

Investigating the Role of Supported Teaching in Schools (STS) in Improving Teaching of Foundational Literacy & Numeracy in Ghana



Draft Comparative Report on Pre and Post (Extended Teaching) STS Study

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Table of Contents

Contents

1.0	Executive Summary	5
1.1	Introduction.....	5
1.2	Methodology	5
1.3	Highlights from Findings.....	6
1.3.1	Understanding of the National Teachers' Standards	6
1.3.2	Adherence to the National Teachers' Standards for foundational literacy and numeracy	6
1.3.3	Content knowledge in foundational literacy	7
1.3.4	Content knowledge in foundational numeracy	7
1.3.5	Pedagogical knowledge in foundational literacy and numeracy.....	7
1.3.6	Pedagogical content knowledge in foundational literacy and numeracy.....	7
1.3.7	Competencies development in foundational literacy and numeracy	8
1.3.8	Competency in selecting appropriate teaching strategies for foundational literacy and numeracy.....	8
1.3.9	Skills development in foundational literacy and numeracy	8
1.3.10	Motivation towards professional teaching.....	8
1.3.11	Professional readiness to teach foundational literacy and numeracy.....	9
1.4	Conclusion	9
1.5	Recommendations based on the comparative analysis	9
2.0	Introduction.....	11
2.1	<i>Background</i>	11
2.2	Supported Teaching in School in the new B.Ed. curriculum	12
3.0	Methodology	14
4.0	Results.....	15
4.1	Understanding of the National Teachers' Standards (NTS)	15
4.2	Adherence to the National Teachers' Standards for foundational literacy and numeracy	15
4.3	Content knowledge in foundational literacy	16
4.4	Content knowledge in foundational numeracy	17
4.5	Pedagogical knowledge in foundational literacy and numeracy.....	18
4.6	Pedagogical content knowledge in foundational literacy and numeracy.....	18
4.7	Competencies development in foundational literacy and numeracy	19
4.8	Competency in selecting appropriate teaching strategies for foundational literacy	20

4.9	Competency in selecting appropriate teaching strategies for foundational numeracy	20
4.10	Skills development in foundational literacy and numeracy	21
4.11	Professional readiness to teach foundational literacy and numeracy.....	22
4.12	Motivation towards professional teaching	22
4.13	Summary of findings.....	23
5.0	Conclusion	25
6.0	Recommendations Based on the comparative analysis	26
	Appendices	27

List of Tables

Table 1: Student teachers' self-reported rating of their understanding of the National Teaching Standards pre- and post-STS.....	15
Table 2: Student teachers' self-reported rating of their adherence to the National Teachers' Standards for FLN pre- and post-STS	16
Table 3: Student teachers' self-reported rating of their content knowledge in foundational literacy pre- and post-STS	17
Table 4: Student teachers' self-reported rating of their content knowledge in foundational numeracy pre- and post-STS.....	17
Table 5: Student teachers' self-reported rating of their pedagogical knowledge in foundational literacy and numeracy pre- and post-STS	18
Table 6: Student teachers' self-reported rating of their pedagogical content knowledge in foundational literacy and numeracy pre- and post-STS.....	19
Table 7: Student teachers' self-reported rating of their competencies development in foundational literacy and numeracy pre- and post-STS.....	19
Table 8: Student teachers' self-reported competency in selecting appropriate teaching strategies for foundational literacy pre- and post-STS	20
Table 9: Student teachers' self-reported competency in selecting appropriate teaching strategies for foundational numeracy pre- and post-STS.....	21
Table 10: Student teachers' self-reported rating of their skills development in foundational literacy and numeracy	22
Table 11: Student teachers' self-reported rating of their professional readiness to teach foundational literacy and numeracy pre- and post-STS.....	22
Table 12: Student teachers' self-reported rating of their motivation towards professional teaching pre- or post-STS	23

1.0 Executive Summary

1.1 Introduction

Since 2015, Ghana has implemented comprehensive reforms to address longstanding challenges in Initial Teacher Education, including poor quality of entrants, a content-heavy and examinations-driven Diploma in Basic Education (DBE) curriculum, limited practical teaching exposure, lack of specialisation, inadequate resources, and weak quality assurance systems in the Colleges of Education (CoEs).

Central to these reforms was the development of the National Teachers' Standards (NTS), which established a unified framework for teachers' knowledge, practice, and professional conduct. This led to the replacement of the DBE with a 4-year Bachelor of Education (B.Ed.) programme in Initial Teacher Education in 2018.

The B.Ed. programme, aligned with the National Teacher Education Curriculum Framework (NTECF), introduced structured specialisations for Early Grade (KG–P3), Upper Primary (P4–P6) and Junior High School (JHS 1– JHS 3). A distinctive feature of the new curriculum was the expansion and restructuring of teaching practice into the Supported Teaching in Schools (STS) component. Implemented across all four years of the programme, the STS provides sustained, school-based practical experience aimed at strengthening student teachers' professional development.

Despite its central role, empirical evidence on the impact of the STS on student teachers' professional development in Foundational Literacy and Numeracy (FLN) remains limited. This study seeks to address this gap by analysing data from pre- and post-STS (Extended Teaching) surveys of student teachers transitioning from Year Three to Year Four of the B.Ed. programme. The analysis examines changes in self-reported competencies, skills, FLN content knowledge, pedagogical practices, understanding and adherence to the NTS, motivation, and professional readiness to teach FLN before and after the 12-week Year Four (Extended Teaching) STS placement.

1.2 Methodology

The study employed a repeated cross-sectional design to examine changes in student teachers' self-reported outcomes before and after participation in the Supported Teaching in Schools (STS) programme. Data were collected at two time points, pre-STS and post-STS, using structured questionnaires with five-point Likert-scale items ranging from Very Low to Very High. The pre-STS survey involved 2,728 respondents, while the post-STS survey involved 2,462 respondents. The samples were independent, and no individual-level pairing was assumed across time points.

Multiple Likert-scale items measuring understanding, adherence, competencies and skills development, among others, were aggregated to form a composite score for each respondent. Items were numerically coded from 1 (very low) to 5 (very high) and the composite score was computed as the weighted mean of the constituent items. This approach is consistent with standard practice when Likert items measure a common latent construct and are analysed at scale. Based on the literature, the weighted mean scores were categorised and interpreted as

1.00 – 1.79 = very poor; 1.80 – 2.59 = poor; 2.60 – 3.39 = average; 3.40 – 4.19 = good; 4.20 – 5.00 = very good. Descriptive statistics were used to summarise response distributions across the five Likert categories.

Differences in overall understanding, adherence, competencies and skills development, among others, between pre- and post-STS were assessed using mean score comparisons with 95% confidence intervals. Evidence of change was inferred based on the magnitude of the difference in means, and the degree of overlap between the confidence intervals. To determine whether the overall distribution of responses across the five categories differed between the pre- and the post-STS assessments, a chi-square test of independence was conducted. This test evaluated the null hypothesis that the distribution of responses across categories was the same at both time points. The chi-square test was used because the outcome variables were categorical, the samples were independent, and the expected cell counts were sufficiently large to satisfy the test assumptions of independent observations and large-sample normal approximations. A statistically significant chi-square result was interpreted as evidence of a systematic redistribution of responses across the response categories over time.

Further, to examine the direction and magnitude of change within individual response categories, two independent-sample tests of proportions were conducted for each Likert category. These tests compared the proportion of respondents in each category at post-STS relative to pre-STS. Two-sided z-tests were used to determine whether the observed differences in proportions were statistically significant. Z-statistics were computed using pooled standard errors under the null hypothesis of equal proportions. All statistical tests were conducted at a 5% significance level, allowing for a robust assessment of both average changes and shifts across response categories.

Using a combined analytical strategy, i.e., mean score comparisons, overall chi-square tests, and category-specific proportions test, allowed for a comprehensive assessment of competencies development. Mean scores captured average change, while the chi-square and proportion tests provided insight into how changes were distributed across the spectrum, particularly shifts toward higher competency levels.

1.3 Highlights from Findings

1.3.1 Understanding of the National Teachers' Standards

Before the STS practicum, student teachers already self-reported a high level of understanding of the National Teachers' Standards (NTS). Nonetheless, after completing the practicum, this understanding increased further, while remaining within the high category. The proportions of student teachers who self-rated their understanding of the NTS as moderate and high decreased significantly following the STS practicum, while the proportion who rated their understanding as *very high* increased substantially.

1.3.2 Adherence to the National Teachers' Standards for foundational literacy and numeracy

The overall mean score for self-reported adherence to the NTS increased post-STS. At both the pre- and post-STS stages, most student teachers rated themselves within the *high* or *very high* categories of adherence. However, the proportion classified as *moderate* declined,

while the proportion classified as *very high* increased markedly at post-STS. The overall results indicated a statistically significant improvement in adherence to the NTS between pre-STS and post-STS.

1.3.3 Content knowledge in foundational literacy

There was an improvement in student teachers' self-reported content knowledge in foundational literacy following the STS practicum. While content knowledge was already rated *high* at pre-STS, the post-STS mean increased further, indicating a positive upward shift. The results indicate that, at both the pre- and post-STS stages, most student teachers rated their content knowledge in foundational literacy as *good* or *very good*. Although category-specific analyses did not show statistically significant changes for individual rating levels, there was a noticeable increase in the proportion of student teachers rating their content knowledge as *very good* following the STS practicum.

1.3.4 Content knowledge in foundational numeracy

The overall mean score for self-reported content knowledge in foundational numeracy was high at pre-STS, indicating a strong baseline level of numeracy content knowledge among student teachers. Following the STS practicum, the mean score increased further. The non-overlapping confidence intervals indicated a statistically significant increase in the overall mean score, reflecting improved self-reported content knowledge after the practicum. Consistent with this pattern, the overall results showed a statistically significant difference in the distribution of ratings between Pre-STS and Post-STS.

In particular, the proportion of student teachers who rated their content knowledge as *very good* increased significantly. In contrast, the proportions in the *average* and *good* categories declined, while there were no significant changes observed in the *very poor* and *poor* categories. Overall, this pattern indicates a redistribution of self-reported ratings towards higher categories after the practicum.

1.3.5 Pedagogical knowledge in foundational literacy and numeracy

The mean self-rated pedagogical knowledge in foundational literacy and numeracy scores increased between pre-STS and post-STS. This change represented a significant improvement in average self-rated pedagogical knowledge in foundational literacy and numeracy between pre- and post-STS. Relative to pre-STS, post-STS was characterised by a significant increase in the proportion of student teachers who rated their pedagogical knowledge as *very good*, alongside significant reductions in the *very poor* and *good* categories.

1.3.6 Pedagogical content knowledge in foundational literacy and numeracy

For pedagogical content knowledge in foundational literacy and numeracy, the mean self-rated score increased at the post-STS phase. This indicated a modest but consistent improvement in average perceived pedagogical content knowledge in foundational literacy and numeracy following the STS. From pre- to post-STS, there was a significant increase in the proportion of student teachers rating themselves as *very good*, alongside significant reductions in the *average*

and *good* categories, while changes in the lowest categories (*very poor* and *poor*) were not statistically significant. These demonstrate an overall upward shift in self-rated pedagogical content knowledge after STS, driven primarily by movement from mid-level categories into the highest knowledge category.

1.3.7 Competencies development in foundational literacy and numeracy

Student teachers' self-reported competencies development showed a clear and statistically significant improvement from pre- to post-STS. The result reflects a shift away from lower and moderate competency ratings toward higher ratings, particularly an increase in the *very high* category at post-STS, alongside marked declines in the *moderate* and *low* categories.

1.3.8 Competency in selecting appropriate teaching strategies for foundational literacy and numeracy

Despite overall positive outcomes, student teachers reported limited improvement and, in some cases, declines in their competence to select appropriate teaching strategies for specific foundational literacy and numeracy concepts. Declines were particularly evident in reading fluency, number counting and representation, geometry and measurement, and data handling, highlighting persistent pedagogical challenges. There was no significant difference between the pre- and post-STS proportions of student teachers who felt competent in selecting appropriate teaching strategies for listening, writing and reading, listening and reading, and reading

1.3.9 Skills development in foundational literacy and numeracy

There was an improvement in skills development in foundational literacy and numeracy from pre- to post-STS. The distribution of responses across the five rating categories between pre- and post-STS showed a statistically significant upward shift in self-reported skills development in foundational literacy and numeracy, revealing a systematic redistribution of responses across skill levels from pre- to post-STS. The changes were not confined to a single category but reflected a broader shift in the response distribution, with movement away from lower and intermediate skill ratings toward higher ratings at post-STS. The results provide convergent evidence that skills development in foundational literacy and numeracy improved from pre- to post-STS.

1.3.10 Motivation towards professional teaching

Student teachers' overall motivation to teach was high at both time points and remained essentially unchanged. There were no significant changes across individual response categories. The results demonstrate that motivation to teach remained high and stable from pre- to post-STS, with no evidence of a statistically significant shift attributable to the STS. From a programmatic perspective, this suggests that the STS experience, maintained motivation rather than producing a measurable increase or decrease.

1.3.11 Professional readiness to teach foundational literacy and numeracy

The overall mean score for professional readiness to teach foundational literacy and numeracy increased at post-STs, indicating a clear improvement in average perceived readiness to teach FLN following STs. The results further showed a significant change in the distribution of readiness categories between pre- and post-STs, confirming that changes occurred across the full response scale rather than being confined to the mean alone. From pre- to post-STs, there was a substantial and statistically significant increase in the proportion of student teachers reporting a *very large extent* of readiness, accompanied by significant reductions in the *moderate extent* and *large extent* readiness categories. Changes in the lowest readiness categories; *not at all ready* and *very little extent*, were not statistically significant.

1.4 Conclusion

The comparative analysis of the results from pre-STs and post-STs surveys provide strong evidence that the Supported Teaching in Schools (STs) programme contributes meaningfully to student teachers' professional development. Participation in STs strengthened understanding and adherence to the National Teachers' Standards (NTS), enhanced content knowledge, pedagogical knowledge, and pedagogical content knowledge in foundational literacy and numeracy. It also improved overall competences, skills development, and professional readiness to teach at the foundational level.

However, the findings also reveal a critical gap in the STs programme's effectiveness in developing student teachers' ability to select and apply appropriate teaching and learning strategies for specific foundational learning areas including reading fluency, number counting and representation, geometry and measurement, and handling data. The observed declines in perceived competence suggest limitations in the depth of guided practice, mentoring, or feedback during school placements. Motivation to teach FLN remained steady across the two STs phases.

Overall, while the STs is broadly effective and delivers substantial professional gains, its impact would be strengthened by more targeted, practice-oriented support focusing on instructional decision-making in FLN. Addressing this gap is essential to ensure that improvements in knowledge, confidence, and readiness translate into consistently effective classroom practice.

1.5 Recommendations based on the comparative analysis

Based on the findings, the following recommendations are offered:

1. ***Strengthen and Sustain the Quality of the STs Experience***

There is a need for all stakeholders to work collaboratively to consolidate and enhance all components of the STs programme to ensure a coherent, high-quality, and consistently implemented practicum across Colleges of Education and partner schools. These components include:

- mentorship
- supervision
- classroom observation
- practical in-class teaching sessions
- reflective practice
- resource provision
- peer teaching and collaboration

2. Enhance Motivation for Teaching Foundational Literacy & Numeracy (FLN)

Integrate structured motivational strategies such as reflective seminars, engagements with exemplary FLN teachers, and discussions on professional value of early-grade teaching to reinforce positive professional identity and commitment to FLN instruction.

3. Recognise and Reward Excellence to Sustain Motivation after STS

Establish post-STS recognition mechanisms to reinforce effort, encourage high standards, and bolster long-term motivation. These may include awards, showcasing of outstanding FLN lesson plans, and acknowledgement of exemplary practicum performance.

4. Build Stronger Capacity in Selecting and Applying Appropriate FLN Teaching Strategies

Provide targeted training that uses video-based lesson analysis and facilitated reflection to deepen student teachers' understanding of instructional choices. The focus should include:

- rationale for strategy selection
-
- appropriateness for specific FLN concepts
- learner engagement and responses
-
- differentiation techniques
- comparison of alternative instructional approaches

These will ensure student teachers develop the pedagogical decision-making skills required for effective FLN instruction.

2.0 Introduction

2.1 Background

Since 2015, Ghana has implemented comprehensive reforms to address persistent weaknesses in Initial Teacher Education (ITE), notably low entry qualifications, a content-heavy and exam-driven Diploma in Basic Education (DBE), limited practical teaching exposure, lack of specialisation, inadequate resources, and weak quality assurance across all the Colleges of Education (CoEs)¹

In practice, the three-year DBE, offered by CoEs at the time attracted applicants who did not have the required Senior High School grades to enter university, many of whom required remedial instruction in English, Mathematics, and Science. Teaching often defaulted to lectures and rote learning by student-teachers.² Links to the pre-tertiary curriculum were weak and school-based experience typically began only in Year 3 of the DBE, with variable mentoring and supervision and unclear roles among education offices that oversee basic schools and the CoEs.

Along with the content-heavy nature of the curriculum, lack of specialisation meant that tutors had difficulty in preparing teachers who might, on the one hand, be teaching reading to Primary 1 pupils or who could be teaching English Literature to junior high school (JHS) 3 pupils once they were posted to basic schools after completing the DBE.

Quality assurance, management and assessment processes within institutions were often inadequate, and the quality of teaching and learning was variable. Many tutors lacked the required academic qualifications to teach at the tertiary level. This combination of factors meant that most CoEs were ‘tertiary’ in name only.

An external review emphasised these challenges, noting limited hands-on exposure to effective pedagogy (DFID, 2012:9).

It was against this background that Ghana’s Initial Teacher Education reforms were supported by a \$34 million six-year (2015-2020) package of support from the Foreign Commonwealth and Development Office (FCDO) through Cambridge Education’s Transforming Teacher Education & Learning (T-TEL) programme.³ Central to these reforms was the development of

¹ These findings are taken from *Teacher Training in Ghana- Does it Count? Multi-Site Teacher Education Research Project (MUSTER)*, Kwame Akyeampong, 2003; ‘Girls Unite and Pass (Participatory Approaches for Student Success) Business Case’, DFID, 2012; ‘Girls Participatory Approaches for Student Success G-PASS Programme in Ghana- Technical Proposal’, Cambridge Education, 2014

² For the purposes of this report ‘student-teachers’ are the young people in training in the CoEs of Education undertaking the B.Ed. who will become teachers when they graduate, ‘tutors’ are the staff in the Colleges of Education who are responsible for training the student-teachers, ‘teachers’ are what the student-teachers become once they have graduated and start working in basic schools. The term ‘mentors’ is used to describe the teachers working in partner schools who play the role of mentors to the student-teachers during the practical, classroom-based elements of their training, which is known as Supported Teaching in School (STS).

³ The Transforming Teacher Education & Learning (T-TEL) programme ran from 2015 to 2020 and was implemented by Cambridge Education. The Ghanaian team responsible for implementing T-TEL then established a Ghanaian-registered not-for-profit organization called Transforming Teaching, Education & Learning (T-TEL) in July 2020 which is completely independent of Cambridge Education. Further details of T-TEL’s work can be found here: [Our Work - T-TEL](#)

the National Teachers' Standards (NTS), which established a unified framework for teachers' knowledge, practice, and professional conduct. Central to these reforms was the development of the National Teachers' Standards (NTS),⁴ which established a unified framework for Ghanaian teachers' knowledge, practice and professional conduct. The NTS provided the foundation for subsequent reforms, establishing the requirements for teacher licensing, introduced for all new entrants to the teaching profession in 2018, and a review of the DBE curriculum. This review concluded that the DBE did not provide adequate training for beginning teachers to meet the NTS requirements.

Following the curriculum review, the Ministry of Education replaced the DBE with a four-year Bachelor of Education (B.Ed). in 2018, which became the new minimum qualification for anyone aspiring to enter the teaching profession. The B.Ed. is aligned to the National Teacher Education Curriculum Framework (NTECF). The NTECF mandates specialisations for Early Grade (KG–P3), Upper Primary (P4–P6), and JHS (JHS1–JHS3). These are the B.Ed. programmes currently being run by CoEs affiliated to Kwame Nkrumah University of Science and Technology (KNUST), the University of Education Winneba (UoE), the University for Development Studies (UDS) and the University of Ghana (UG). CoEs affiliated to the University of Cape Coast (UCC) run a slightly different system with B.Ed. Early Childhood (KG–P3), Primary Education (P1–P6) and JHS (JHS1–JHS3).

Launched across Ghana's 46 public CoEs in September 2018, with the first cohort of student teachers graduating in October 2022, the new B.Ed. sought to reorient Initial Teacher Education to:

- i. Prepare graduates to teach the basic school curriculum with relevant subject and pedagogic knowledge and specialisms in Early Grade, Upper Primary and JHS education;
- ii. Strengthen language and literacy development;
- iii. Elevate school-based practice through Supported Teaching in School (STS);
- iv. Broaden assessment to include in-school learning and assignments as well as examinations against the NTS;
- v. Model a more interactive, learner-centred pedagogy
- vi. Embed cross-cutting priorities such as equity, inclusivity, assessment, core skills, professional values, action research and reflection.

2.2. Supported Teaching in School in the new B.Ed. curriculum

The STS component of the B.Ed. curriculum is arguably the most important change brought about in Ghana's Initial Teacher Education reforms. Accounting for 30% of the overall B.Ed. grade, the STS spans all 4 years of the programme. Year 1 emphasises structured school-based observation and reflection. This takes place one day a week for 6 weeks in Semester One and again in Semester Two. Subsequent years progressively increase responsibility for

⁴ National Teachers' Standards (NTS): <https://t-tel.org/download/national-teachers-standards/?wpdmdl=3301&refresh=64297217d167a1680437783>

planning, teaching, assessment, and classroom inquiry under mentor guidance. Across diverse school contexts, student teachers both teach and observe to understand learners' development and learning. The detailed structure of the STS over the four years of the B.Ed., including the expectations and outcomes at each level as set out in the STS Year Handbook, is presented in Appendix 1.⁵

The Supported Teaching in Schools (STS) component remains the most challenging aspect of the B.Ed. programme to implement effectively. This is reflected in the findings of the 2022 Fidelity of Implementation (FoI) assessment conducted by GTEC with support from T-TEL.⁶ Despite its importance, there is still limited evidence on how student teachers' STS experiences influence their knowledge, competences, skills, motivation toward teaching foundational literacy and numeracy (FLN), and their professional readiness to teach FLN.

To address this gap, Transforming Teaching, Education & Learning (T-TEL), in collaboration with the University of Cape Coast (UCC) and Education Sub-Saharan Africa (ESSA), conducted research across Colleges of Education (CoEs) and partner schools in Ghana. The study examined how the Supported Teaching in Schools (STS) contributes to improving the teaching of foundational literacy & numeracy among Year 3 and Year 4 student teachers in the Bachelor of Education (B.Ed.) Early Grade (KG-P3) specialism programme. Specifically, it explored the statistical differences between pre- and post-STS outcomes across key domains, including understanding and adherence to the National Teachers' Standards (NTS), competences and skills development, content and pedagogical knowledge, motivation to teach, and readiness to teach FLN.

⁵ Detailed information on the STS is taken from the official STS Year 4 School Placement Handbook (GTEC, NTC & T-TEL 2020) which can be accessed here: https://t-tel.org/download/supported-teaching-in-school_year-4_school-placement-handbook/?wpdmdl=8128&refresh=67b0878a919921739622282

⁶ GTEC FoI Report : https://t-tel.org/download/report_fidelity-of-implementation-foi-of-b-ed-programme/?wpdmdl=8130&refresh=642c12e4634d01680610020

3.0 Methodology

The study employed a repeated cross-sectional design to assess changes in student teachers' self-reported outcomes before and after participation in the Supported Teaching in Schools programme. Data were collected using structured questionnaires with five-point Likert-scale items, ranging from *Very Low* to *Very High*. The pre-STs survey included 2,728 student teachers whilst the post-STs involved 2,462 student teachers. Both samples comprised independent groups of respondents.

Multiple Likert items measuring understanding, adherence, competencies and skills development, among others, were aggregated into composite scores for each respondent, using weighted means. Items were coded numerically from 1 (*very low*) to 5 (*very high*) and the composite score was computed as the weighted mean of the constituent items. This approach is consistent with standard practice when Likert items measure a common latent construct and are analysed at scale. Based on the literature, the weighted mean scores were categorised and interpreted as 1.00 – 1.79 = very poor; 1.80 – 2.59 = poor; 2.60 – 3.39 = average; 3.40 – 4.19 = good; 4.20 – 5.00 = very good. Descriptive statistics summarised the distribution of responses across the five Likert categories.

To determine changes over time, pre- and post-STs, mean score differences with 95% confidence intervals were examined. The chi-square test of independence was used to assess whether the overall distribution of ratings differed significantly between the pre- and post-STs assessments. This test evaluated the null hypothesis that the distribution of responses across categories was the same at both time points. The chi-square test was appropriate given the categorical nature of the data, independence of the samples, and adequacy of the expected cell counts. A significant chi-square result indicated evidence of a systematic shift of response patterns across the categories over time.

Additionally, to examine the direction and magnitude of change within individual response categories, two independent-sample tests of proportions were conducted for each Likert category. These tests compared the proportion of respondents in each category at post-STs relative to pre-STs. Two-sided z-tests with pooled standard errors were used, applying a 5% significance threshold to determine whether the observed differences in proportions were statistically significant.

Using a combined analytical strategy, i.e., mean score comparisons, chi-square testing, and category-level proportion tests, enabled a comprehensive assessment of changes in competencies development. While mean scores captured overall improvement (change), the distributional analyses provided deeper insight into how changes occurred across the rating scale.

4.0 Results

4.1 Understanding of the National Teachers' Standards (NTS)

Student teachers entered the STS practicum with a strong self-reported understanding of the National Teachers' Standards (NTS), with an average rating of 3.95 (95% CI: 3.92, 3.97) on a 5-point scale. After completing the practicum, this understanding improved further, with the average score rising to 4.15 (95% CI: 4.12, 4.17). This represented a statistically significant upward shift from pre- to post-STS.

Table 1 shows that, at both the pre- and post-STS stages, most student teachers rated their understanding as *high* or *very high*. Notwithstanding this overall pattern, statistically significant shifts were observed across three rating categories. Specifically, the proportions of student teachers who self-rated their understanding of the NTS as *moderate* ($p = 0.002$) and *high* ($p = 0.001$) decreased significantly following the STS practicum, while the proportion who rated their understanding as *very high* increased substantially ($p < 0.001$). However, no statistically significant changes were detected in the *very low* and *low* categories.

The observed shift from *moderate* and *high* understanding towards *very high* following the STS practicum suggests that the programme was effective in strengthening student teachers' self-reported understanding of the NTS. While these findings indicate that the practicum adds value, they reflect only perceived improvements and therefore highlight the importance of complementing them with objective indicators of understanding and practice.

Table 1: Student teachers' self-reported rating of their understanding of the National Teaching Standards pre- and post-STS

Categories	Pre-STS		Post-STS		Test of difference	
	%	n	%	n	z	p-value
Very Low	0.5	15	0.9	22	-0.14	0.889
Low	2.3	62	1.2	30	0.36	0.720
Moderate	18.5	506	9.8	241	3.06	0.002
High	41.8	1141	34.6	853	3.27	0.001
Very High	36.8	1004	53.5	1316	-7.99	< 0.001

% = percentage of student teachers; n = sample size

4.2 Adherence to the National Teachers' Standards for foundational literacy and numeracy

The overall mean score for self-reported adherence to the NTS increased significantly following the STS experience, with the mean score rising from 4.05 at pre-STS (95% CI: 4.02, 4.07) to 4.16 at post-STS (95% CI: 4.13, 4.18). This upward shift towards the upper end of the 5-point scale suggests that student teachers reported stronger alignment with, and application of, the NTS after completing the practicum, reflecting enhanced adherence to the standards during their school-based teaching experience.

Table 2 shows that at both the pre- and post-STS stages, most student teachers rated themselves within the *high* or *very high* categories of adherence. However, statistically significant shifts were observed across the distribution. The proportion classified as *moderate* declined

significantly ($p = 0.028$) post-STS, while the proportion classified as *very high* increased markedly ($p < 0.001$). No statistically significant changes were observed in the *very low*, *low*, or *high* categories. Consistent with these category-specific results, the overall chi-squared test indicated a statistically significant ($p < 0.001$) difference between the Pre-STS and Post-STS.

Overall, the results demonstrate that the STS practicum is associated with a positive shift in student teachers' self-reported adherence to the NTS. While high levels of adherence were evident before the practicum, participation in STS contributed to a significant movement towards *very high* adherence. These findings underscore the role of the practicum in strengthening alignment with NTS and supporting the professional development of student teachers.

Table 2: Student teachers' self-reported rating of their adherence to the National Teachers' Standards for FLN pre- and post-STS

Category	Pre-STS		Post-STS		Test of difference	
	%	n	%	n	z	p-value
Very Low	0.9	24	0.9	22	0.00	1.000
Low	1.4	39	1.2	30	0.23	0.820
Moderate	14.0	382	9.8	241	2.20	0.028
High	38.3	1044	34.6	853	1.68	0.093
Very High	45.4	1239	53.5	1316	-4.33	< 0.001

% = percentage of student teachers; n = sample size

4.3 Content knowledge in foundational literacy

The results indicate an improvement in student teachers' self-reported content knowledge in foundational literacy following the STS practicum. While content knowledge was already rated as *high* (mean = 4.20, 95% CI: 4.18, 4.23) at pre-STS, the post-STS mean increased to 4.23 (95% CI: 4.20, 4.26), reflecting a further shift towards the upper end of the 5-point scale. Table 3 shows the percentage distribution of student teachers and their pre- and post-STS self-rated content knowledge in foundational literacy. The results indicate that, at both the pre- and post-STS stages, the majority of student teachers rated their content knowledge in foundational literacy as *good* or *very good*. Although category-specific analyses did not show statistically significant changes for individual rating levels, there was a noticeable increase in the proportion of student teachers rating their content knowledge as *very good* following the STS practicum. The overall chi-squared test shows a statistically significant improvement in student teachers' self-reported content knowledge in foundational literacy between Pre-STS and Post-STS ($p = 0.030$), underscoring the STS practicum's contribution to strengthening foundational literacy preparation.

Table 3: Student teachers' self-reported rating of their content knowledge in foundational literacy pre- and post-STS

Category	Pre-STS		Post-STS		Test of difference	
	%	n	%	n	z	p-value
Very Poor	0.8	23	1	24	-0.07	0.942
Poor	1.2	32	2	49	-0.27	0.784
Average	9.6	262	8.6	212	0.38	0.707
Good	39.1	1066	36.1	890	1.36	0.173
Very Good	49.0	1336	52.3	1287	-1.69	0.091

% = percentage of student teachers; n = sample size

4.4 Content knowledge in foundational numeracy

The overall mean score for self-reported content knowledge in foundational numeracy was high at pre-STS (mean = 4.03, 95% CI: 4.00, 4.06), indicating a strong baseline level of content knowledge among student teachers. Following the STS practicum, the mean score increased to 4.15 (95% CI: 4.12, 4.17). The non-overlapping confidence intervals indicate a statistically significant increase in the overall mean score, reflecting improved self-reported content knowledge after the practicum. Consistent with this pattern, the overall chi-squared test showed a statistically significant ($p < 0.001$) difference in the distribution of ratings between Pre-STS and Post-STS.

The category-specific comparisons reveal that, at both the pre- and post-STS stages, most student teachers rated their content knowledge in foundational numeracy as *good* or *very good* (Table 4). Following the STS practicum, a notable shift was observed across the rating categories. In particular, the proportion of student teachers who rated their content knowledge as *very good* increased significantly. In contrast, the proportions in the *average* and *good* categories declined, albeit only barely significantly. No statistically significant changes were observed in the *very poor* and *poor* categories. Overall, this pattern indicates a redistribution of self-reported ratings towards higher categories after the practicum, suggesting an improvement in student teachers' perceived content knowledge in foundational numeracy.

Table 4: Student teachers' self-reported rating of their content knowledge in foundational numeracy pre- and post-STS

Category	Pre-STS		Post-STS		Test of difference	
	%	n	%	n	z	p-value
Very Poor	1.0	27	0.9	22	0.04	0.971
Poor	1.8	49	2.4	58	-0.21	0.830
Average	16.3	444	11.1	274	1.93	0.053
Good	39.1	1067	34.8	856	1.94	0.053
Very Good	41.8	1141	50.9	1252	-4.46	< 0.001

% = percentage of student teachers; n = sample size

4.5 Pedagogical knowledge in foundational literacy and numeracy

Student teachers' self-rated pedagogical knowledge in foundational literacy and numeracy improved significantly from pre-STS to post-STS. Mean scores increased from 4.14 (95% CI: 4.12, 4.17) to 4.21 (95% CI: 4.18, 4.24), confirming a measurable enhancement in average perceived competence following the STS. The chi-square test also indicated a significant ($p < 0.001$) overall shift in the pattern of responses across the two time points. The most notable improvement occurred in the “*very good*” category, which saw a significant ($p < 0.001$) increase. Correspondingly, there were significant reductions in the *very poor* ($p = 0.011$) and *good* ($p = 0.002$) categories, indicating movement toward higher levels of perceived pedagogical competence. No significant changes were observed in the *poor* and *average* categories (see Table 5). Overall, the post-STS results demonstrate a positive upward redistribution of responses into the highest competence category. This suggests that the STS experience contributed meaningfully to strengthening pedagogical knowledge in foundational literacy and numeracy.

Table 5: Student teachers' self-reported rating of their pedagogical knowledge in foundational literacy and numeracy pre- and post-STS

Category	Pre-STS		Post-STS		Test of difference	
	%	n	%	n	z	p-value
Very Poor	1.0	26	0.4	11	-2.55	0.011
Poor	1.2	34	1.5	38	1.06	0.289
Average	10.5	287	9.0	221	-1.76	0.078
Good	40.1	1094	36.0	887	-3.03	0.002
Very Good	47.2	1287	53.0	1305	4.20	<0.001

% = percentage of student teachers; n = sample size

4.6 Pedagogical content knowledge in foundational literacy and numeracy

The mean self-rated pedagogical content knowledge in foundational literacy and numeracy scores increased from 4.15 (95% CI: 4.09, 4.14) at pre-STS to 4.18 (95% CI: 4.15, 4.20) at post-STS, indicating a modest but consistent improvement in average perceived pedagogical content knowledge in foundational literacy and numeracy. The overall chi-square test shows a statistically significant ($p < 0.001$) difference in the distribution of knowledge categories between pre- and post-STS, confirming that the pattern of responses changed across time points. From pre- to post-STS, there was a significant increase in the proportion of student teachers rating themselves as *very good*, alongside significant reductions in the *average* and *good* categories. Changes in the lowest categories (*very poor* and *poor*) were not statistically significant (see Table 6). These demonstrate an overall upward shift in self-rated knowledge after STS, driven primarily by movement from mid-level categories into the highest knowledge category.

Table 6: Student teachers' self-reported rating of their pedagogical content knowledge in foundational literacy and numeracy pre- and post-STs

Category	Pre-STs		Post-STs		Test of difference	
	%	n	%	n	z	p-value
Very Poor	0.8	23	0.6	15	-0.68	0.497
Poor	1.1	30	1.5	38	1.43	0.153
Average	11.7	319	9.4	232	-2.66	0.008
Good	39.5	1077	36.3	894	-2.30	0.021
Very Good	46.9	1279	52.1	1283	3.78	<0.001

% = percentage of student teachers; n = sample size

4.7 Competencies development in foundational literacy and numeracy

Student teachers' self-reported competencies development showed a clear and statistically significant improvement from pre- to post-STs. The pre-STs mean score was 3.92 (95% CI: 3.89, 3.95), while the post-STs mean score increased to 4.14 (95% CI: 4.11, 4.17). The results showed a significant increase in the mean score from pre- to post-STs ($p < 0.001$). The result reflects a shift away from lower and moderate competency ratings toward higher ratings, particularly an increase in the *very high* category at post-STs, alongside marked declines in the *moderate* and *low* categories (Table 7). This redistribution aligns closely with the observed rise in the overall mean score.

The significant increase in mean competency scores with non-overlapping confidence intervals and the highly significant overall chi-square test provide convergent evidence that competency development improved substantially from pre- to post-STs. Unlike outcomes that merely remained stable, this pattern indicates that the STs experience was associated with a meaningful and statistically robust enhancement of student teachers' competency development, particularly through movement toward the upper end of the competency scale.

Table 7: Student teachers' self-reported rating of their competencies development in foundational literacy and numeracy pre- and post-STs

Category	Pre-STs		Post-STs		Test of difference	
	%	n	%	n	z	p-value
Very Low	0.8	21	1.3	32	1.9	0.058
Low	3.2	87	1.8	44	-3.22	0.001
Moderate	21.4	583	10.9	269	-10.14	< 0.001
High	39.7	1084	37.1	914	-1.93	0.053
Very High	34.9	953	48.9	1203	10.17	< 0.001

% = percentage of student teachers; n = sample size

4.8 Competency in selecting appropriate teaching strategies for foundational literacy

Table 8 shows student teachers' self-reported competencies in selecting appropriate teaching strategies for foundational literacy in the pre- and post-STS periods. Analysis of the results shows that there was limited improvement following the STS practicum. Across most literacy domains particularly phonemic awareness, concept of print, alphabetic knowledge and phonics, vocabulary, and comprehension, there was no statistically significant changes in the proportions of student teachers who reported feeling competent, as evidenced by p-values greater than 0.05. However, there was a significant decline in perceived competence related to teaching reading fluency, suggesting a persistent instructional challenge. This decline may also reflect heightened professional awareness and more realistic self-assessment as student teachers encounter real classroom complexities. Nonetheless, the result suggests that reading fluency is a potential area of weakness within the STS framework and underscores the need for more focused and practice-oriented support in this domain.

Table 8: Student teachers' self-reported competency in selecting appropriate teaching strategies for foundational literacy pre- and post-STS

Indicators	Pre-STS		Post-STS		Test of difference	
	%	n	%	n	Z	p-value
Listening (Phonemic Awareness)	56.9	1546	56.9	1401	0.00	1.000
Writing and Reading (Concept of Print)	55.6	1512	52.2	1286	1.80	0.072
Listening and Reading (Alphabetic Knowledge and Phonics)	47.4	1288	44.8	1104	1.27	0.204
Reading (Vocabulary)	44.9	1220	44.3	1090	0.29	0.772
Reading (Comprehension)	44.5	1211	41.0	1010	1.66	0.097
Reading (Fluency)	36.2	983	27.5	676	3.71	0.000

% = percentage of student teachers; n = sample size

Note: This was a multiple-response question; the total percentage may exceed 100%.

4.9 Competency in selecting appropriate teaching strategies for foundational numeracy

Table 9 shows the analysis of student teachers' self-reported competency in selecting appropriate teaching strategies for foundational numeracy before and after STS practicum. The results show a statistically significant (5% level) decline in the proportion of student teachers who reported that they were competent in selecting numbers (whole numbers), counting and representation; geometry and measurement (measurements-length, mass, capacity); and handling data (data collection, presentation, analysis and interpretation). For the remaining strategies, there were no significant differences between the pre- and post-STS, as evidenced in the small z-statistics and p-values greater than 0.05. This suggests that, for these items, the proportions observed post-STS are statistically comparable to those observed pre-STS, and any observed changes may reasonably be attributed to sampling variability rather than systematic change.

Given that the expected impact of the STS was to increase student teachers' competency, the observed declines in post-STS proportions for some foundational numeracy strategies indicate that the intervention may not have achieved its intended effect in these areas. The absence of

statistically significant improvements in the remaining domains further suggests that STS failed to generate measurable gains in perceived competency. These findings imply either limited effectiveness of the STS in strengthening pedagogical competence or a recalibration of self-perceived competence following exposure to real classroom practice, highlighting the need for stronger pedagogical support and mentoring during school placement.

Table 9: Student teachers' self-reported competency in selecting appropriate teaching strategies for foundational numeracy pre- and post-STS

Indicator	Pre-STS		Post-STS		Test of difference	
	%	n	%	n	Z	p-value
number (whole numbers), counting and representation	74.9	2036	70.5	1736	-3.03	0.002
Number (whole numbers) operations and the relationship between numbers)	47.2	1283	46.9	1154	-0.15	0.882
Number (whole numbers), fractions and the relationship between numbers	39.9	1085	41.8	1029	0.89	0.374
Algebra (non-numerical patterns and relationships)	30.0	816	28.6	704	-0.60	0.55
Geometry and measurement (lines and shapes)	29.7	808	25.8	636	-1.64	0.101
Geometry and measurement (telling positions of objects in space)	25.2	684	22.1	545	-1.27	0.205
Geometry and measurement (measurements-length, mass, capacity)	24.2	658	18.8	462	-2.15	0.032
Handling data (data collection, presentation, analysis and interpretation)	31.1	846	21.3	524	-3.95	<0.001

% = percentage of student teachers; n = sample size

Note: This was a multiple-response question; the total percentage may exceed 100%.

4.10 Skills development in foundational literacy and numeracy

The findings indicate an improvement in skills development in foundational literacy and numeracy from pre- to post-STS. The pre-STS mean score was 4.11 (95% CI: 4.09, 4.14), while the post-STS mean score increased to 4.22 (95% CI: 4.19, 4.24). A chi-square test of independence comparing the distribution of responses across the five rating categories between pre- and post-STS showed a statistically significant ($p < 0.001$) upward shift in self-reported skills development in foundational literacy and numeracy (see Table 10). This indicates a systematic redistribution of responses across skill levels from pre- to post-STS. The results show that the changes were not confined to a single category but reflected a broader shift in the response distribution, with movement away from lower and intermediate skill ratings toward higher ratings at post-STS. This pattern aligns with the increase in the overall mean score, reinforcing evidence of self-reported improved skills development in foundational literacy and numeracy.

The results provide convergent evidence that skills development in foundational literacy and numeracy improved from pre- to post-STS and confirmation that the STS experience contributed to a meaningful and educationally relevant enhancement of student teachers' skills development in foundational literacy and numeracy.

Table 10: Student teachers' self-reported rating of their skills development in foundational literacy and numeracy

Category	Pre-STs		Post-STs		Test of difference	
	%	n	%	n	z	p-value
Very Poor	0.5	14	0.8	19	1.17	0.242
Poor	1.2	34	1.4	34	0.43	0.670
Average	10.2	279	6.4	158	-4.94	< 0.001
Good	39.4	1074	33.0	813	-4.75	< 0.001
Very Good	48.6	1327	58.4	1438	7.04	< 0.001

4.11 Professional readiness to teach foundational literacy and numeracy

The overall mean score for professional readiness to teach foundational literacy and numeracy increased from 4.03 (95% CI: 4.00, 4.06) at pre-STs to 4.15 (95% CI: 4.12, 4.18) at post-STs, indicating a clear and meaningful improvement in average perceived readiness following STs. Consistent with this upward shift in the mean, the overall chi-square test shows a statistically significant change in the distribution of readiness categories between pre- and post-STs ($p < 0.001$). This indicates that changes occurred across the full response scale rather than being confined to the mean alone (see Table 11). Additionally, from pre- to post-STs, there was a substantial and statistically significant increase in the proportion of student teachers reporting a *very large* extent of readiness, accompanied by significant reductions in the *moderate* extent and *large* extent readiness categories. Changes in the lowest categories, i.e. *not at all ready* and *very little* extent, were not statistically significant. These demonstrate an upward shift in professional readiness to teach foundational literacy and numeracy following STs, driven primarily by movement from mid-level to the highest readiness category, and provide strong evidence of self-reported enhanced preparedness to teach foundational literacy and numeracy.

Table 11: Student teachers' self-reported rating of their professional readiness to teach foundational literacy and numeracy pre- and post-STs

Category	Pre-STs		Post-STs		Test of difference	
	%	n	%	n	z	p-value
Not at All Ready	0.8	23	0.9	21	0.32	0.749
Very Little Extent	1.8	48	1.5	38	-0.72	0.471
Moderate Extent	17.4	472	12.1	298	-5.39	<0.001
Large Extent	40.5	1101	37.8	931	-2.10	0.036
Very Large Extent	39.5	1075	47.7	1174	5.99	<0.001

4.12 Motivation towards professional teaching

Student teachers' overall motivation to teach was high at both time points and remained essentially unchanged. The pre-STs mean score was 4.27 (95% CI: 4.25, 4.30), while the post-STs mean was 4.28 (95% CI: 4.25, 4.31). The overlap of the confidence intervals indicates no statistically significant difference in average motivation between pre-STs and post-STs, suggesting stability in overall motivation levels across the STs period. Consistent with the mean comparison, the overall chi-square test of independence comparing the full distribution of Likert responses between pre- and post-STs showed no statistically significant difference ($p = 0.433$).

In addition, the results showed no statistically significant changes across individual response categories (see Table 12). The results demonstrate that motivation to teach remained high and stable from pre- to post-STS, with no statistically significant shift attributable to the STS.

Table 12: Student teachers' self-reported rating of their motivation towards professional teaching pre- or post-STS

Category	Pre-STS		Post-STS		Test of difference	
	%	n	%	n	z	p-value
Strongly Disagree	1.1	31	1.3	32	0.74	0.459
Disagree	2.2	61	1.9	47	-0.83	0.405
Neutral	7.2	195	6.4	158	-1.19	0.234
Agree	29.6	805	31.5	776	1.52	0.128
Strongly Agree	59.8	1627	58.9	1449	-0.67	0.501

4.13 Summary of findings

The comparative analysis of pre- and post-STS survey results shows that the Supported Teaching in Schools (STS) programme produced substantial positive gains in several key areas of student teachers' professional development, while exposing some notable gaps in others. Student teachers demonstrated significant improvements in their understanding and adherence to the National Teachers' Standards (NTS), with clear shifts from *moderate* and *high* ratings toward the highest performance categories. Student teachers' self-reported content knowledge in both foundational literacy and numeracy also improved, supported by statistically significant increases in mean scores and upward redistribution of responses toward the *very good* category after their STS experiences.

Similarly, there was an overall improvement in student teachers' self-rated pedagogical knowledge and pedagogical content knowledge in both foundational literacy and numeracy after STS. In both domains, results reflected statistically significant reductions in lower and mid-level ratings and meaningful increases in the highest competency category. This was a clear indication of stronger instructional understanding following the STS practicum. The findings also show notable gains in the development of general skills and competencies in FLN, with clear upward shifts away from lower and moderate ratings toward higher competency levels. Professional readiness to teach foundational literacy and numeracy followed the same pattern, with marked increase in the proportion of student teachers rating themselves as ready to a "*very large extent*"

In contrast, the STS had limited effectiveness in strengthening student teachers' ability to select appropriate teaching and learning strategies for foundational literacy and numeracy. Competency levels remained unchanged in many literacy domains, and significant declines were recorded in key areas, including reading fluency in literacy, whole number counting and representation, geometry and measurement, and data handling in numeracy. These declines suggest persistent pedagogical challenges and may reflect insufficient guided practice, limited opportunities for applied instructional decision-making, or more realistic self-evaluation after exposure to classroom realities.

Motivation to teach FLN remained high and stable across the two STS phases, with no significant change attributable to the STS experience.

Overall, the findings indicate that while the STS practicum effectively strengthens core professional knowledge, skills, competences, and readiness, it remains less effective in developing strategic pedagogical decision-making, particularly in selecting and applying appropriate instructional strategies in foundational literacy and numeracy.

5.0 Conclusion

This study provides clear evidence that the Supported Teaching in Schools (STS) practicum contributes meaningfully to student teachers' professional development in foundational literacy and numeracy (FLN). Across most domains; content knowledge, pedagogical and pedagogical content knowledge, competences, skills development, and professional readiness, student teachers recorded statistically significant improvements between the pre-STS and post-STS assessments.

However, the STS was less effective in strengthening student teachers' ability to select and apply appropriate teaching strategies for specific foundational literacy and numeracy concepts. Declines in perceived competence in areas such as reading fluency, whole number representation, measurement, and data handling point to gaps in the depth and quality of guided practice, mentoring, and instructional modelling available during school placements. These weaknesses suggest that while the practicum builds foundational knowledge and confidence, it does not consistently translate into enhanced pedagogical decision-making for key FLN instructional areas.

Finally, the findings highlight the value of the STS programme but also underscore the need for more targeted, practice-oriented support to equip student teachers with strategic teaching skills required for effective FLN instruction. Strengthening these components is essential to ensure that gains in knowledge and readiness lead to sustained improvements in classroom practice.

6.0 *Recommendations Based on the comparative analysis*

Based on the key findings, the following recommendations are made:

1. ***Strengthen the Quality and Consistency of the STS Programme***

All stakeholders must work together to enhance key elements of the STS such as mentorship, supervision, classroom observation, practical teaching sessions, structured reflections on teaching practicum, resource provision, and peer teaching and collaboration. This will provide a holistic, integrated STS experience in FLN for student teachers

2. ***Reinforce Motivation for Teaching FLN***

Although motivation remained high, the STS experience did not impact it. Motivation for professional teaching in FLN must be intentionally pursued by incorporating targeted activities such as seminars to address negative perceptions about early-grade teaching, reflective practice, exposure of preservice teachers to exemplary FLN teachers, and professional identity building sessions to maintain commitment to foundational teaching.

3. ***Recognise and Reward Outstanding Performance***

Introduce post-STS awards and recognition for exemplary FLN lesson planning and practicum performance to sustain motivation and promote excellence.

4. ***Build Stronger Capacity in Selecting FLN Teaching Strategies***

Address documented weaknesses and declines in strategy selection for reading fluency, number representation, measurement, and data handling. Provide focused, practice-oriented support using video-based lesson analysis, guided reflections, explicit modelling of instructional strategies, and structured comparison of approaches to improve pedagogical decision-making.

Appendices

Appendix 1: STS Structure and Expectations

STS Year One

By the end of the beginning placement student teachers, under the close guidance of a mentor, will be able to:

1. Work collaboratively, with 2-4 student teachers per class, to plan for and work with a small group or individual pupils, beginning to acquire the ability to consider children's learning, backgrounds and experience.
2. Discuss features of the school curriculum, specifically focusing on English (literacy), Mathematics and Science.
3. Undertake child studies focused on children's learning and progress.
4. Begin to identify the traits of the profession and qualities of a good teacher.
5. Reflect on and record their experiences in their professional portfolios – through this student teacher will begin working towards meeting the NTS.
6. May work towards 10-15% of class responsibility with a small group.

Duration 32 days: day visit and 4-week placement, in vacation, across 2 semesters.

Year Two: Developing teaching – student teachers select one of the three specialisms whilst key features from Year One continue to be developed as relevant to each specialism. The second year prepares student teachers to identify and assess weaknesses and barriers to learning for learners and carry out small-scale classroom enquiry under the guidance of mentors.

STS Year Two

By the end of the developing placement, under the close guidance of a mentor, the student teacher will be able to:

1. Teach, motivate, support and manage (working individually and in pairs) the learning of small groups of pupils in the core subjects of English (literacy), mathematics and science and other subjects as appropriate to their specialism.
2. Begin to identify, assess and analyses the needs of children, taking into account any issues of background and experience.
3. Discuss key features of the school curriculum, including issues of continuity and progression both within their specialism and across all the subjects they will teach.
4. Undertake small scale classroom enquiry focused on children's learning and progress, demonstrating an emerging ability to reflect on their developing understanding of teaching, learning and assessment.
5. Demonstrate a high standard of professional conduct and positive professional values at all times and act as a good role model for pupils.
6. Those preparing for early grade or primary specialisms will have begun to develop knowledge of teaching the speaking, listening, reading and writing of one Ghanaian language.

7. Demonstrate a growing understanding of the requirements of the NTS in terms of professional practice, knowledge, values and attitudes, in particular their professional role as a teacher and be able to reflect on, record and discuss evidence of their progress towards meeting the NTS.
8. May be working towards 30% of class responsibility with the small groups they are planning for and teaching.

Duration 32 days: including day visits and across 2 semesters and in vacation.

Year Three: Embedding teaching – student teachers will continue to build skills, knowledge and understanding in their chosen specialism. They will co-plan and co-teach groups of learners and whole classes, carry out small-scale classroom enquiries and provide evidence of working towards meeting the NTS. Year Three includes preparation for Year Four, semester one: final supported teaching in school (internship) and for significant classroom-based enquiry and action research projects.

STS Year Three

By the end of the embedding placement the student teacher, with mentor guidance and support, will be able to:

1. Teach, motivate, manage and extend the learning of classes with increasing consistency and independence, whatever their socio-cultural and linguistic background and regardless of age, aptitude and ability. This will involve co-planning, co-teaching and co-assessment with mentors and their ongoing presence in the classroom.
2. Plan for and teach sequences of lessons across all required subjects with regard for cross-cutting skills and issues of equity and inclusivity.
3. Undertake small-scale action research, evaluate and reflect on their teaching and on pupils' learning to support students in improving their teaching and assessment.
4. Demonstrate emerging leadership qualities in the classroom and to contribute to wider school life, being guided by the legal and ethical codes of conduct required by a professional teacher.
5. Provide evidence and discuss how, with support from their mentor, they are able to meet the Teachers' Standards through much of their teaching and all of their professional conduct. They will be able to agree and act on targets to further improve their teaching.
6. May work towards 50-60% of class responsibility with agreed classes and periods in accordance with agreed placement requirements.

Duration 36 days: including day visits across 2 semesters.

Year Four: Extending Teaching: Following a supported teaching in school internship in Semester One, during Semester Two students will return to school to complete some courses. By the end of the fourth year, student teachers will: plan, teach and assess their learners independently and with increasing consistency; exhibit the ethical codes of conduct, values and attitudes expected of a teacher; carry out extensive action research projects; and provide evidence of meeting the National Teachers' Standards in full.

STS Year Four

By the end of the extending placement the student teacher, with mentor guidance, will be able to:

1. Intently and independently plan for teaching, motivate and extend the learning of all children whatever their socio-cultural and linguistic background and regardless of age, aptitude and ability.
2. Provide evidence in their planning and teaching of a comprehensive understanding of the school curriculum and of the age-related expectations before, during and after their specialism.
3. Undertake an action research project to improve the learning opportunities of an agreed group of pupils to promote greater inclusion; and through this develop their teaching, classroom management and organization strategies.
4. Demonstrate effective, growing leadership qualities in the classroom and in the wider school community and be guided by the legal and ethical codes of conduct required by a professional teacher.
5. Reflect on, discuss and provide evidence of how they meet the NTS in full and identify targets for further development.
6. Have the qualities and attributes expected of a good teacher and fully meet the NTS.
7. May work towards 80% of class teaching responsibility with agreed classes and periods in accordance with agreed placement requirements.

Duration 60 days in school: these can be either residential or non-residential. 60 days in college working on action research project and professional portfolio and preparing for viva as appropriate.