deeply into early literacy/numeracy pedagogy. This targeting is a strength to be preserved in scaling efforts: rather than one-size-fits-all practicums, programs should be tailored to meet the needs of, say, early grade teachers vs. secondary teachers, as their classroom challenges differ.

Additionally, Popova et al. (2022) found that coaching and in-class follow-up tend to yield better learning outcomes than standalone workshops. The NWU practicum functions as extended coaching in the classroom through repeated observations and feedback to FLN student teachers, which aligns with the evidence. Thus, investing in practicum-based models is in line with the global body of evidence regarding effective teacher education. The challenge is bringing it to scale cost-effectively. NWU essentially leverages existing teachers as coaches without extra compensation, a model based on intrinsic motivation and professional duty. To scale, systems may need to formalize the concept with incentives or officially integrate it into teachers' workload.

Toward a National Mentorship Policy for Preservice Teachers: One of the most apparent implications from NWU and the existing literature is that there is a need for policy frameworks to support mentorship in teacher development, particularly in foundational learning. A possible national mentorship policy for preservice teachers in South Africa (and other countries) could encompass:

- Criteria for selecting mentor teachers (e.g., minimum number of years of experience, a demonstrated ability to teach effectively, and a willingness to mentor).
- Training and certification for mentors (workshops, online courses, mentorship guides, with consideration for previous mentoring experience).
- Defined roles and responsibilities (the manner in which mentors should coach, how to use assessment tools, and how to handle feedback and reporting).
- Incentives (monetary or career credits; e.g., mentoring could count towards fulfilling CPD requirements or be considered in promotion decisions).
- Institutional provisions (assigning a mentorship coordinator at the district level to support school mentors and liaise with universities).
- Continuous evaluation of mentorship effectiveness (collect feedback from student teachers, and potentially from the mentors regarding the support they need).

Such a policy would address the concerns raised by NWU participants, transitioning from an informal "do your best" setting to a structured program that acknowledges mentoring as skilled work. It would also help address the power imbalance that sometimes exists between university lecturers and school mentors. Formal recognition can empower school-based mentors and encourage genuine partnership (Echaune & Maiyo, 2023; Njenga, 2023).

Improving Theory-Practice Integration: The NWU findings show that some aspects of theory (special needs, admin), didn't match practice indicating a potential area for improvement that can be addressed through policy and curricular reform. Teacher educators must be exposed to the current school contexts, possibly through required school visits or temporary school postings, so that they are not out of touch with classroom realities, as the students complained. It has been noted that teacher education remains under-prioritized in policy, which contributes to the existence of such gaps (UNESCO, 2015). If ministries invest in bridging initiatives such as holding regular stakeholder meetings between university faculty and school principals, and joint design of practicum tasks, it could ensure curricula evolve with ongoing demands. Research from New Zealand by Gibbons et al. (2018) speaks of "silent policymakers" – teacher perspectives on practicum influencing policy when they are heard. Encouraging practicing teachers and recent graduates to give structured input on teacher education content would help close loops.

Finally, it is crucial to preserve the emphasis on learning outcomes. While our study did not measure pupil outcomes, the ultimate goal of FLN improvement underlies these efforts. Countries are confronted by a learning poverty crisis, and teacher skill is central to addressing it. Effective practicums produce teachers who are capable of delivering impactful instruction from the outset. According to the NWU mentors, student teachers who are adequately prepared (some referred to them as them "A students"), considerably reduce the workload and maintain class learning momentum. Conversely, mentors observed "not a very significant growth" in student teachers without adequate preparation during the placement. This implies that improving the quality of teacher preparation yields more capable new teachers, likely to translate into better student learning. Akyeampong et al. (2013) posed the question "Does teacher preparation count?" – their research in six African countries suggested that merely possessing a teaching certification wasn't strongly correlated with improved pupil achievement, possibly because of the quality issues in preparation. Our findings suggest that preparation is effective when it is practice-rich and reflective. NWU graduates, having undergone this intensive WIL, would presumably be more effective than if they had only received theoretical training.

In sum, the NWU case aligns with and adds nuance to the existing body of knowledge on practicum-based teacher education. It is a confirmation that collaboration between students, mentors, and faculty is a foundational component. Indeed, the literature review identified collaboration as a common success factor across all five approaches. The literature also exposes systemic bottlenecks such as mentor support and theory-practice disconnect that should be addressed through policy innovation. For funders and policymakers, the message is clear: investing in robust practicum models and mentorship systems is likely to result in significant improvements in teacher quality. However, it requires concurrent investment in mentor training, curriculum updates, and partnership formation so that the promising features identified are not just isolated pockets of excellence but rather standard practice throughout the education system.

Conclusion

This study set out to examine the extent to which a school-based practicum program, exemplified by NWU's model in South Africa, contributes to improved teaching practice and learning outcomes in FLN and can support broader education reforms. The evidence from NWU's extensive B.Ed. foundation phase practicum provides compelling evidence. The practicum strongly affirms RQ1: a well-designed practicum with key features like mentorship, peer collaboration, reflection, and varied classroom exposure has the potential to strengthen student teachers' FLN pedagogical skills, confidence, and readiness for early grade classrooms. Effective mentors bridged the gap between educational theory and practice, inducting novices into not only the "how" of teaching (lesson planning, instructional techniques, classroom management) but also the "why" (professional attitudes, ethical responsibilities, reflective habits). Through gradual release of responsibility and co-teaching, mentors at NWU enabled student teachers to develop competence in a supported environment, leading to a growth in their ability to teach early grade reading and math. The student teachers learned to translate abstract methodologies from their coursework into concrete strategies tailored to their learners – for example, applying phonics techniques for literacy or using continuous assessment to inform instruction. By the end of their practicum experience, many student teachers reported that they were able to independently plan and deliver lessons aligned with the national curriculum and respond adaptively to learners' needs, indicating an important outcome: the practicum had, in effect, begun to generate the next generation of capable FLN instructors.

In addressing RQ2, the findings show that the practicum program has a multifaceted role in supporting broader education reforms, particularly related to FLN, though some aspects need strengthening. First, NWU's practicum acts as a vehicle for curriculum implementation, particularly in early grades. Its grounds aspiring teachers in the practical realities of the CAPS curriculum and assessment standards, thereby ensuring that newly qualified teachers can carry forward the reforms embodied in the curriculum. Secondly, it serves as an incubator for scaling evidence-based practices. In the microcosm of their placement schools, student teachers and mentors exchanged innovative techniques such as integrating technology to small-group instruction, effectively spreading best practices. This bottom-up diffusion can complement top-down initiatives – for instance, if a new reading intervention is effective, student teachers who observe it may become ambassadors for it in their future schools. Third, the practicum emphasizes the need to encourage data use and reflective decision-making in classrooms. By engaging student teachers in observing learner performance, tracking progress, and reflecting on outcomes, it lays the foundation for data-driven instruction, a key element of modern efforts to improve education quality in FLN. These contributions, however, were occurring in spite of, rather than because of, formal structures. The NWU case demonstrated that stronger alignment with education authorities (e.g., involving district subject advisors in mentoring and standardizing resources across schools) could amplify the practicum's impact on system-level reform.

A critical reflection on NWU's model highlights its success factors and challenges, yielding insights that transcend a singular case. What worked well was the emphasis on collaboration and the coherence of the program over the course of four years. Student teachers gradually assumed more responsibility in a supportive scaffold, and they had multiple opportunities to integrate feedback and improve. This structured progression is particularly valuable in the context of FLN, where effective teaching requires not only strong content knowledge but also the ability to adapt pedagogy to meet diverse learner needs. The synergy between mentors, peers, and faculty created a rich ecosystem of learning FLN pedagogical practices. The NWU's

approach exemplifies how "practice makes proficient": extended, repeated practice in real settings under expert guidance produces teachers who are far better equipped than those who only experience a token, brief practicum. NWU's approach demonstrates how a well-aligned practicum model can build the competence and confidence needed to deliver quality FLN instruction. This aligns with global evidence that practical, targeted training yields higher gains (Popova et al., 2022).

The primary challenge was largely structural: mentor capacity was strained and undervalued; some theoretical training did not match the on-the-ground needs (notably, NWU has acknowledged these disparities and is working to address them through the introduction of MRS); and communication gaps between the university and schools led to inconsistencies. These issues are not unique to NWU – they reflect common conditions in many SSA teacher education systems (APHRC, 2024). As a result, we have not yet fully realized the practicum's potential to drive FLN education reform. For instance, mentors' lack of training meant each mentor's effectiveness depended on personal initiative and prior experience; a few student teachers did report subpar mentorship where mentors were "lazy" or uninterested. A national framework could ensure a baseline of mentor quality. Similarly, the theory-to-practice gap, evidenced by, for example, student teachers' complaints about missing skills, such as special needs strategies, highlight the need for continuous renewal of teacher education curricula. This renewal should be grounded in the realities of classroom instruction, particularly the demands of teaching foundational literacy and numeracy in diverse and inclusive early learning environments.

Synthesizing empirical and theoretical insights, we conclude that practicum-based teacher education, when done well, can be an anchor in preparing teachers who can improve FLN outcomes and adapt to educational changes. It effectively operationalizes many principles of adult learning and situated learning theory (Lave & Wenger, 1991; Merriam, 2014) – learning by doing, cognitive apprenticeship, and reflection-in-action. The NWU case affirms that graduates of such a program are more likely to enter the profession as reflective practitioners and collaborative problem-solvers, traits that are essential for ongoing improvement in FLN teaching and learning. However, to harness the practicum as a lever for systemic reform at scale, the surrounding support system must be strengthened. This entails more robust, evidence-based instructional strategies for FLN, policy commitment to mentoring, stronger school-university partnerships, and ensuring consistency and equity in practicum experiences. In short, the practicum cannot exist in a silo; it should be embedded in a broader ecosystem that values and resources on-the-job training for early grade teachers.

For funders and policymakers (such as the Gates Foundation), the NWU study provides evidence that investing in practicum-centric reforms can yield high returns in teacher effectiveness, but such investment should include building the scaffolds around it – mentor development, curricular alignment, and data systems to track outcomes. In the long run, a teacher workforce that has come through enhanced practicum programs will be better prepared to tackle the learning crisis in foundational skills. They will enter classrooms not as novice bystanders but as confident instructors capable of employing evidence-based FLN methods and reflecting on their practice to continually improve. This, ultimately, is how educational reforms translate from paper to practice – through teachers who have learned to teach by teaching in supportive real-world environments.

Recommendations

In a recent review of the initial teacher educator sector in South Africa, Taylor (forthcoming) noted that:

> ***Reforming the 'theory' components of B.Ed. curricula … could be done as part of the duties of faculty members and need not require additional resources, although incentives aimed at stimulating the process may go some way to accelerating the reforms required…. However, improving the quality of the WIL component would certainly benefit from enhanced resourcing.*** **(Taylor, forthcoming).**

The recommendations that follow are all classified as reforms that would require additional funding. While the NWU Faculty of Education is aware of their need, as evidenced in the interviews cited above, the faculty cannot afford to implement them on the scale required to make a measurable difference to the quality of the practicum experience for students. Nevertheless, we present them here with the expectation that the faculty is able to implement them in the future.

We recommend strengthening the structure and quality of school-based supervision during teacher training to significantly enhance FLN outcomes. Two key steps that would make the largest difference are (1) **improving in-school supervision of students by faculty staff or their proxies** *(We were informed, when sharing the study findings, that progress is already being made in this area, with NWU faculty increasingly engaging in practicum activities so that they do not get disconnected from what is happening in the school environment)* and (2) **strengthening the role of school mentors**. From the study findings, students typically receive only two visits from faculty during placement—once in their third year and once in the final year. Besides their paucity, two further potential shortcomings may affect these supervisory visits. First, **the class observed may not be the one requested**; for example, a lecturer may request to observe a literacy lesson but end up observing a life skills lesson. Second, **the lecturer may observe a literacy lesson but they are not an expert in reading pedagogy and therefore unable to assess the quality of the lesson nor to provide guidance to the student**. To ensure that student teachers are adequately prepared to teach FLN skills, it is essential that **supervision is more frequent, strategically aligned with subject-specific teaching (particularly literacy and numeracy), and conducted by faculty with relevant pedagogical expertise**.

Ideally, students specializing in the foundation phase would be supervised by personnel experts in reading pedagogy and numeracy. These individuals may be excellent teachers or educators who are currently employed or have retired. Such supervision should be conducted over a series of two or more consecutive lessons in which students are mandated to cover particularly important curriculum topics, such as teaching decoding skills in a given language or developing mental numeracy proficiency. This is extremely challenging and would require not only the presence of such experts on the faculty payroll but also a careful alignment between student teaching timetables and school visits by the relevant supervisors.

There is consensus that some mentors are more adept at providing constructive guidance to students than others. To improve the quality of school-based teaching practice, particularly in the delivery of FLN, it is recommended that NWU university reinstate and strengthen structured mentor training programs, which were previously implemented but were discontinued approximately three to four years ago. Reviving this program with a clear focus on FLN

instructional strategies would significantly enhance the capacity of mentors to guide student teachers in planning and delivering high-quality reading and numeracy lessons. The effects of such a program would be strengthened if mentors were periodically assessed and targeted interventions implemented where gaps are identified. Mentor training should include strategies for utilizing students to lessen burden on teachers while learning to perform essential teaching tasks, especially those critical to early literacy and numeracy development. Other tasks could range from menial yet necessary functions such as handing out books or photocopying worksheets to co-teaching parts of a class or a lesson and marking learner work. Initially such student teacher work must be done under supervision, with student teachers gradually being allocated increasing responsibility.

The MRS system currently being piloted by the university organizes sessions in which student teachers deliver simulated literacy lessons by means of the TeachLivE software. These lessons are observed by peers, lecturers and mentors, in which learner avatars are programmed to behave in certain ways. These lessons are followed by structured discussion during which the effects of certain pedagogical routines are analyzed and common learner misconceptions explored. To further strengthen FLN instruction, newly introduced language modules place greater emphasis on foundational literacy teaching strategies, enabling student teachers to better understand and apply effective practices in early language and reading development. Having all the actors (lecturers, students and mentors) present in the same discussion promotes a common language and common understanding regarding different approaches and their effects on different classes and learners. This idea is in an embryonic stage and would require a great deal of research and development before its potential could be realized. But it does offer a promising and cost-effective alternative that would certainly be worth exploring, particularly for strengthening the delivery of FLN at scale.

A third area of potential improvement in what is evidently a successful practicum program delivered by NWU would be to investigate some of the practical difficulties raised by students. Two of these stand out in particular: dealing with learner misbehavior in class and the fact that administrative tasks required by the school impose severe demands on students' time. To a considerable extent, handling learners requiring differentiated support is something every teacher must find effective ways of dealing with. However, a short course presented by a behavioral psychologist outlining strategies for promoting positive behavior might be a useful adjunct to any BEd program. In addition, one or two practical sessions on how to maintain standard administrative systems in schools - such as the South African School Administration Management System (SA-SAMS) - would go some way towards equipping students to efficiently manage school administration tasks.

Building on these findings, we propose the following actionable recommendations to strengthen practicum-based teacher professional development for FLN, with an eye to policy and scalability. These recommendations are aimed at education funders, policymakers (e.g., Ministries of Education in SSA), and teacher training institutions:

Part 1: Recommendations for NWU, South Africa's Department of Basic Education (DBE), and other South African stakeholders:

1. **Establish a National Mentorship Policy for Preservice Teachers:** Develop a formal framework for the selection, training, and incentivization of mentor teachers. This policy should set a clear criterion (e.g., minimum of five years of experience, demonstrated history of effective teaching) for teachers to become mentors. Additionally, it should provide them with training in mentorship and coaching skills tailored to specific education needs of learners at different levels, i.e. FLN in early grade levels. It should also include incentives such as honoraria, professional development credits, or career recognition for mentoring. By professionalizing mentorship, South Africa can ensure more consistent and high-quality guidance for all student teachers. For example, South Africa's DHET, in partnership with DBE and provincial education departments, could roll out a Mentor Teacher certification course and require institutions to only match student teachers with certified mentors. This acknowledges mentorship as a critical element of teacher development. These practices directly improve teachers' instructional competence in FLN subjects such as phonics instruction and basic numeracy.
2. **Extend and Enrich Practicum Duration:** NWU's B.Ed. program already exceeds many regional practicum benchmarks (see Chaw et al., 2022) by offering two school-based placement sessions per year, typically about four weeks each, over the course of four years—amounting to approximately 30 weeks in total. This structure is pedagogically sound and aligns with global trends. To strengthen professional integration, a longer, uninterrupted placement in the final year—e.g., 8–10 consecutive weeks to cover full FLN curriculum cycles (e.g., teaching a phonics progression or numeracy unit) —could be implemented within the existing two-block structure. This would allow student teachers to assume greater teaching responsibility, experience the full rhythm of a term, and support learners more meaningfully. This capstone-like placement would build on prior WIL experiences while deepening autonomy. Rationale: While NWU already offers a robust practicum model (~30 weeks), both students and mentors noted that longer final-year placements would enhance preparedness in classroom management, formative assessment, and professional confidence. Structured longer blocks mirror international best practice, including residency models in the U.S. (Papay et al., 2012), which link extended placement to stronger teacher performance and retention.
3. **Integrate Practical Skills (Classroom Management, Administration, Special Needs) into Coursework:** Revise teacher education curricula to better prepare student teachers for real classroom challenges that theory courses sometimes overlook. Specific modules or workshops should be introduced on effective classroom management strategies for large classes, handling administrative tasks (e.g., record-keeping, using Education Management Information Systems such as SA-SAMS); and inclusive education techniques for learners with special needs, particularly in FLN. These should be taught with a hands-on approach, possibly using modeling, case studies, videos or MRS *(We were informed during the sharing of the findings that the Faculty of Education FITLP now includes a full adaptation of all teaching subject-related modules to incorporate didactic training, which is not treated as a separate function in the NWU B.Ed curriculum but occurs throughout the programme).* Moreover, ensure student teachers practice these skills during the practicum with mentor feedback. Supporting evidence: Some NWU student teachers felt unprepared for dealing with learner behavior issues and special needs, which hampered them initially. Incorporating these practical elements into pre-service training will narrow the theory-practice gap. As one student suggested, understanding how to manage behavior and administrative workload was something she only learned by reflecting on practicum; providing this knowledge earlier can boost confidence and effectiveness.

NWU's use of practice-based learning tools—including co-teaching, video analysis, reflective journaling, and MRS—illustrates how pedagogies of enactment (structured teaching approaches that allow student teachers to practice teaching during training) can be localized to close the theory-practice divide. These methods provide a structured space for students to rehearse core FLN practices—like giving phonics instruction or conducting formative assessments—before facing them in real classrooms. Importantly, many of these tools are adaptable: countries without simulation labs could use mobile phones for peer-recorded lesson rehearsals, integrate WhatsApp-based mentor feedback, or expand micro-teaching clinics within teacher training colleges. The principle is transferable: student teachers must be given space to practice teaching, not just learn about it. Embedding such enactment-based methods in SSA's initial teacher education programs could help accelerate the production of classroom-ready FLN instructors.

4. **Strengthen school-based support to reinforce FLN teaching:** Develop in-school support systems (e.g., mentor teachers trained in early grade reading and numeracy pedagogy) that enable consistent feedback and coaching aligned with FLN goals. Student teachers often face high levels of stress during practicums (as seen with 41% of NWU's cohort requiring psychosocial support). Emotional strain can hinder their ability to focus, deliver effective lessons, and engage learners—especially in FLN, which requires clarity, patience, and confidence. Establishing structured support systems—such as mentorship groups, access to counseling, and peer debrief sessions—helps student teachers manage stress, build resilience, and maintain a positive classroom presence. For example, weekly check-ins with trained mentors or counselors can provide coping strategies for classroom challenges, including behavior management or FLN instructional setbacks. Principals and support staff should also include student teachers in school-based pastoral care systems. Emotionally supported student teachers are more likely to remain engaged, model calm and focused teaching, and build productive learning environments. This directly improves their capacity to deliver quality FLN instruction and boosts learner achievement in early reading and numeracy.
5. **Prioritize inclusive FLN pedagogies in teacher preparation:** Ensure TPD equips teachers with inclusive strategies for supporting diverse learners, including those with special needs, in acquiring basic reading and numeracy skills. This reduces learning inequities and supports universal FLN achievement.

Part 2: Recommendations for Sub-Saharan African (SSA) Countries for Scaling or Adapting the Model

1. **Contextualize the TPD model to local FLN challenges:** Customize practicum-based and TPD programs to reflect country-specific FLN learning gaps, language-of-instruction contexts, and curriculum standards. This ensures relevance and better learning outcomes in early grade literacy and numeracy. Establish clear and collaborative relationships between teacher training institutions and partner schools through formal agreements (e.g., MOUs) that define roles for university supervisors, school coordinators, and mentors. These partnerships should include regular joint workshops and communication channels that enable alignment on curriculum priorities—particularly in early grade literacy and numeracy—and expectations for practicum delivery. As recommended in the NWU PrimTEd guidelines, formal arrangements can enhance clarity, sustainability, and shared accountability between schools and universities, especially if the practicum is to serve as a platform for broader reforms.

Implement structured feedback mechanisms to collect insights from mentors, school leaders, and student teachers after each placement. This feedback can inform continuous improvements in mentor support, school preparedness, and the alignment of practicum experiences with foundational learning outcomes.

A strong, coordinated partnership ensures student teachers are placed in supportive environments where high-quality FLN instruction is modeled, practiced, and reinforced. It helps prevent mismatches—such as being assigned to classrooms that don't teach early grades or lack teaching and learning materials—which undermines student teachers' ability to build foundational teaching skills. Clear communication and shared responsibility between institutions and schools ultimately improve the consistency and quality of FLN instruction delivered by future teachers.

2. **Invest in teacher capacity to deliver quality FLN instruction:** Build pre-service teacher skills through ongoing professional development that includes practical techniques for teaching decoding, comprehension, number operations, and formative assessment. Peer learning and microteaching help teachers gain confidence in core FLN practices. Also invest in scalable, cost-effective technological solutions—such as MRS (e.g., Mursion) and virtual observation platforms—to improve the quality of mentor and lecturer supervision. These tools allow student teachers to rehearse teaching in controlled, low-stakes environments and receive targeted feedback on key pedagogical moves. Online platforms where student teachers upload lesson plans, short videos, and reflection logs can further standardize supervision, create peer learning opportunities, and reduce dependency on in-person visits. FLN instruction—especially in early reading (e.g., phonemic awareness, decoding) and foundational numeracy (e.g., number sense, mental math)—requires deliberate practice and nuanced feedback. Technology-enhanced practicum tools make it possible for mentors and faculty to observe and guide student teachers as they refine FLN-specific instructional techniques. For instance, simulations can replicate common learner misconceptions or classroom challenges in literacy and numeracy, allowing student teachers to practice evidence-based responses.

   By increasing access to expert feedback and enabling repeated rehearsal of core FLN practices, these innovations help prepare more classroom-ready teachers and improve the overall quality of foundational learning delivery.

3. **Foster cross-country FLN learning exchange:** Promote collaboration among SSA countries to share innovations in FLN-focused teacher development—such as how mentor training or co-teaching improved early reading outcomes. Regional exchange accelerates uptake of high-impact practices. Embed co-teaching arrangements and peer observations as formal, guided components of the practicum. Mentors should receive training to progressively implement co-teaching—starting with joint lesson planning, then teaching segments collaboratively, followed by structured reflection. Additionally, organize placements so at least two student teachers are in the same or nearby schools to facilitate mutual observation and strategy sharing. Where physical proximity is not feasible, student teachers can video-record their lessons and engage in remote reflection sessions facilitated by faculty. Co-teaching and peer learning offer student teachers the chance to observe and experiment with effective instructional strategies specific to FLN—such as scaffolding phonics lessons, using manipulatives in early numeracy, or differentiating instruction for struggling learners. Peer feedback also fosters reflection on what worked in real-time and why, reinforcing pedagogical decisions that improve foundational learning.

By formalizing these collaborative practices, teacher education programs can ensure all student teachers are supported in developing the nuanced, practice-based skills required to teach foundational literacy and numeracy with confidence and competence.

4. **Mobilize funding and partnerships focused on FLN:** Direct domestic and donor funding toward scaling teacher education approaches that have demonstrated impact on FLN. Strategic partnerships can support material development, digital tools, structured progressive practicums—mapped across the course of the teacher education program, and extended school placements during the final year of teacher training focused on FLN delivery. Funders and institutions could collaborate to pilot extended final-year placements within the existing practicum calendar and evaluate their impact on FLN instructional quality and job readiness.

5. **Scale NWU-like Practicum-Based teacher education through policy integration and funding:** Advocate for and invest in the replication of NWU-like models in other regions or countries. This could involve pilot programs in teacher colleges where practicums are extended and enriched, with the five features intentionally implemented. Multilateral and government funding should prioritize teacher education projects that are practice-based. Ministries of Education should update national teacher education standards to mandate sufficient practicum length and the integration of mentorship and reflection. Concretely: A ministry could revise teacher qualification requirements to say, for example, "a minimum of 20 weeks of evaluated school experience is required, including at least one co-teaching experience and one cross-school peer observation experience," thereby embedding the promising features into national standards. Moreover, allocate budget lines specifically for supporting schools that host practicums (e.g., for materials, mentor training workshops). This ensures sustainability and signals that practicum-based training is not a side initiative but a core part of teacher education strategy.

6. **Incorporate FLN into national teacher education and reform agendas:** The practicum can serve as both a mirror of university training and a platform for introducing instructional change. To position trainees as instruments of pedagogical improvement, FLN should be deliberately embedded into pre-service teacher education, national teacher standards, certification requirements, and curriculum reforms. Embedding FLN in teacher education ensures that early grade learning becomes a core system priority. This also highlights the need for teacher curricula to reflect the realities of FLN classrooms—using feedback from practicum experiences to inform and improve coursework. In this way, the practicum does not only test preparedness; it actively shapes how TPD systems evolve.

7. **Revise teacher education curricula to equip student teachers with practical skills essential for FLN instruction:** Update pre-service teacher training to include hands-on modules or workshops on effective classroom management for large, diverse classrooms; managing administrative tasks (e.g., learner records, use of systems like SA-SAMS); and inclusive teaching strategies for learners with special needs or learning difficulties. These modules should be taught using experiential approaches—such as simulations, case studies, and role-play—allowing student teachers to rehearse scenarios they will likely face when teaching FLN.

Ensure these practical skills are reinforced during the practicum through structured opportunities for application and feedback from mentors. For example, managing behavior during a reading group, maintaining learner numeracy portfolios, or adapting a phonics lesson for a child with a learning difficulty can be rehearsed, observed, and reflected upon.

Foundational learning success depends not only on pedagogical content knowledge but also on a teacher's ability to manage time, learners, and administrative responsibilities effectively. If student teachers are overwhelmed by behavioral challenges or record-keeping tasks, their capacity to deliver clear, structured FLN lessons diminishes. Additionally, inclusive instructional strategies ensure no child is left behind during critical early literacy and numeracy development.

NWU's use of practice-based tools like co-teaching, video analysis, and MRS demonstrates how pedagogies of enactment (teacher education practices that give student teachers repeated, supported opportunities to practice actual elements of teaching—such as giving instructions, modeling tasks, or leading discussions—before they take full responsibility in a classroom [Grossman et al., 2009b]) help student teachers build FLN teaching confidence before entering real classrooms. These enactment approaches are adaptable and can be scaled across SSA, offering a roadmap for producing classroom-ready FLN instructors who can immediately impact learner outcomes.

8. **Strengthen monitoring and evaluation to assess the impact of practicum on FLN teaching and learning outcomes:** Establish robust monitoring and evaluation systems that go beyond collecting mentor feedback forms to include tracking the performance of teacher education graduates in their first years of teaching—especially in relation to learner outcomes in foundational literacy and numeracy. Governments, universities, and research institutions should collaborate on longitudinal or tracer studies that connect student teacher practicum performance (e.g., lesson observations, portfolios, assessments) to FLN gains among learners once those teachers enter the workforce.

   Where feasible, link teacher practicum records with early grade learner assessments to understand how well-prepared teachers influence pupil outcomes in reading fluency, comprehension, and basic numeracy. This data should be used to refine teacher training programs, especially the structure, content, and duration of the practicum experience. Without strong evidence connecting teacher training to learner performance in the foundational years, it is difficult to know what components of the practicum most effectively support FLN acquisition. Building an evidence base that shows which teacher preparation practices lead to measurable FLN improvements could help policymakers and funders to prioritize scalable, high-impact reforms. It also ensures that the practicum is not just a requirement but a strategic driver of better foundational learning outcomes.

In summary, these recommendations aim to create an enabling environment where the strengths observed in NWU's practicum model can be amplified and the challenges addressed. By implementing these measures, stakeholders can move towards a more coherent and effective teacher education system – one that produces well-prepared, reflective, and adaptive teachers ready to tackle the FLN learning crisis and carry forward educational reforms. The path to better learning outcomes for children starts with better preparation and support of their teachers. Enhancing the practicum is therefore a key step toward that path.

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Appendix 1: NWU Faculty of Education Teaching Practice Curriculum

SACE Professional Teaching Standards	Year 1	Year 2	Year 3	Year 4	Core Practices
Teachers collaborate with others to support teaching, learning and their professional development	Write a reflection on the development of a professional identity (i.e., Looking back, looking in and around and looking forward). Discuss SACE's Code of Professional Ethics. Demonstrate digital competences, (e.g., Use Excel to capture marks, schedule and join a zoom meeting, save a Word document in Pdf format, complete a Google Form, etc.)	Write a reflection on SACE's Code of Professional Ethics: Learners Assist with extra-curricular activities (where protocol allows). Interact with teachers/ coaches and learners.	Discuss demands and challenges of teaching profession with mentor teacher. Assist with extra-curricular activities (where protocol allows). Interact with teachers/coaches and learners in a respectful manner. Collaborate with mentor teacher to improve teaching practice. Attend phase or grade meetings and ask to take minutes.	Discuss and reflect on the role that various subject associations, professional learning communities, etc. play in professional development. Conduct a practice parent meeting. Demonstrate digital communication competence (e.g., Use WhatsApp, etc. to communicate with groups or parents).	Communicate with professionals. Communicate with parents/caregivers. Identify professional development needs (e.g., digital competences) and access learning opportunities.

Teaching requires that well-managed and safe learning environments are created and maintained within reason. Teachers make thoughtful choices about their teaching that lead to learning goals for all learners	Observe and discuss emergency evacuation procedures and COVID-19 protocols. Observe and discuss classroom seating arrangements and the use of space in the classroom. Reflect on how diverse community, school & classroom contexts can affect teaching choices. Reflect on how technology access or lack thereof can affect teaching choices. Reflect on how learning and teaching support materials or lack thereof can affect teaching choices.	Observe and discuss school as community: ü Routines ü Learner behaviour ü Teacher & Learner Code of Conduct Observe and discuss the classroom as community: ü Building relationships ü Behaviour management ü Classroom rules and expectations ü Teacher's Action Zone Ask to manage a small group of learners. Develop own management system for small group.	Work with small group of learners: ü Positive social interactions Practice proactive and reactive management techniques (e.g., proximity control, cues, signals, etc.) Give instructions (both verbal and written). Explain procedure for classroom routine.	Plan and execute routines, procedures & transitions. Plan and execute a classroom management plan to handle misbehaviour. Handle learner conflict or misunderstanding. Establish an engaged learning environment for a large group that supports individual and collaborative learning.	Implement organisational routines, procedures and transitions to support a learning environment. Set up and manage small group work. Build respectful relationships.

Teaching is based on an ethical commitment to the learning and wellbeing of all learners. Teachers support social justice and the redress of inequalities within their educational institutions and society more broadly	Reflect on learner diversity in South Africa. Reflect on how socio-emotional issues (family and learners) affect behaviour and learning. Interact and engage with learners. Learn their names.	Observe/note different developmental stages of learners in a classroom (cognitive, linguistic, social, emotional, physical) Analyse observed learners' work. Collect data on individual learner behaviour -classroom and learner profiles)	Observe mentor teacher interaction with learners: ü Language development ü Special learner needs ü Differentiation of instruction Plan appropriate activities for a group of learners within a developmental level.	Create developmentally appropriate lesson plans. Implement instruction that is developmentally appropriate for a large group	Elicit and interpret individual learners' thinking and learning.

Teachers are able to plan coherent sequences of learning experiences	Analyse mentor teachers' year, term and weekly/cycle planning. Analyse planning templates. Analyse the CAPS curriculum	Discuss the planning approach with the mentor teacher: ü How to integrate CAPS ü Factors to consider when planning. ü Learning and Teaching Support Material to use (e.g., Lego Six Bricks manipulatives, etc.) ü Timetable for each day ü Predict how much time learners will need to complete activities Create and implement a lesson for a small group. Create weekly lesson plans for the phase or specialist subject(s).	Discuss how planning changes during times of absenteeism or crisis. Choose, appraise and modify tools, texts and materials to optimise learning goals. Co-plan for five consecutive days (weekly/cycle) Use formative assessment data to adjust planning	Discuss how planning changes during times of absenteeism or crisis. Plan for five consecutive days (weekly/daily, etc.) Use summative data to adjust planning	Setting long- and short-term goals. Planning single lessons and sequences of lessons.

Teaching is fundamentally connected to teachers' understanding of the subject/s they teach. Teachers understand how their teaching methodologies are effectively applied	Become familiar with subject-specific curricula (CAPS) & resources. Observe blackboard work. Observe how technology is integrated in lessons. Explore subject-specific resources, manipulatives, etc. (e.g., Lego Six Bricks, etc.) Teach a small group of learners.	Model appropriate level content-specific vocabulary Co-teach part of a lesson with the mentor teacher. Teach a small group of learners. Demonstrate digital communication competence (e.g., Use WhatsApp, etc. as a teaching tool).	Choose appropriate and accurate representations of the content to share with learners. Provide accurate explanations of content to individuals/small groups. Observe and co-teach for five consecutive days: ü Content-specific questions ü Wait time ü Pacing ü Content-specific instructional strategies Model content-specific academic language Demonstrate subject-specific digital competences (e.g., Access and create a Powtoon)	Model the use of technology for accessing content references. Demonstrate subject-specific (content) digital competences (e.g., Create a PowerPoint with voice over to explain selected content, Use Active Presenter to record your screen, etc.) Teach for five consecutive days using explicit instructional sequences.	Explicit instruction. Lead a group discussion. Explain and model content. Check learner understanding during and after lesson. Analyse instruction for purpose of improvement.

Teaching involves monitoring and assessing learning	Analyse school-based assessment documents. Analyse learner workbooks.	Discuss assessment with mentor teacher. Become familiar and reflect on the school's, phase and teacher assessment systems. Capture and record marks	Analyse a small group of learners' written work. Analyse correction and assessment techniques. Discuss how school-based assessment should be implemented. Develop assessment activities (informal or formal) (whole class). Capture and record marks. Write a report on learner performance and indicate how instruction should be adapted.	Develop assessment tasks for the period of placement for all subjects. Implement assessment tasks. Do all marking and recording of marks. Document decisions that will affect future planning or instruction	Select and design assessments. Interpret the results of learner work. Provide oral and written feedback.

Teachers understand that language plays an important role in teaching and learning.	Identify and analyse the CAPS (subject-specific) for language functions. Differentiate between two sources of academic language demands, namely texts and tasks. Identify a key language function and one learning task within your subject that allows learners to practice the function. Use resources (e.g., storybooks) and manipulatives (e.g., Lego Six Bricks) to enhance language learning for coding and robotics.	Differentiate between discourse, syntax and lexical (vocabulary) demands. Identify vocabulary and one additional language demand that relates to a language function and learning task. Identify and describe instructional and/or language supports to address language demands. Use resources (e.g., storybooks) and manipulatives (e.g., Lego Six Bricks) to enhance language learning for coding and robotics.	Formulate language objectives. Plan for academic language and content integration in lesson planning. Teach lessons with an explicit focus on accommodating academic language demands within a specific subject. Use resources (e.g., storybooks) and manipulatives (e.g., Lego Six Bricks) to enhance language learning for coding and robotics.	Teach lessons demonstrating academic language accommodation. Use resources (e.g., storybooks) and manipulatives (e.g., Lego Six Bricks) to enhance language learning for coding and robotics.	Facilitate academic language development for all learners.

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P.O. Box 10787-00100,
APHRC Headquarters, Kitisuru, Nairobi, Kenya
Email: info@aphrc.org

Telephone: +254 (20) 400 1000, 266 2244, or 266 2255
Mobile: +254 722 205 933, 733 410 102
Fax: + 254 (20) 400 1101