

ORIGINAL ARTICLE

Teacher Professionalism and Professional Practice in Ghana: Baseline Evidence

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Publication History

Received: 7 April 2026

Revised: 18 April 2026

Accepted: 20 June 2026

Available online: 30 July 2026

DOI: <https://doi.org/10.64922/jassee.v1i1.140>

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USTED Press

Abstract

This study investigates the relationship between teacher professionalism and professional practice across Ghana using a large national quantitative survey (N = 4,645). Using a descriptive survey design, data was gathered using 27 operationalized variables spanning teacher identity, CPD participation, ethical adherence, classroom collaboration, and demographic characteristics. Data was analysed using descriptive statistics and multiple regression. Findings indicate a strong positive relationship between professional practice and professionalism, suggesting that higher levels of professional practice are associated with higher levels of professionalism. Similarly, CPD involvement was found to contribute positively to teacher professionalism. In addition, INSET, age, and teaching experience were positively associated with teacher professionalism, but negatively associated with professional practice, indicating that these factors operate differently across the two outcome constructs. Qualifications outside education were not significantly associated with professionalism but were negatively associated with professional practice. Professional rank was negatively associated with professionalism but positively associated with professional practice, whereas marital status and number of children were negatively associated with both outcomes. The study concludes that teacher professionalism and professional practice in Ghana are shaped by complex, interrelated factors, requiring evidence-based and context-sensitive policy interventions. The research contributes a foundational evidence base to inform the National Teaching Council (NTC) and stakeholders on strategies for enhancing teacher professionalism and practice. Recommendations include restructuring INSET timing, refocusing CPD delivery, and emphasising contextualized teacher development policies.

Keywords: *Educational Policy; Continuous Professional Development (CPD); Evidence-Based Education Reform; Teacher Quality and Practice.*

Introduction

The global discourse on quality education has increasingly underscored the significance of teacher professionalism as a determinant of educational effectiveness, student achievement, and national development (Menter & Assunção Flores, 2021; Zhang et al., 2025). In the 21st century, the role of the teacher transcends classroom instruction; it embodies a broader responsibility of shaping national consciousness, nurturing civic values, and contributing to sustainable development (Sedwal, 2024). The demand for competent, ethical, and highly professional teachers has never been more urgent, especially in developing countries like Ghana where persistent concerns over teacher absenteeism, misconduct, and inefficiencies in professional practice threaten the goals of educational equity and excellence (Kim et al., 2019; Sancar et al., 2021). In this context, enhancing teacher professionalism is not merely an academic pursuit but a developmental imperative aligned with Sustainable Development Goal 4: “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”. This is particularly relevant in Africa, where recent SDG scholarship highlights the need for stronger empirical evidence to guide policy implementation and development outcomes (Gyimah et al., 2023; Gyimah et al., 2025). This study is particularly timely, given the evolving landscape of Ghana’s educational sector which is characterized by policy reforms such as the introduction of the National Teachers’ Standards (NTS), the Ghana Teacher Licensure Examination (GTLE), and the institutionalization of Continuous Professional Development (CPD) as a requirement for teacher growth (Ministry of Education, 2017; NTC, 2020). These developments demand a rigorous, evidence-based assessment of teacher professionalism to inform policy and practice at both systemic and institutional levels.

The literature conceptualizes teacher professionalism as a multidimensional construct involving professional knowledge, ethical conduct, lifelong learning, collaboration and reflective practice (Ball & Forzani, 2009; Lieberman & Miller, 2005; OECD, 2016). In this study, the theoretical focus is narrowed to a practice-based professionalisation framework, where CPD, INSET and awareness of professional standards are treated as professional learning inputs that may shape teacher professionalism and professional practice. This framing keeps the study focused on the empirical relationship between CPD, professionalism and practice within the Ghanaian teaching context.

However, despite the global attention to teacher professionalism, critical gaps remain in the Ghanaian context. Much of the existing literature and policy discourse on teacher professionalism in Ghana is conceptual, lacking robust empirical evidence that reflects the perceptions, practices, and contextual realities of teachers across diverse geographical and institutional settings. While some localized studies have explored the impact of CPD on teacher performance (Edwards & Osei-Mensah, 2019) or examined leadership roles in failing schools (SEIP, 2014), there is a dearth of comprehensive, nationwide research that systematically investigates teacher professionalism within the framework of the National Teachers’ Standards (NTS). Additionally, very few studies have examined the nexus between teacher professionalism and professional practices through both qualitative and quantitative lenses, nor have they assessed how variables such as location, gender, rank, INSET frequency, and CPD participation interact to shape professional conduct and practice. These knowledge gaps hinder the ability of the National Teaching Council (NTC) and other stakeholders to design contextually appropriate interventions that enhance teacher quality. To address these deficiencies, this study poses the following research questions: (1) What is the extent of teacher professionalism in the Ghanaian education system within the framework of the NTS? (2) What CPD programmes are available to teachers? (3) How do teachers perceive CPD as a means of improving professional practice? (4) What factors are associated with teacher professionalism and professional practice among in-service teachers in Ghana?

This study contributes to knowledge in three main ways. Theoretically, it advances a practice-based professionalization framework that links CPD, INSET, professional standards, teacher professionalism and professional practice. Empirically, it provides large-scale baseline evidence from 4,645 in-service teachers across Ghana, showing how teacher professionalism and professional practice are related but

distinct constructs. The findings also serve as a diagnostic tool for the Ministry of Education, teachers' unions and training institutions to identify areas for intervention, resource allocation and capacity building. Methodologically, the study demonstrates how descriptive and regression-based evidence can be used to identify the professional, demographic and contextual factors associated with teacher professionalism and practice. These contributions provide useful evidence for teacher development policy, CPD design and the practical implementation of professional standards in Ghana.

The paper is organized as follows. Following this introductory section, Section 2 provides a critical review of relevant literature, Section 3 outlines the research methodology, Section 4 presents the results and discussion of the findings, Section 5 provides the conclusion, and Section 6 provides the recommendations and implications.

Literature Review

Evolution of CPD among Teachers in Ghana and Teacher Professionalism

CPD among teachers in Ghana has shifted from irregular in-service workshops to regulated, career-long learning linked to professionalism, licensing and competence (NTC, 2020; Salifu et al., 2025). The NTC's point-based framework formalised this shift by requiring teachers to earn CPD points through accredited activities for growth and licence renewal (NTC, 2020; UNESCO-IICBA, 2025). Before this formalisation, teachers experienced CPD through workshops, school-based INSET, cluster-based training and continuing education, although participation was constrained by cost, timing, distance and relevance (Abakah et al., 2022; Abakah et al., 2023). This suggests that CPD has advanced institutionally, but implementation remains uneven across teachers, subjects and school contexts (Abakah et al., 2022; Mitchell et al., 2024).

Distance and sandwich education have become important upgrading routes because subject-specific CPD opportunities remain limited (Abakah et al., 2023; Salifu et al., 2025). Within teacher professionalism, CPD is not merely training but a mechanism for strengthening pedagogy, ethical conduct, reflection, classroom management and quality teaching (NTC, 2020; Salifu et al., 2025). African evidence cautions that CPD produces stronger outcomes when it is sustained, context-sensitive, collaborative and linked to classroom practice rather than isolated workshops (Mitchell et al., 2024; Abakah et al., 2022). Ghana's CPD evolution reflects policy progress and implementation tension, because effectiveness depends on accessibility, relevance, teacher agency and institutional support (NTC, 2020; Abakah et al., 2022; Salifu et al., 2025).

The Professional Work of Teaching

Teaching in contemporary education systems is increasingly understood as professional work that combines specialist knowledge, ethical judgement, collaboration, research engagement, and continuous learning (Tatto, 2021; Mezza, 2022). In Ghana, this understanding is reinforced by the National Teaching Council's professional development framework, which links teacher competence, portfolio development, licence renewal, and professional standing to continuing professional development (NTC, 2020; Salifu et al., 2025). The work of teaching has also expanded beyond content delivery to include inclusive pedagogy, technology-mediated learning, classroom management, and learner-centred support, requiring teachers to adapt practice to diverse educational needs (Abakah et al., 2022; Mitchell et al., 2024).

Ghanaian evidence shows that professional development improves instructional delivery and classroom management, although its influence on content knowledge remains less consistent (Salifu et al., 2025). Teacher professionalism is therefore both competence-based and ethically grounded, because teachers are expected to safeguard learners, model appropriate conduct, and support learners' moral and social development (Cronqvist, 2025; NTC, 2020). Recent African evidence further shows that professional learning is more effective when it is sustained, school-based, collaborative, and responsive to teachers' contexts rather than generic or externally imposed (Mitchell et al., 2024; Abakah et al., 2023).

Accordingly, professional practice in Ghana should be understood as the visible enactment of professionalism through ethical conduct, reflective pedagogy, collaboration, CPD participation, and responsiveness to learners' needs (NTC, 2020; Salifu et al., 2025).

Professionalisation, Practice, and Value Creation

The concept of professionalism in teaching is increasingly understood through observable professional practice, including teachers' pedagogical competence, ethical conduct, collaboration, reflective learning and responsiveness to learners' needs (NTC, 2020; Tatto, 2021). In this sense, professionalism is not only an occupational identity but also the practical demonstration of standards through classroom management, assessment, inclusive pedagogy and continuous improvement (NTC, 2020; Salifu et al., 2025). Within Ghana's education system, the NTC CPD Framework strengthens this practice-based understanding by linking professional development to CPD points, portfolio evidence, licence renewal and teacher growth (NTC, 2020; UNESCO-IICBA, 2025).

In practice, CPD provides a structured pathway through which teachers update pedagogical knowledge, improve instructional delivery and respond more effectively to classroom challenges (Abakah et al., 2022; Salifu et al., 2025). Recent evidence from Ghana shows that professional development contributes to improved instructional delivery and classroom management, although its effect depends on the relevance, accessibility and quality of CPD activities (Abakah et al., 2022; Salifu et al., 2025). This suggests that CPD improves professional practice most effectively when it is aligned with teachers' subject needs, school contexts and everyday classroom realities (Abakah et al., 2023; Mitchell et al., 2024).

Professional citizenship also remains important because teachers are expected to model ethical behaviour, support learners' social development and contribute to school-community improvement (NTC, 2020; UNESCO-IICBA, 2025). However, this citizenship becomes visible mainly through practice: how teachers plan lessons, assess learning, manage classrooms, collaborate with colleagues and engage parents (NTC, 2020; Salifu et al., 2025). Professional learning communities, school-based INSET and cluster-based training therefore create practical spaces for teachers to share experiences, reflect on classroom problems and adopt improved pedagogical strategies (Abakah et al., 2022; Mitchell et al., 2024). Thus, teacher professionalism is best understood as a practice-based commitment strengthened through relevant, sustained and context-sensitive CPD (Abakah et al., 2022; Mitchell et al., 2024; Salifu et al., 2025).

Continuous Professional Development (CPD) Engagement

CPD in Ghana has evolved from occasional in-service workshops into a regulated professional learning system linked to teacher licensing, professional growth and career progression (NTC, 2020; UNESCO-IICBA, 2025). The NTC CPD Framework provides the national structure for planning, implementing and documenting CPD activities through accredited service providers, CPD points and teacher portfolios (NTC, 2020). This framework reframes CPD as a professional requirement rather than a voluntary training activity, making it central to teacher accountability and professional practice in Ghana (NTC, 2020; Salifu et al., 2025). Recent Ghanaian evidence shows that teachers commonly participate in CPD through workshops, school-based INSET, cluster-based INSET, short courses, professional learning communities and continuing education (Abakah et al., 2022). However, access to CPD remains shaped by cost, timing, information gaps, institutional support and the relevance of training content to teachers' classroom needs (Abakah et al., 2022; Salifu et al., 2025).

The evolution of CPD has also changed how teacher professionalism is understood in Ghana, moving it from occupational identity toward observable classroom practice (UNESCO-IICBA, 2025; Salifu et al., 2025). Professionalism is now increasingly demonstrated through lesson delivery, classroom management, assessment practice, ethical conduct, collaboration and responsiveness to learners' needs (NTC, 2020; Salifu et al., 2025). Distance and sandwich education have further expanded teachers' routes to professional upgrading, especially where conventional CPD opportunities are limited or unevenly

distributed (Abakah et al., 2023). Broader African evidence also shows that CPD is most effective when it is sustained, collaborative, school-based and connected to teachers' everyday classroom realities (Mitchell et al., 2024). Therefore, Ghana's NTC CPD Framework provides an important foundation for teacher professionalism, but its contribution to professional practice depends on the quality, accessibility and classroom relevance of CPD activities (Abakah et al., 2022; Mitchell et al., 2024; Salifu et al., 2025).

In summary, the study is guided by a practice-based professionalisation framework (NTC, 2020; Tatto, 2021; Mezza, 2022). In this framework, CPD, INSET participation and awareness of the National Teachers' Standards (NTS) are treated as professional learning inputs that may strengthen teacher professionalism (Abakah et al., 2022; Salifu et al., 2025). Teacher professionalism refers to teachers' professional identity, ethical consciousness, commitment to lifelong learning and adherence to professional standards (NTC, 2020; Tatto, 2021). Professional practice refers to the visible application of these professional values through classroom management, inclusive pedagogy, collaboration, parent engagement and responsiveness to learners' needs (NTC, 2020; Salifu et al., 2025). Demographic and professional characteristics such as location, gender, age, qualification, rank, teaching experience, practice level, marital status, number of children and union affiliation are included as contextual factors that may shape both professionalism and practice (Abakah et al., 2022; Mitchell et al., 2024).

Research Design

The study employed a descriptive cross-sectional survey design under the quantitative approach. This design enabled the collection of data from a large sample of in-service teachers rather than conducting a census of the entire teacher population in Ghana. Most Ghanaian teachers have traditionally been trained through Colleges of Education; however, initial teacher education has since been reformed from the diploma-based model to the four-year Bachelor of Education (B.Ed.) programme. The National Teacher Education Curriculum Framework provides the benchmark for reviewing teacher education curricula in Ghana and is underpinned by the National Teachers' Standards, which define the competencies expected of a professional teacher.

To determine the minimum required sample size for the survey, a standard sample size calculation formula was applied¹, which indicated that at least 401 in-service teachers were needed to achieve adequate statistical precision. However, the study exceeded this minimum and successfully obtained a robust and usable sample of 4,645 respondents. The survey was designed to obtain broad geographical coverage across Ghana's Coastal, Middle and Northern belts, as well as urban, peri-urban and rural school locations. To support this coverage, survey links were distributed through teacher networks and institutional channels across the three geographical zones. However, because participation was voluntary and based on access to the online survey, proportional representation could not be strictly guaranteed. Therefore, the final sample is best described as a large voluntary convenience sample rather than a probability-based random sample. In addition, the flexible voluntary response approach may have introduced sampling bias, as teachers with internet access, stronger professional networks or greater interest in CPD and professionalism may have been more likely to participate. Although the large sample provides useful baseline evidence on teacher professionalism and professional practice in Ghana, the non-probability nature of the sampling approach limits the extent to which the findings can be statistically generalised to the entire population of in-service teachers in Ghana.

¹ Sample size = $\frac{N}{1 + N\alpha^2}$ Where N = number of in-service teachers, α = margin of error
therefore, Sample size = $\frac{340,000}{1 + (340,000)(0.05)^2} = 401$

Data Collection and Analysis

Data were collected remotely using an online questionnaire administered through Google Forms and SurveyMonkey. The online format enabled questionnaire distribution, response collation and data export for statistical analysis. Survey links were distributed to in-service teachers through email and teacher networks across the study locations. Participation was voluntary, and respondents were informed about the purpose of the study, confidentiality of responses and the use of the data for research purposes.

Given the remote data collection process, participation depended on teachers' access to the online survey and willingness to respond. This approach increased the number of responses but means that the final sample should be understood as a voluntary convenience sample rather than a probability-based sample. No personally identifying information was reported in the analysis.

Data were screened and coded before analysis in SPSS. Descriptive statistics, including frequencies, percentages and means, were used to summarise respondents' demographic characteristics and views on CPD, teacher professionalism and professional practice. Multiple regression was then used to examine the determinants of teacher professionalism and professional practice. Multicollinearity was additionally assessed using variance inflation factor (VIF) and tolerance statistics before interpreting the regression results. Table 1 presents the alignment between the research questions, questionnaire items and analytical procedures.

Table 1

Alignment of Research Questions, Questionnaire Items and Analytical Procedures

S/N	Research Question	Appropriate questionnaire items ²	Appropriate data analysis	Expected Outcome/ Results Reporting
1	What is the extent of teacher professionalism in the Ghanaian education system within the framework of the NTS?	Section B – items no 1-3, 5-7	Central Tendencies (i.e., frequencies, percentages)	Variations in the extent of opinions in agreement, frequencies, significance, etc.
2	What Continuous Professional Development (CPD) programmes are available to teachers?	Section B – items 4, 11, 20	Central Tendencies (i.e., frequencies, percentages)	Variations in the extent of opinions in agreement, frequencies, significance, etc.
3	How do teachers perceive CPD as a means of improving professional practice?	Section A – demographics Section B – item 8, 9, 12, 13 - 18	Central Tendencies (i.e., frequencies, percentages)	Variations in the extent of opinions in agreement, frequencies, significance, etc.
4	What factors are associated with teacher professionalism and professional practice among in-service teachers in Ghana?	Section B – items 10, 21 - 23	Multiple Regressions	Results from regressions of professionalism and practices to ascertain perceptions

Results

Demographic Statistics

Table 2 presents the statistics of the respondents used for the study. Geographically, the largest group of respondents (47.82%) came from the Southern Zone, followed by the Northern Zone (26.67%) and the Middle Zone (24.95%). A small proportion (0.56%) was unsure of their geographical zone. The study covered a wide range of districts, indicating strong regional representation. Regarding locality, 67.84% of respondents resided in rural areas, 30.78% in urban areas, and 1.38% were uncertain. This distribution

shows broad geographical coverage across the three zones, although it should not be interpreted as strict proportional representation because participation was voluntary.

In the study sample, male teachers represented 61.85% of respondents, while female teachers accounted for 38.15%. Compared with the national teacher workforce distribution reported in the Methodology section, the sample therefore reflects a slightly higher male response rate. This difference is interpreted as the gender composition of the survey respondents rather than as a claim about the national teacher population. The age distribution indicated that nearly half (48.91%) of the respondents were aged 21–30, suggesting a relatively young teacher workforce. An additional 25.58% were aged 31–40, 18.62% were between 41–50, and 6.35% were aged 51 and above.

Educational qualifications showed that all respondents were trained teachers. About 47.75% held diplomas, 39.74% had bachelor's degrees, and 10.81% had master's degrees. Most teachers (48.22%) held the rank of Senior Superintendent II & I, followed by Principal Superintendents (29.58%) and Assistant Directors (19.72%). In terms of teaching experience, 56% had taught for 10 years or less. Teachers with 11–15 years of experience constituted 21.08%, while 10.96% had 16–20 years, and 11.71% had taught for more than 20 years. Teaching level data showed that approximately 54% taught at the primary level, 39% at the junior high school (JHS) level, and only 7% at senior high school (SHS) or TVET institutions. Finally, 79.16% of respondents were affiliated with GNAT, 9.28% with CCT, 8.89% with NAGRAT, and 0.37% with ATAG. A small group (2.3%) did not belong to any union. These demographic findings provide a comprehensive baseline for interpreting teachers' views on professionalism and CPD across Ghana.

Table 2

Demographic statistics (N = 4645)

	<i>Frequency</i>	<i>Percentage</i>
<i>Geographical Zone</i>		
Southern	2,221	47.82
Northern	1,239	26.67
Middle	1,159	24.95
Uncertain	26	0.56
<i>Location of Schools</i>		
Urban	1,430	30.78
Rural	3,151	67.84
Uncertain	64	1.38
<i>Gender</i>		
Male	2,873	61.85
Female	1,772	38.15
<i>Age (years)</i>		
<20	25	0.54
21-30	2,272	48.91
31-40	1,188	25.58
41-50	865	18.62
51+	295	6.35
<i>Education</i>		
None	79	1.70
Diploma	2,218	47.75
Bachelor	1,846	39.74
Masters	502	10.81
<i>Ranks</i>		
Senior Superintendent II & I	2,240	48.22
Principal Superintendent	1,374	29.58
Assistant Director II & I	916	19.72
Not sure	44	0.95
Deputy Director	39	0.84
Director II & I	32	0.69
<i>Teaching Experience</i>		
Month(s) Up to 5 years	1,389	29.9
6 - 10 years	1,213	26.11
11 - 15 years	979	21.08
16 - 20 years	509	10.96
More than 20 years	544	11.71
Uncertain	11	0.24
<i>Level of practice</i>		
JHS	1806	38.88

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Lower Primary	1299	27.97
Upper primary	1231	26.5
SHS/ TVET	309	6.65
<i>Union Affiliation</i>		
GNAT	3677	79.16
CCT	431	9.28
NAGRAT	413	8.89
ATAG	17	0.37
None	107	2.3

Statement Descriptive Statistics

Extent of Teacher Professionalism within NTS Framework

The data presented in Table 3 reveal a strong commitment among teachers to gender-responsive pedagogy. A combined 69% of respondents indicated that they either always or often consider gender differences in their instructional practices, reflecting a high degree of gender awareness in classroom engagement. Additionally, 22% of respondents reported occasional consideration of gender dynamics, while only 9% acknowledged that they rarely or never integrate gender considerations into their teaching. These findings reflect an overall positive trend toward inclusive pedagogy, although they highlight the need to strengthen consistency in gender-inclusive strategies across all teaching contexts. Similarly, Table 3 illustrates a generally affirmative stance toward supporting learners with special educational needs. Approximately 66.8% of respondents reported that they always or often provide support to students with diverse learning needs. A further 15% indicated occasional support, while 17.8% acknowledged rare or no support. Although the majority of teachers demonstrate inclusive teaching practices, the results point to a segment of the workforce requiring targeted professional development to enhance competencies in inclusive education.

Table 3

Responses for Teacher Professionalism within NTS Framework

<i>Responses</i>	<i>Frequency</i>	<i>Percentage</i>
<i>Respondents' responsiveness to gender differences in the classroom</i>		
Often [about 80% of my lessons]	1,834	39.48
Always [about 100% of my lessons]	1,372	29.54
Sometimes [about 50% of my lessons]	1,003	21.59
Never	226	4.87
Rarely [about 10% of my lessons]	210	4.52
<i>Respondents' support for learners with special and diverse needs</i>		
Always [I practice this in every lesson]	1,683	36.23
Often [I practice this in 80% of my lessons]	1,424	30.66
Sometimes [I practice this in 50% of my lessons]	710	15.29
I have not encountered children with special/diverse needs	678	14.60
Rarely [I practice this in 10% of my lessons]	129	2.78

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<i>Respondents' professional working relationship with colleagues</i>		
Often [I do this in about 80% of my lessons in a term]	1,792	38.58
Always [I do it in every lesson]	1,584	34.10
Sometimes [I do this in about 50% of my lessons in a term]	983	21.16
Rarely [I do this in about 10% of my lesson in a term]	267	5.75
Never [I do not do this at all]	19	0.41
<i>Respondents' consciousness of the legal and ethical codes</i>		
Strongly agree	2,798	60.24
Agree	1,631	35.11
Moderately agree	188	4.05
Disagree	20	0.43
Strongly disagree	8	0.17
<i>The extent of respondents' involvement in parent association (PA) meetings</i>		
Always [Every time there is PA meeting]	3,499	75.33
Often [attend about 80% of PA meetings]	690	14.85
Sometimes [attend about 50% of PA meetings]	288	6.20
Rarely [attend about 10% of PA meetings]	98	2.11
Never	70	1.51

In Table 3, findings emphasise a strong culture of professional collaboration, with 72.68% of respondents engaging frequently in collegial collaboration to improve teaching and learning. An additional 21.16% collaborate occasionally, whereas 6.16% reported limited collaboration. These results highlight widespread collegiality but also suggest a need to promote structured peer-learning frameworks to ensure inclusion of all educators in collaborative practice. Furthermore, Table 3 shows that 95.35% of respondents are aware of the legal and ethical codes of the profession, and 4.05% are somewhat aware, leaving only 0.60% reporting no awareness. This points to a high level of ethical consciousness among teachers. Lastly, Table 3 reveals that 90.85% of respondents regularly attend Parent Association (PA) meetings, with only a small proportion—3.62%—rarely or never participating. This indicates strong teacher engagement in school-community relations, reinforcing the importance of collaboration between educators and parents in fostering student success.

Different CPDs for Teachers

Table 4 presents respondents' awareness, frequency of participation, and specific involvement in Continuous Professional Development (CPD) programmes. The most widely recognised CPD activity was School-Based INSET, reported by 1,553 respondents (33.43%), followed by Cluster-Based INSET with 1,214 respondents (26.14%) and Short Courses with 850 respondents (18.30%). Awareness of Department-Based INSET and Degree Programmes was lower, reported by 565 respondents (12.16%) and 463 respondents (9.97%), respectively.

Table 4

Responses for Different CPDs for Teachers

<i>Responses</i>	<i>Frequency</i>	<i>Percentage</i>
<i>Respondents' awareness of available CPD programmes</i>		
School-Based In-Service Training	1,553	33.43
Cluster-Based In-Service Training	1,214	26.14
Short Courses (e.g. Seminars, workshops, online learning)	850	18.30
Department-Based In-service Training	565	12.16
Degree programmes	463	9.97
<i>Respondents' frequency of CPD participation per year</i>		
Up to 5 CPD programmes	2,608	56.15
6 - 10 CPD programmes	1,420	30.57
10 - 20 CPD programmes	412	8.87
21 - 30 CPD programmes	117	2.52
More than 30 CPD programmes	88	1.89
<i>Respondents' views on CPD programmes attended within the term</i>		
Two School-Based INSET and one Cluster-Based INSET	1,266	27.26
Two School-Based INSET, one Cluster-Based INSET and Professional Learning Community (PLC)	1,021	21.98
Two School-Based INSET and Professional Learning Community (PLC)	755	16.25
Short Courses (e.g. Seminars, workshops, online learning)	734	15.80
Professional Learning Community (PLC)	372	8.01
None of the above	248	5.34
Department-Based INSET	133	2.86
Degree programmes	116	2.50

Regarding annual CPD participation, most respondents, 2,608 (56.15%), reported attending up to five CPD programmes. A further 1,420 respondents (30.57%) participated in 6–10 CPD programmes, while 412 (8.87%) attended 10–20 programmes. Smaller proportions reported attending 21–30 programmes (117 respondents; 2.52%) and more than 30 programmes (88 respondents; 1.89%). These results suggest a moderate but varied pattern of CPD engagement among the respondents.

Table 4 also shows the CPD activities respondents attended during the previous academic term. The most common activity was participation in two School-Based INSETs and one Cluster-Based INSET, reported by 1,266 respondents (27.26%). This was followed by two School-Based INSETs, one Cluster-Based INSET and a Professional Learning Community (PLC), reported by 1,021 respondents (21.98%). Other reported activities included two School-Based INSETs and PLC, 755 respondents (16.25%); Short Courses, 734 respondents (15.80%); and PLC only, 372 respondents (8.01%). Department-Based INSET and Degree Programmes were less frequently reported, with 133 respondents (2.86%) and 116 respondents (2.50%), respectively. Notably, 248 respondents (5.34%) indicated that they had not participated in any of the listed CPD activities. Overall, the findings suggest stronger engagement with School-Based and Cluster-Based INSETs than with other CPD formats.

Teachers' Perception of CPD for Professional Practice

Table 5 presents teachers' perceptions of CPD for professional practice. The findings show that most respondents expressed a strong professional identity, with 4,378 respondents (94.25%) indicating that they were proud to be teachers. This comprised 3,597 respondents (77.44%) who strongly agreed and 781 respondents (16.81%) who agreed. In contrast, 217 respondents (4.67%) moderately agreed, while only 50 respondents (1.08%) disagreed or strongly disagreed. Similarly, most respondents perceived themselves as role models, with 4,585 respondents (98.71%) either strongly agreeing or agreeing. This comprised 3,904 respondents (84.05%) who strongly agreed and 681 respondents (14.66%) who agreed. Only 47 respondents (1.01%) moderately agreed, while 13 respondents (0.28%) disagreed or strongly disagreed.

Regarding CPD participation within a term, 1,582 respondents (34.06%) reported participating in CPD activities twice, while 1,251 respondents (26.93%) participated five times or more. A further 1,123 respondents (24.18%) participated four times, 529 respondents (11.39%) participated once, and 160 respondents (3.44%) reported no participation. These findings suggest that most respondents had some level of CPD engagement within the academic term.

The results also show that CPD was widely perceived as useful for professional practice. A total of 4,275 respondents (92.04%) described CPD as either very helpful or helpful, comprising 2,942 respondents (63.34%) who rated it as very helpful and 1,333 respondents (28.70%) who rated it as helpful. In comparison, 185 respondents (3.98%) considered CPD moderately helpful, 174 respondents (3.75%) had not attended any CPD programme, and 11 respondents (0.24%) regarded CPD as not helpful.

Respondents also reported positive views on the content and classroom relevance of CPD. In relation to CPD content, 4,261 respondents (91.74%) considered it either very significant or significant for their teaching, while 209 respondents (4.50%) rated it as somehow significant and 175 respondents (3.77%) considered it not very significant or not significant. Similarly, 4,277 respondents (92.08%) agreed or strongly agreed that CPD had improved their classroom management, while 291 respondents (6.26%) moderately agreed and 77 respondents (1.66%) disagreed or strongly disagreed. In terms of teaching strategies, 4,108 respondents (88.44%) agreed or strongly agreed that CPD training had improved their teaching strategies, while 415 respondents (8.93%) moderately agreed and 122 respondents (2.63%) disagreed or strongly disagreed.

Regarding career advancement, 4,229 respondents (91.04%) agreed or strongly agreed that CPD supported their career growth, while 331 respondents (7.13%) moderately agreed and 85 respondents (1.83%) disagreed or strongly disagreed. Finally, Table 5 also reports respondents' general views about CPD. The most selected response was "None of the above," reported by 1,479 respondents (31.84%), followed by "Time-consuming" with 1,417 respondents (30.50%) and "Mostly expensive" with 1,366 respondents (29.41%). Other concerns included "Not easily accessible," reported by 928 respondents (19.98%), and "Content mostly irrelevant," reported by 248 respondents (5.34%). These findings suggest that although respondents generally valued CPD, concerns about time, cost, accessibility and relevance remain important implementation issues.

Table 5

Responses for Teachers' Perception of CPD for Professional Practice

<i>Responses</i>	<i>Frequency</i>	<i>Percentage</i>
<i>Respondents' recognition of their professional identity</i>		
Strongly agree	3,597	77.44
Agree	781	16.81
Moderately agree	217	4.67
Disagree	27	0.58
Strongly disagree	23	0.50
<i>Respondents' view of their recognition as role models</i>		
Strongly agree	3,904	84.05
Agree	681	14.66
Moderately agree	47	1.01
Disagree	9	0.19
Strongly disagree	4	0.09
<i>Respondents' participation in CPD activities within a term</i>		
Moderate (2 times)	1,582	34.06
Very often (5 times or more)	1,251	26.93
Quite often (4 times)	1,123	24.18
Not quite often (Once)	529	11.39
Not at all (Zero)	160	3.44
<i>Respondents' views on how CPD programmes influence their work</i>		
Very helpful	2,942	63.34
Helpful	1,333	28.70
Moderate	185	3.98
Not attended any CPD programme	174	3.75
Not helpful	11	0.24
<i>Respondents' views on the impact of the content of CPD programmes on their teaching</i>		
Very significant	2,359	50.79
Significant	1,902	40.95
Somehow significant	209	4.50
Not very significant	163	3.51
Not significant	12	0.26
<i>Respondents' views on how CPD programmes have helped them in classroom management</i>		
Strongly agree	2,360	50.81
Agree	1,917	41.27
Moderately agree	291	6.26
Disagree	40	0.86
Strongly disagree	37	0.8
<i>Respondents' views on the impact of training on their teaching strategies</i>		
Strongly agree	2,083	44.84
Agree	2,025	43.60

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Moderately agree	415	8.93
Disagree	77	1.66
Strongly disagree	45	0.97
<i>Respondents' views on engaging in CPD for career advancement</i>		
Strongly agree	2,213	47.64
Agree	2,016	43.4
Moderately agree	331	7.13
Disagree	52	1.12
Strongly disagree	33	0.71
<i>Respondents' views about CPD in general</i>		
None of the above	1,479	31.84
Time-consuming	1,417	30.50
Mostly Expensive	1,366	29.41
Not easily accessible	928	19.98
Content mostly irrelevant	248	5.34

Teachers' Views on Enhancing their Professional Standing

Respondents were asked to indicate the key factors that guide their decision-making as professionals. As shown in Table 6, the welfare of learners was the most frequently selected factor, reported by 1,760 respondents (37.89%). This was followed by being a good role model to learners, selected by 1,220 respondents (26.26%), and being an agent of change in the community, selected by 634 respondents (13.65%). Ethical codes of conduct were selected by 520 respondents (11.19%), while moral reasoning was selected by 456 respondents (9.82%). Only 55 respondents (1.18%) selected other factors. These findings suggest that teachers' professional decision-making is largely shaped by learner-centred, ethical and community-oriented considerations.

Table 6 also shows strong commitment to life-long learning. A total of 4,380 respondents (94.29%) agreed or strongly agreed that they were involved in life-long learning activities, comprising 2,631 respondents (56.64%) who strongly agreed and 1,749 respondents (37.65%) who agreed. A further 229 respondents (4.93%) moderately agreed, while 36 respondents (0.78%) disagreed or strongly disagreed. These results suggest broad recognition of life-long learning as part of teachers' professional growth.

Table 6

Responses for Teachers' Views on Enhancing Their Professional Standing

<i>Responses</i>	<i>Frequency</i>	<i>Percentage</i>
<i>Factors guiding respondents' professional decision-making</i>		
The welfare of my learners	1,760	37.89
Being a good role model to the learners	1,220	26.26
Being an agent of change in my community	634	13.65
Ethical codes of conduct	520	11.19
Moral reasoning	456	9.82
Others	55	1.18
<i>Respondents' involvement in lifelong learning activities</i>		
Strongly agree	2,631	56.64
Agree	1,749	37.65
Moderately agree	229	4.93
Disagree	25	0.54
Strongly disagree	11	0.24
<i>Respondents' involvement of parents in learners' learning</i>		
Strongly agree	4,105	88.37
Agree	505	10.87
Moderately agree	30	0.65
Strongly disagree	3	0.06
Disagree	2	0.04
<i>Respondents' views on what will elevate their status in society</i>		
Belonging to a Professional Learning Community (PLC) - [This means, belonging to a group of teachers that support and share teaching and learning experiences for capacity building]	2,035	43.81
If my work as a teacher is appreciated by society	1,155	24.87
Increase in remuneration (eg. salaries, motivation etc)	592	12.74
If my personal integrity is always protected	497	10.70
If I become the Most Outstanding teacher of the year	366	7.88
<i>Respondents' opinion about the teacher licensure examination</i>		
It promotes the professionalization of the teaching career	1,770	38.11
It helps to gain international recognition	1,165	25.08
It motivates teachers towards higher attainments	847	18.23
It frustrates teachers in their career life	622	13.39
It causes teachers to lose their jobs	241	5.19

In relation to parent engagement, 4,610 respondents (99.24%) agreed or strongly agreed that they involved parents in learners' learning, comprising 4,105 respondents (88.37%) who strongly agreed and 505 respondents (10.87%) who agreed. Only 30 respondents (0.65%) moderately agreed, while 5 respondents (0.10%) disagreed or strongly disagreed. This indicates strong support for teacher-parent collaboration in learners' education.

Regarding factors that teachers believed would elevate their status in society, belonging to a Professional Learning Community (PLC) was the most selected response, reported by 2,035 respondents (43.81%). This was followed by societal appreciation of teachers' work, selected by 1,155 respondents (24.87%). Other responses included increased remuneration, selected by 592 respondents (12.74%); protection of personal integrity, selected by 497 respondents (10.70%); and becoming the Most Outstanding Teacher of the Year, selected by 366 respondents (7.88%). These findings show that teachers value both professional support structures and public recognition.

Finally, respondents expressed mixed views on the teacher licensure examination. The largest proportion, 1,770 respondents (38.11%), indicated that the licensure examination promotes the professionalization of teaching, while 1,165 respondents (25.08%) indicated that it helps teachers gain international recognition. A further 847 respondents (18.23%) believed that it motivates teachers toward higher attainment. However, 622 respondents (13.39%) indicated that it frustrates teachers' career progression, while 241 respondents (5.19%) believed that it causes job insecurity. These findings suggest that although many teachers view licensure positively, some concerns remain about its implications for career progression and job security.

Regression Results

This section provides the results by examining the factors associated with teacher professionalism and professional practice. Given the close conceptual relationship between teacher professionalism and professional practice, the regression results are interpreted cautiously as associational evidence. Teacher professionalism and professional practice were treated as related but distinct constructs. The professionalism captures what teachers value, believe and internalise as members of a profession, whereas professional practice captures how those values are translated into behaviour. The two constructs were therefore not treated as identical or interchangeable. Instead, they were modelled separately to examine their reciprocal association in a cross-sectional baseline study.

In the first model, professional practice was included as a predictor of professionalism because repeated professional actions may reinforce teachers' professional identity and ethical commitment. In the second model, professionalism was included as a predictor of professional practice because stronger professional identity and ethical consciousness may encourage better classroom behaviour, collaboration and engagement with learners. The models should therefore be interpreted as complementary associational models rather than causal models. This clarification has been added to avoid the impression that the study assumes simultaneous causality or tautological prediction.

Multicollinearity diagnostics were examined to assess whether the high R^2 values reflected excessive overlap among the predictors. Additionally, although the models reported high R^2 values, these results should be interpreted with caution because teacher professionalism and professional practice are conceptually related constructs. Diagnostic checks for multicollinearity were therefore conducted, and the findings are interpreted as evidence of association rather than causal prediction.

Determinants of Teachers' Professionalism

Table 7 presents a regression analysis examining the influence of professional practice and various demographic and professional factors on teacher professionalism. The results indicate that professional practice has a significant positive coefficient ($\beta = 0.5288$) at the 1% significance level ($p < 0.001$), suggesting a strong association with professionalism. Importantly, the findings reveal that all predictors, except for other qualifications, significantly affect professionalism. The "other qualifications" variable showed a negative and statistically insignificant relationship, suggesting that qualifications outside the field of teacher education (e.g., non-education degrees) do not enhance teacher professionalism. Conversely, teacher-specific qualifications such as Certificate 'A', Diploma in Education, or postgraduate degrees in education remain essential for professional growth.

Table 7

Professionalism as against Practice and Other Variables

<i>Variable</i>	<i>Coef. (β)</i>	<i>Std. Err.</i>	<i>t</i>	<i>p-value</i>
Practice	0.5288	0.0179	29.47	0.000
INSET	0.0474	0.0043	10.88	0.000
Location	-0.1883	0.0146	-12.89	0.000
Gender	0.3280	0.1082	30.30	0.000
Age	0.0678	0.0050	13.30	0.000
Professional Qualification (Education)	-0.1219	0.0070	-17.26	0.000
Other Qualification	-0.0001	0.0021	-0.08	0.939
Professional Rank	-0.2138	0.0075	-28.49	0.000
Teaching Experience	0.1249	0.0077	16.19	0.000
National Teaching Standards	0.0227	0.0071	3.16	0.002
Practice Level	-0.7229	0.0176	-40.90	0.000
Marital Status	-0.1143	0.0098	-11.57	0.000
Number of Children	-0.0227	0.0043	-5.22	0.000
Teacher Unions	0.0481	0.0164	2.92	0.003
	2.4688	0.9434	26.17	0.000
<i>Constant</i>				
Observations	4645			
Model Significance	0.0000			
R-squared	0.9622			
Adjusted R-squared	0.9620			
F-statistics	8409.00			
Probability (F-statistics)	0.0000			

In-service training (INSET) emerged as a positive and significant contributor to professionalism ($\beta = 0.0474$, $p < 0.01$), affirming the value of structured, periodic training. However, location showed a significant negative relationship ($\beta = -0.1883$, $p < 0.01$), indicating that teaching in rural areas is associated with reduced professionalism. This aligns with the descriptive data, which shows that 68% of respondents teach in rural areas.

Gender ($\beta = 0.3280$, $p < 0.01$), age ($\beta = 0.0678$, $p < 0.01$), and teaching experience ($\beta = 0.1249$, $p < 0.01$) all had significant positive effects on professionalism, suggesting that both male and female teachers, as well as older and more experienced educators, tend to exhibit higher professional standards.

Unexpectedly, professional qualification ($\beta = -0.1219$, $p < 0.01$) and professional rank ($\beta = -0.2138$, $p < 0.01$) were negatively associated with professionalism. This indicates that teachers with the highest academic qualifications (e.g., Master's or Doctorate degrees in education) and those in higher professional ranks (e.g., Deputy Director, Director II/I) do not necessarily demonstrate stronger adherence to professional standards than those with lower qualifications or ranks. These surprising outcomes highlight the need for further research into the dynamics of teacher motivation and accountability across ranks and qualification levels.

Determinants of Professional Practice

To further explore the diversity of professional practice among teachers in Ghana, the study introduced additional control variables. As shown in Table 8, the inclusion of these variables led to a reduction in the coefficient for professionalism, which stood at 0.2987 and remained statistically significant ($p < 0.001$). The coefficient for professionalism remained positive and statistically significant ($\beta = 0.2987$, $p < 0.01$), indicating that higher levels of professionalism are associated with stronger professional practice, even after controlling for demographic and professional characteristics. This suggests that socio-demographic variables and inadequate professional development efforts can undermine the overall quality of teaching practice in Ghana.

Table 8

Practice as against Professionalism and Other Variables

Variable	Coef. (β)	Std. Err.	t	p-value
Professionalism	0.2987	0.0101	29.47	0.000
INSET	-0.0601	0.0032	-18.80	0.000
Location	0.3242	0.0101	32.07	0.000
Gender	0.0783	0.0088	8.87	0.000
Age	-0.1368	0.0033	-40.92	0.000
Professional Qualification (Education)	-0.1231	0.0051	-23.81	0.000
Other Qualification	-0.0272	0.0015	-17.15	0.000
Professional Rank	0.1463	0.0057	25.56	0.000
Teaching Experience	-0.0931	0.0058	-16.05	0.000
National Teaching Standards	0.0041	0.0054	0.76	0.447
Practice Level	-0.0896	0.0154	-5.81	0.000
Marital Status	-0.0904	0.0074	-12.20	0.000
Number of Children	-0.0137	0.0032	-4.20	0.000
Teacher Unions	0.1848	0.0120	15.29	0.000
	2.9572	0.0623	47.45	0.000
<i>Constant</i>				
Observations (df)	4645			
Model Significance	0.0000			
R-squared	0.9784			
Adjusted R-squared	0.9783			
F-statistics	14977.27			
Probability (F-statistics)	0.0000			

The analysis further reveals that INSET (in-service training) has a significant negative relationship with practice ($\beta = -0.0601$, $p < 0.01$), implying that frequent INSET sessions during the term may disrupt teaching routines and negatively impact professional practice. Consequently, the study recommends scheduling INSET sessions during school vacations or limiting them to no more than twice per term.

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In contrast, location exhibits a significant positive effect ($\beta = 0.3242$, $p < 0.01$), suggesting that teachers across both rural and urban settings are equally capable of adhering to professional practice. Gender also shows a positive relationship ($\beta = 0.0783$, $p < 0.01$), indicating no disparity between male and female teachers in maintaining professional standards.

However, age ($\beta = -0.1368$, $p < 0.01$) negatively affects practice, suggesting that older teachers may be less inclined to adopt new methods or engage actively in professional practices. This is mirrored in the negative effect of teaching experience ($\beta = -0.0931$, $p < 0.01$), likely linked to a sense of complacency or overreliance on past experience.

Furthermore, both professional qualification ($\beta = -0.1231$, $p < 0.01$) and other qualifications ($\beta = -0.0272$, $p < 0.01$) are negatively associated with practice. This finding challenges the assumption that higher academic credentials necessarily lead to higher levels of professional conduct. Interestingly, professional rank ($\beta = 0.1463$, $p < 0.01$) shows a positive relationship, indicating that senior-ranking teachers (e.g., Deputy Directors or Directors) are more likely to adhere to professional teaching practices.

Additional variables also revealed noteworthy patterns. Practice level ($\beta = -0.0896$, $p < 0.01$) suggests that teachers in senior high schools or TVET institutions demonstrate lower levels of professional practice compared to those in basic education (primary and JHS). Marital status ($\beta = -0.0904$, $p < 0.01$) and having more than five children ($\beta = -0.0137$, $p < 0.01$) also negatively influence professional practice, possibly due to increased personal responsibilities that limit professional engagement.

Lastly, union affiliation has a significant positive impact on professional practice ($\beta = 0.1848$, $p < 0.01$), indicating that teachers who belong to unions are more professionally engaged. Conversely, awareness of the National Teaching Standards ($\beta = 0.0041$, $p > 0.05$) shows no significant relationship, suggesting that mere awareness or possession of the standards document does not directly translate into improved practice.

In conclusion, the results underscore that while professionalism, gender, location, professional rank, and union membership positively influence professional practice, factors such as excessive INSET, teacher age and experience, higher academic qualifications, and personal life circumstances (e.g., marital status and family size) can negatively affect professional engagement. These insights call for more targeted and context-sensitive professional development strategies that consider both systemic and individual-level factors influencing teacher performance in Ghana.

Table 9

Multicollinearity Diagnostic Results

Variable	Model 1: Professionalism		Model 2: Professional Practice	
	VIF	Tolerance	VIF	Tolerance
Professional Practice / Professionalism	2.64	0.379	2.51	0.398
INSET	1.37	0.730	1.41	0.709
Location	1.19	0.840	1.22	0.820
Gender	1.08	0.926	1.09	0.917
Age	3.42	0.292	3.68	0.272
Professional Qualification	1.76	0.568	1.84	0.543
Other Qualification	1.22	0.820	1.26	0.794
Professional Rank	3.88	0.258	4.03	0.248
Teaching Experience	4.26	0.235	4.48	0.223
National Teaching Standards	1.31	0.763	1.29	0.775
Practice Level	1.44	0.694	1.46	0.685
Marital Status	1.58	0.633	1.61	0.621
Number of Children	1.83	0.546	1.87	0.535
Teacher Union Affiliation	1.17	0.855	1.20	0.833
Mean VIF	2.01		2.07	
Maximum VIF	4.26		4.48	

The diagnostic results in Table 9 indicate that multicollinearity does not pose a serious threat to the regression models. The VIF values ranged from 1.08 to 4.26 in the professionalism model and from 1.09 to 4.48 in the professional practice model, with mean VIF values of 2.01 and 2.07, respectively. Since all VIF values are below the commonly accepted threshold of 5.0 and all tolerance values are above 0.20, the results suggest that the regression estimates are not unduly affected by multicollinearity. The high R-squared values are therefore interpreted cautiously as reflecting the close conceptual relationship between professionalism and professional practice, rather than as evidence of model invalidity. The models are also interpreted as associational rather than causal.

Discussion of Findings

This study provides robust insights into teacher professionalism and professional practice in Ghana, situated within an evolving educational context marked by reforms such as the National Teaching Standards (Ministry of Education, 2017), the Ghana Teacher Licensure Examination (GTLE), and CPD institutionalisation.

The demographic results provide important context for interpreting teacher professionalism and professional practice in Ghana. The finding that more than 74% of respondents were below 40 years suggests that the respondent group was largely youthful, while the dominance of Senior Superintendents indicates that many participants were still within active career-development stages. This is important because teacher professionalism is increasingly understood as a career-long process shaped by professional learning, ethical judgement, institutional standards and classroom experience (Tatto, 2021; Mezza, 2022; NTC, 2020; Salifu et al., 2025). The finding also suggests that early- and mid-career teachers may be a strategic group for strengthening CPD participation, professional identity and practical engagement with the National Teaching Standards.

The findings on gender-responsive pedagogy, inclusive education, collegial collaboration and parent engagement further show that professionalism is not merely an abstract professional identity but a visible practice enacted through teachers' day-to-day responsibilities. This interpretation is consistent with recent literature which argues that teacher professionalism is both competence-based and ethically grounded, requiring teachers to safeguard learners, model appropriate conduct, collaborate with colleagues and respond to diverse learner needs (NTC, 2020; Tatto, 2021; Mezza, 2022; Cronqvist, 2025). Thus, the high levels of reported ethical awareness, role modelling, support for learners with diverse needs and parent engagement suggest that many teachers understand professionalism as a learner-centred and community-facing responsibility.

However, the findings also reveal an important implementation gap. While teachers reported strong professional identity and positive perceptions of CPD, awareness or possession of professional standards alone may not be sufficient to improve professional practice. This supports recent Ghanaian and African evidence that CPD contributes more effectively to instructional delivery and classroom management when it is sustained, relevant, school-based, collaborative and connected to teachers' everyday classroom realities (Abakah et al., 2022; Abakah et al., 2023; Mitchell et al., 2024; Salifu et al., 2025). The mixed effect of INSET further reinforces this point. Although INSET was positively associated with professionalism, its negative association with professional practice suggests that training may strengthen professional identity but disrupt classroom routines when poorly timed or insufficiently aligned with teaching demands. Therefore, CPD and INSET should not be evaluated only by participation rates, but by their relevance, timing, accessibility and capacity to support teachers in translating professional standards into classroom practice (NTC, 2020; UNESCO-IICBA, 2025; Salifu et al., 2025).

The results show a positive association between professional practice and professionalism ($\beta = 0.5288$, $p < 0.01$), and between professionalism and professional practice ($\beta = 0.2987$, $p < 0.01$). This finding suggests that teacher professionalism and professional practice are mutually reinforcing but not identical constructs. While professional practice may strengthen teachers' professional identity and ethical

commitment, professionalism may also support improved classroom conduct, collaboration and learner-centred engagement. This interpretation is consistent with recent literature which views teaching as both an ethical and practice-based profession, shaped by professional identity, ethical judgement, continuous learning and responsiveness to learners' needs (Tatto, 2021; Mezza, 2022; NTC, 2020; Salifu et al., 2025).

The findings also show that professional qualification was negatively associated with both professionalism ($\beta = -0.1219$, $p < 0.01$) and professional practice ($\beta = -0.1231$, $p < 0.01$), while other qualifications were insignificant in the professionalism model but negatively associated with professional practice ($\beta = -0.0272$, $p < 0.01$). This suggests that higher qualifications or non-education credentials do not automatically translate into stronger professional conduct or improved classroom practice. Rather, the usefulness of qualification and professional development appears to depend on their relevance to teachers' classroom realities. This aligns with recent evidence that CPD is most effective when it is sustained, collaborative, school-based and responsive to teachers' instructional needs, rather than delivered as isolated or generic training (Abakah et al., 2022; Abakah et al., 2023; Mitchell et al., 2024; Salifu et al., 2025).

The insignificant effect of National Teaching Standards awareness on professional practice further suggests that policy knowledge alone is insufficient unless teachers are supported to translate standards into lesson planning, classroom management, assessment, inclusion and parent engagement. This reinforces the need for CPD and INSET programmes that move beyond awareness creation to practical implementation of professional standards. Overall, the findings deepen existing debates on teacher professionalization by showing that professional identity and classroom practice do not always develop uniformly, and that professional development should be judged by its relevance, timing and classroom applicability rather than by participation or credentials alone (NTC, 2020; UNESCO-IICBA, 2025; Tatto, 2021; Mezza, 2022).

Other socio-demographic factors, including age and teaching experience, produced different effects across the two models. In the professionalism model, age and teaching experience were positively associated with professionalism, suggesting that older and more experienced teachers may have stronger professional identity, ethical awareness and familiarity with professional expectations. This is consistent with the view that teaching is professional work shaped by continuous learning, ethical judgement and professional standing (Tatto, 2021; Mezza, 2022; NTC, 2020; Salifu et al., 2025). However, in the professional practice model, age and teaching experience were negatively associated with practice, suggesting that longer service does not automatically translate into stronger day-to-day enactment of professional practice. This may reflect reduced engagement with recent CPD practices, reliance on established routines, or limited adaptation to new pedagogical expectations. Recent evidence indicates that CPD produces stronger outcomes when it is sustained, school-based, collaborative and responsive to teachers' classroom realities rather than generic or isolated (Abakah et al., 2022; Abakah et al., 2023; Mitchell et al., 2024; Salifu et al., 2025). These results therefore suggest that professional identity and professional practice, although related, may be shaped differently by career-stage factors.

Moreover, the negative association between practice level and professional practice ($\beta = -0.0896$, $p < 0.01$) suggests that teachers at SHS and TVET levels may require more targeted professional development support. This may reflect the greater subject specialization, assessment demands and institutional pressures associated with secondary and technical education contexts. The finding reinforces recent literature which argues that CPD should be context-sensitive and aligned with teachers' specific classroom realities rather than delivered as uniform training across all levels (Abakah et al., 2022; Abakah et al., 2023; Mitchell et al., 2024; Salifu et al., 2025). Family-related variables also showed negative associations with professional practice, as marital status ($\beta = -0.0904$, $p < 0.01$) and number of children ($\beta = -0.0137$, $p < 0.01$) may reflect the pressure of balancing professional responsibilities with domestic and caregiving demands. This suggests that teacher professionalism is shaped not only by institutional policy

but also by the wider social and organisational conditions within which teachers work. This interpretation is consistent with Ghanaian evidence showing that cultural profiles, interpersonal bonds and workgroup involvement can shape work outcomes in collectivist contexts (Akoto et al., 2022).

Finally, union affiliation was positively associated with professional practice ($\beta = 0.1848$, $p < 0.01$), indicating that professional networks may support teachers' engagement, identity and continuous development. However, the insignificant effect of National Teaching Standards awareness on practice ($\beta = 0.0041$, $p > 0.05$) suggests that awareness of policy documents alone is insufficient unless teachers are supported to translate standards into classroom management, inclusive pedagogy, assessment, collaboration and parent engagement. This is consistent with the view that teacher professionalism is demonstrated through practice-based application of ethical standards, reflective teaching and responsiveness to learners' needs (NTC, 2020; UNESCO-IICBA, 2025; Tatto, 2021; Mezza, 2022; Salifu et al., 2025).

Conclusion

This baseline study offers a comprehensive empirical investigation into the dynamics of teacher professionalism and professional practice in Ghana, contributing to a critical body of evidence needed to inform policy and reform in education. Framed within a practice-based professionalization framework, the study operationalizes professionalism through measurable constructs such as CPD engagement, ethical conduct, collaboration, professional identity and instructional responsiveness.

Drawing on data from 4,645 in-service teachers across diverse geographical and institutional settings, the findings show a positive association between professional practice and professionalism ($\beta = 0.5288$, $p < 0.01$), and between professionalism and professional practice ($\beta = 0.2987$, $p < 0.01$). This suggests that teachers who demonstrate stronger professional practice are more likely to report higher levels of professionalism, while teachers with stronger professional identity, ethical commitment and adherence to professional standards are also more likely to demonstrate improved professional practice. Notably, Continuous Professional Development (CPD) emerged as a critical enabler, with teachers who actively participated in CPD activities demonstrating elevated levels of professionalism and instructional effectiveness (Edwards & Osei-Mensah, 2019; Padwad & Dixit, 2011). However, the findings also illuminate structural and demographic constraints that mediate this relationship. Variables such as teaching experience, extensive INSET engagement, and higher academic qualifications outside the education field showed inverse relationships with professional practice, raising questions about the timing, relevance, and alignment of development initiatives with the realities of practice. Moreover, contextual factors such as location, family responsibilities, and school level of instruction influence the degree to which professional values are internalized and enacted.

This study, therefore, advances the discourse on teacher professionalism by providing empirical validation of its multifaceted nature. It also highlights the importance of contextualized, data-driven interventions that bridge policy ideals with classroom realities. As Ghana aspires toward the attainment of Sustainable Development Goal 4 and the National Education Agenda 2030 (Gyimah et al., 2023; Gyimah et al., 2025), strengthening professionalism through evidence-based CPD, ethical governance, and inclusive career development policies will be indispensable. In this respect, the National Teaching Council (NTC) is strategically positioned to serve as a regulatory and developmental anchor for advancing teacher quality and professional ethics across the country (NTC, 2020; UNESCO-IICBA, 2025). In this respect, the National Teaching Council (NTC) is strategically positioned to serve as a regulatory and developmental anchor for advancing teacher quality and professional ethics across the country.

Recommendations and Implications

Teacher Professionalisation

Based on the findings, the study offers five evidence-based recommendations for strengthening teacher professionalism and professional practice in Ghana. First, the Ministry of Education, through the National Teaching Council, may strengthen the practical implementation of the National Teaching Standards. This recommendation is based on the finding that awareness of the National Teaching Standards was not significantly associated with professional practice, suggesting that awareness alone may not translate into classroom application.

Second, CPD programmes could be made more accessible, affordable, relevant and classroom-focused. This is supported by teachers' concerns that CPD was time-consuming, expensive, not easily accessible and sometimes not sufficiently relevant to classroom needs. CPD content may therefore be better aligned with lesson delivery, classroom management, inclusive pedagogy, assessment and parent engagement.

Third, INSET activities may be scheduled more carefully to reduce disruption to teaching and learning. The findings show that INSET was positively associated with teacher professionalism but negatively associated with professional practice. This suggests that while INSET can strengthen professional identity, its timing and delivery may affect classroom practice if not properly planned.

Fourth, the National Teaching Council and school leadership could promote Professional Learning Communities and school-based mentoring. This recommendation is supported by the finding that many teachers identified Professional Learning Communities as important for enhancing their professional standing. Such platforms may help teachers share experiences, improve instructional strategies and translate professional standards into practice.

Finally, professional development interventions should remain context-sensitive. The findings show that location, teaching level, rank, age, teaching experience, marital status and number of children were associated with differences in professionalism and professional practice. Targeted support may therefore be needed for teachers in rural schools, SHS/TVET contexts, early- and late-career stages, and teachers balancing professional and family responsibilities.

Implications for National Relevance

The findings have implications for teacher development, professional standards and education quality in Ghana. First, the results suggest that teacher professionalism should be strengthened through practical engagement with the National Teaching Standards rather than awareness alone. Although many teachers reported strong ethical awareness and professional identity, the findings show that such awareness must be translated into classroom management, inclusive pedagogy, assessment, collaboration and parent engagement.

Second, the study highlights the importance of relevant and context-sensitive CPD. Teachers generally perceived CPD as useful for improving classroom management and teaching strategies, but concerns about cost, timing, accessibility and relevance remain important. This implies that CPD and INSET programmes may be more effective when they are school-based, collaborative, affordable and aligned with teachers' classroom realities.

Third, the findings suggest that teacher professionalization should consider differences in school location, teaching level, rank, experience and family responsibilities. These contextual factors influence how teachers internalize and enact professional values. Therefore, national teacher development policy may be strengthened by combining professional standards with practical support systems such as mentoring, professional learning communities and evidence-based monitoring of CPD outcomes.

Policy Direction

Future policy direction should be guided by empirical evidence on the factors that shape teacher professionalism and professional practice. The Ministry of Education, through the National Teaching Council, may design career-long teacher development policies that strengthen ethical conduct, classroom practice, professional identity and continuous professional development. Policy attention could also focus on making CPD more accessible, relevant and affordable, while ensuring that INSET activities are scheduled in ways that do not disrupt teaching and learning. Rather than relying only on broad national policy statements, teacher professionalism could be advanced through practical implementation of the National Teaching Standards, school-based mentoring, professional learning communities and regular evidence-based monitoring of teacher development outcomes. This aligns with Ghanaian public-sector evidence that leadership, integrity and internal control systems are important for strengthening accountability and institutional performance (Bonsu et al., 2023).

Limitations and Future Studies

This study provides important baseline evidence on teacher professionalism and professional practice in Ghana; however, some limitations should be acknowledged. First, although the study obtained a large national respondent pool of 4,645 in-service teachers, the use of voluntary convenience sampling limits the extent to which the findings can be statistically generalised to the entire population of Ghanaian teachers. Although respondents were drawn from all three geographical zones, the voluntary participation approach means that the zonal distribution should be interpreted as broad coverage rather than probability-based geographical representation. Future studies should therefore adopt probability-based sampling designs to strengthen representativeness and population-level inference.

Second, the study relied on self-reported survey responses, which may be affected by social desirability bias, particularly on issues relating to ethics, professionalism and classroom practice. Future research could combine survey data with interviews, classroom observations and documentary evidence to provide a richer understanding of teachers' professional behaviour.

Third, though this study covered diverse geographical and school contexts, further research should examine regional, urban-rural and sociocultural differences in greater depth. Future studies should also explore how school ecology, leadership support, CPD quality and access to professional learning opportunities influence teacher professionalism and professional practice. A mixed-methods design would provide a more holistic understanding of the factors shaping teacher professionalism in Ghana.

Finally, the high R^2 values in the regression models may reflect the close conceptual relationship between teacher professionalism and professional practice. Future studies should use more refined measurement models, such as confirmatory factor analysis or structural equation modelling, to distinguish the constructs more clearly and reduce the risk of tautological modelling.

Acknowledgements

The authors gratefully acknowledge the National Teaching Council (NTC) and all participating teachers for their invaluable contributions to this study. We also appreciate the support of research assistants and reviewers whose insights strengthened the analysis. Any remaining errors or interpretations are solely the responsibility of the authors.

Author Contribution Statement

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Formal Analysis: CAP (lead), IB (supporting).

Investigation: CAP (lead), IB (equal), PG (supporting), EAK (supporting), JNA (supporting), BK (supporting).

Methodology: CAP (lead), IB (equal), PG (supporting), EAK (supporting), JNA (supporting), BK (supporting).

Conflict of Interest Statement

The authors declare no known conflicts of interest associated with this publication.

AI Disclosure Statement

Artificial intelligence (AI) tools were used only for grammar checking, language refinement and improving the clarity of the paper.

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