# Professional Development and Teacher Competence in Managing Exceptional Learners: A Ghanaian Perspective

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Abstract- This study examines the critical relationship between professional development and teacher competence in effectively managing learners with exceptionalities within Ghana's evolving inclusive education framework. Rooted in a qualitative review design, the paper synthesises existing empirical and theoretical literature to explore how professional learning enhances teachers' pedagogical readiness, adaptive capacity, and instructional quality in inclusive classrooms. The analysis draws upon global and African perspectives to provide a nuanced understanding of the Ghanaian context while situating local developments within international education discourse. Findings reveal that sustained, contextually grounded professional development significantly improves teachers' confidence, instructional adaptability, and responsiveness to learner diversity. Effective professional learning models—characterised by coherence, collaboration, and reflection—were identified as essential in fostering inclusive pedagogical competence. Conversely, systemic barriers such as inadequate funding, limited access to continuous training, and weak institutional coordination undermine teachers' ability to translate inclusive policies into classroom practice. The integration of technology emerged as a transformative tool, expanding access to professional learning and supporting teachers in differentiating instruction for diverse learners. The study concludes that professional development is indispensable to achieving equitable and quality education. It recommends the institutionalisation of continuous, evidence-based professional learning embedded within Ghana's teacher education and certification frameworks. Strengthening collaboration among policymakers, educators, and training institutions, alongside increased investment in technological infrastructure and inclusive pedagogy, is vital for sustaining reform. Ultimately, empowering teachers through sustained professional growth is pivotal to the realisation of a truly inclusive educational system capable of addressing the academic and social needs of all learners.

## I. INTRODUCTION

Teacher professional development and competence in managing exceptional learners have become central concerns in contemporary educational discourse, particularly within inclusive education frameworks that foreground equity and learner diversity (Avalos, 2011). Exceptional learners—students with special educational needs, disabilities, or unique learning challenges—require instructional approaches that are tailored to their specific needs, extending beyond traditional teaching paradigms. Research has consistently emphasised that teacher quality is the most critical school-based factor influencing student outcomes (Darling-Hammond, Hyler & Gardner, 2017), and that equipping teachers with specialist skills through professional development is integral to inclusive practice.

Within sub-Saharan African contexts, such as Ghana and Nigeria, inclusive education policies now formally mandate the accommodation of exceptional learners in mainstream classrooms. However, the translation of policy into practice remains inconsistent, largely owing to gaps in teacher preparation and ongoing professional learning (Agbenyega, 2011; Ajuwon, 2012). In Ghana, for example, pre-service teacher education often insufficiently foregrounds competencies related to special needs education, leaving many graduates underprepared for heterogeneous classrooms (Kuyini& Desai, 2008). Similarly, in Nigeria, special educators have reported

challenges including inadequate instructional resources and limited pedagogical training that constrain their ability to implement inclusive practices effectively (Ajuwon, 2012). These contextual insights illustrate that professional development is not merely an optional supplement to teacher education; it is foundational to teacher competence in managing diverse learner needs.

The professional development literature underscores the importance of sustained, coherent, and context-responsive learning opportunities for teachers (Desimone, 2009). Rather than episodic workshop models, high-impact professional development is characterised by alignment with classroom practice, collaborative inquiry, and continuous reflection on teaching and learning (Darling-Hammond, Hyler & Gardner, 2017). Effective programmes build teachers' content knowledge, pedagogical skill, and self-efficacy—attributes closely associated with inclusive teaching competence (Forlin, 2010). Inclusive pedagogy, in this regard, extends beyond knowing what to teach to encompass how to create supportive learning environments that accommodate cognitive, behavioural, cultural, and sensory variabilities among learners.

Globally, research into teacher competencies required for inclusion has identified key domains such as differentiated instruction, classroom and behaviour management, assessment adaptation, and co-teaching strategies (Majoko, 2019). In Zimbabwe, Majoko's study revealed that screening and assessment, instructional differentiation, and collaboration are perceived as foundational competencies for inclusive teaching, emphasising that effective professional development must equip teachers with skills to respond to classroom diversity pragmatically. These findings resonate with broader conceptualisations of inclusive competence in which teachers are expected to blend content expertise with adaptive instructional strategies and interpersonal collaboration.

Despite these recognised competencies, many Ghanaian and Nigerian teachers report feeling inadequately prepared to teach exceptional learners. Studies in Ghana have highlighted teachers' concerns about their limited training in inclusive education

practices, particularly in adapting pedagogical techniques to support students with special needs (Vanderpuye, Obosu&Nishimuko, 2018). The literature also suggests that attitudinal factors, such as teachers' perceptions of inclusion and self-efficacy beliefs, significantly influence their readiness to adopt inclusive practices (Ajuwon, 2012). Consequently, professional development initiatives must address both the technical and affective dimensions of teaching in diverse classrooms.

UNESCO's global reviews of teacher development reiterate that quality professional learning is a continuum beginning in pre-service education and extending throughout a teacher's career (UNESCO, 2014; 2015). These reviews argue that professional development should be aligned with broader educational goals such as the Sustainable Development Goal 4 (SDG 4) mandate for inclusive, equitable, and quality education for all. For exceptional learners, this alignment underscores the necessity of equipping teachers with the competencies to dismantle barriers to learning, foster participation, and promote social inclusion within mainstream settings.

In sub-Saharan Africa specifically, inclusive education research has documented systemic challenges related to professional development infrastructure, resource constraints, and curricular disconnects (Agbenyega, 2011; Kuyini& Desai, 2008). Such challenges are compounded by large class sizes and prevalent misconceptions about disability that may influence teacher attitudes and practices. These contextual barriers highlight the multifaceted nature of competence development, where technical skills must be integrated with cultural awareness and reflective practices that affirm the educational rights of exceptional learners.

In summary, professional development represents a strategic mechanism for enhancing teacher competence in managing exceptional learners, bridging the divide between policy aspirations and classroom realities. The literature identifies critical competencies necessary for inclusive practice while also pointing to persistent gaps in training and support. This study aims to explore these dimensions within the

Ghanaian context, focusing on how professional development shapes teacher competence in inclusive settings. The objectives are to assess the extent to which professional development prepares teachers to support exceptional learners, to identify barriers to professional growth in inclusive education, and to contribute to policy dialogues on strengthening teacher education systems in Ghana. The scope of the study encompasses both pre-service and in-service professional development models and examines their relationship to teacher competence and student outcomes in inclusive classrooms.

1.1 Background to the Study

The education landscape in Ghana has undergone a significant transformation in recent decades, with increased recognition of the need to create inclusive learning environments that cater to the diverse abilities of all learners. Exceptional learners—those with special educational needs, disabilities, or gifted capabilities—represent a vital segment of the student population whose academic success depends on the quality of teacher preparation and professional competence. The shift toward inclusive education has placed a premium on teachers' capacity to adapt instruction, differentiate learning, and provide emotional and behavioural support that ensures equitable access to education. This transformation is not merely a policy aspiration but a social commitment that reflects Ghana's alignment with international frameworks such as Sustainable Development Goal 4, which advocates inclusive and equitable quality education for all.

Within this evolving context, professional development emerges as a cornerstone for equipping teachers with the requisite pedagogical knowledge, attitudes, and skills to address the complexities of managing exceptional learners. It extends beyond initial teacher education to encompass continuous learning that refines practice and fosters reflective professionalism. The Ghanaian education system, however, continues to grapple with challenges such as limited resources, insufficient specialised training, and varying interpretations of inclusive education across districts. These issues highlight the pressing need for a coherent, contextually grounded approach to teacher development. The capacity of teachers to implement

inclusive practices effectively depends not only on their academic preparation but also on sustained professional learning that reinforces competence and confidence in addressing learner diversity. Consequently, exploring the interplay between professional development and teacher competence in managing exceptional learners is essential for strengthening Ghana's inclusive education agenda and ensuring that every learner, regardless of ability, achieves meaningful educational outcomes.

1.2 Problem Statement

Despite considerable progress in promoting inclusive education in Ghana, the implementation of effective teaching strategies for exceptional learners remains inconsistent and fragmented. Many teachers enter the profession with limited exposure to the principles and methodologies of special and inclusive education, leaving them underprepared to respond to the unique needs of learners with physical, cognitive, emotional, or behavioural differences. Professional development opportunities that could bridge this competence gap are often sporadic, underfunded, and narrowly focused, providing minimal impact on sustained pedagogical transformation. This situation has created a disjunction between policy intent and classroom practice, where teachers acknowledge the importance of inclusion but struggle to translate it into effective instructional action.

The inadequacy of professional development structures has far-reaching implications for educational quality and equity. Without targeted training and ongoing support, teachers are less likely to adopt differentiated instruction, utilise assistive technologies, or collaborate with specialists in developing inclusive learning plans. Moreover, misconceptions about disability and a lack of institutional guidance often lead to exclusionary practices that marginalise exceptional learners within mainstream classrooms. This mismatch between teachers' preparedness and the realities of inclusive teaching underscores a systemic issue within Ghana's teacher education framework.

In essence, the central problem lies in the limited scope and depth of professional development initiatives designed to enhance teacher competence in managing

exceptional learners. The lack of structured, evidence-based professional learning models hinders the development of inclusive pedagogical cultures in schools. Addressing this gap is not only a matter of improving teaching practice but also a strategic imperative for advancing educational inclusion and national development goals. Hence, a comprehensive examination of professional development as a determinant of teacher competence is critical to bridging the divide between policy ambition and classroom realities in Ghanaian education.

## 1.3 Purpose and Significance of the Review

The purpose of this review is to examine the nexus between professional development and teacher competence in managing exceptional learners within the Ghanaian educational system. It seeks to synthesise existing evidence, identify gaps in current professional development practices, and propose informed pathways for strengthening teacher capacity in inclusive education. The review aims to deepen understanding of how professional learning initiatives—both pre-service and in-service—contribute to teachers' ability to create inclusive, responsive, and effective classroom environments that accommodate diverse learner needs. By exploring the structural, pedagogical, and attitudinal dimensions of teacher competence, this paper aspires to provide a comprehensive perspective that informs policy, practice, and future research.

The significance of this review lies in its potential to influence educational reform and professional learning frameworks in Ghana. As the nation continues to promote inclusion as a guiding educational principle, evidence-based insights into teacher development are essential for translating policy into effective practice. The review also serves as a valuable resource for teacher educators, policymakers, and school administrators seeking to align training programmes with the competencies required for inclusive teaching. Furthermore, it highlights the need for sustained, collaborative, and context-sensitive professional development that empowers teachers to innovate and adapt to evolving learner profiles.

Beyond national implications, the review contributes to the broader discourse on inclusive education across sub-Saharan Africa and developing contexts, offering comparative insights into how professional development can be strategically leveraged to advance equity and quality. Ultimately, its findings aim to reaffirm that teacher competence in managing exceptional learners is not a static attribute but a dynamic construct that evolves through continuous professional engagement and reflective practice.

## 1.4 Structure of the Paper

This paper is systematically organised to provide a coherent and comprehensive examination of professional development and teacher competence in managing exceptional learners from a Ghanaian perspective. The structure follows a logical progression, beginning with the conceptual foundations and moving toward applied and policy-oriented discussions. Following the introduction, the second section presents the conceptual and theoretical perspectives that underpin teacher professional development. It explores key frameworks that define teacher competence, outlines international and national policy contexts, and analyses how professional development initiatives are structured and operationalised within educational systems.

Subsequent subsections within this part of the paper delve into specific thematic areas, including the historical evolution of inclusive education in Ghana, prevailing models of professional development, and the roles and challenges of educators in managing exceptional learners. It also examines the intersection between technology, innovation, and professional learning as transformative tools for inclusion. Each subsection builds upon the preceding discussion to provide an integrated understanding of how teacher competence is cultivated and sustained in inclusive environments.

The final section of the paper synthesises key insights and identifies future directions for research and practice. It outlines strategic recommendations for policymakers and educational leaders to enhance teacher development programmes, particularly in resource-limited contexts. This structure ensures analytical depth and clarity, enabling readers to follow a clear trajectory from conceptual understanding to practical implications. Through this organisation, the

paper seeks to illuminate the multifaceted relationship between professional development and teacher competence while offering realistic pathways for improving inclusive education outcomes in Ghana and beyond.

## II. CONCEPTUAL AND THEORETICAL PERSPECTIVES ON TEACHER PROFESSIONAL DEVELOPMENT

Teacher professional development (PD) represents an essential dimension of education systems worldwide, defined as systematic activities designed to enhance teacher knowledge, instructional practice, and ultimately student learning outcomes (Darling-Hammond, Hyler & Gardner, 2017). Unlike one-off training, PD is conceptualized as a continuous, lifelong process beginning with pre-service training and extending throughout a teacher's career, anchored in adult learning principles and reflective practice (Villegas-Reimers, 2003). The theoretical underpinnings of PD emphasize that teachers, as adult professionals, require sustained opportunities to deepen content knowledge, enhance pedagogical skills, and adapt to emerging educational challenges, particularly for managing diverse learners. This perspective aligns with adult learning frameworks that frame PD not merely as information transmission, but as transformative learning experiences fostering teacher efficacy and adaptability.

Central to contemporary conceptions of teacher PD is Guskey's model of teacher change, which foregrounds the temporal and iterative nature of professional growth. According to Guskey (2002), PD impacts teachers' attitudes and classroom behaviours sequentially: changes in classroom practice precede shifts in beliefs and student outcomes. This model reframes PD as a process of internal transformation rather than short-term skill acquisition, suggesting that durable competence emerges when teachers see firsthand the positive effects of new practices. Alongside this framework, empirical insights from PD research highlight key design features associated with effectiveness: content focus, active learning, coherence with school goals, collaborative participation, and adequate duration (Desimone, 2015). These characteristics reflect a conceptual shift from externally imposed training towards participatory, contextualized PD that respects teachers' professional identities and promotes reflective inquiry.

In addition to general PD theory, inclusive education scholarship contributes significant conceptual insights relevant to teacher competence in managing exceptional learners. Inclusive pedagogy, as articulated by Florian and Black-Hawkins (2011), challenges traditional deficit models of special education by emphasizing pedagogical approaches that extend what is available to all learners rather than focusing solely on adaptations for a few. This perspective implies that PD for inclusion must cultivate teachers' craft knowledge—the tacit, context-sensitive understandings of how to enact inclusive practices—rather than deliver checklist solutions. Inclusive pedagogy thus reframes teacher learning as a dynamic interaction between theory and practice, where competence evolves through engagement with real classroom diversity and reflective dialogues.

The PD literature also intersects with research on teacher preparedness for inclusive classrooms. Foundational studies on teacher attitudes towards inclusion emphasize that dispositions, beliefs, and self-efficacy influence how teachers respond to diversity in learners (Avramidis & Norwich, 2002). Teacher education programs, therefore, must integrate both cognitive and affective dimensions of professional growth, preparing teachers to negotiate complexity with confidence and empathy. Similarly, research on preparing teachers for inclusive settings underscores that competence emerges from integrated PD efforts across pre-service and in-service phases, where content knowledge, pedagogical skill, and reflective practice converge (Jordan, Schwartz & McGhie-Richmond, 2009).

International frameworks on effective PD underscore that professional learning must be embedded in teachers' work contexts, sustain collaboration among educators, and align with school improvement goals (Darling-Hammond et al., 2017). This alignment ensures that PD does not remain an isolated event but becomes part of a coherent professional learning ecosystem. In such ecosystems, PD efforts build collective teacher capacity, enabling educators to

share insights, refine practices collaboratively, and innovate in response to local challenges. Furthermore, PD theories stress the importance of linking PD to student learning outcomes, reinforcing that teacher competence manifests not only in knowledge acquisition but in enhanced instructional effectiveness and equitable learning opportunities for all students.

A critical conceptual lens for PD also acknowledges contextual influences: cultural expectations, policy environments, and resource availability mediate how PD is implemented and experienced. For instance, global comparisons reveal that teacher PD systems vary widely, with developed contexts often having institutionalized PD structures, while many sub-Saharan African settings face challenges such as limited access to continuous learning opportunities, insufficient training on inclusive pedagogy, and resource constraints. These contextual factors necessitate PD models that are responsive to local conditions yet grounded in robust theory.

## 2.1 The Ghanaian Education Context and Inclusion Policy

The Ghanaian education system has undergone significant reform over the past few decades, driven by the global movement towards inclusive and equitable education. Historically, education in Ghana, much like in many developing nations, operated on exclusionary principles that segregated learners with disabilities and special educational needs from mainstream classrooms. Such exclusion reflected broader socio-cultural and policy attitudes that equated disability with incapacity, thus reinforcing a deficit-oriented view of learners who required additional support (Avoke, 2002). This traditional model of special education created systemic barriers that limited access, participation, and progression for exceptional learners.

The introduction of international policy frameworks such as the Salamanca Statement and Framework for Action on Special Needs Education and UNESCO's Policy Guidelines on Inclusion in Education redefined the discourse on educational equality. These global initiatives emphasized that all children, irrespective of disability, background, or learning ability, have a fundamental right to quality education in inclusive environments that accommodate their diverse needs (UNESCO, 2009). Ghana, as a signatory to these global agreements, began aligning its national education policy framework with inclusive principles that prioritise social justice, equity, and full participation in schooling.

At the national level, the Ministry of Education and the Ghana Education Service (GES) have progressively integrated inclusive education into mainstream policy through a series of reforms culminating in the Inclusive Education Policy launched in 2015. This policy articulated the vision of providing quality education for all learners, including those with disabilities, giftedness, or socio-economic disadvantages. It defined inclusion not merely as physical integration into mainstream classrooms but as a transformative process aimed at eliminating barriers to participation, learning, and achievement. The policy established guiding principles such as equal access, non-discrimination, community participation, and the right to learn in environments that recognise individual differences.

Despite these advancements, the implementation of inclusive education in Ghana remains complex and contextually nuanced. Structural constraints such as inadequate teacher training, limited teaching materials, and insufficient assistive technology continue to undermine progress (Ametepee& Anastasiou, 2015). Many teachers, particularly in rural areas, still lack the pedagogical competence required to adapt curriculum delivery to the diverse needs of exceptional learners. The inclusion policy presupposes that every teacher should possess a fundamental understanding of differentiated instruction, classroom management strategies, and assessment modifications that accommodate a range of abilities; however, pre-service and in-service training often fall short of equipping teachers with these competencies (Forlin& Chambers, 2011).

A central challenge lies in translating policy ideals into practical pedagogical transformation. While the Inclusive Education Policy provides a strong legislative and philosophical foundation, the extent to which schools and teachers internalise and operationalise its tenets varies considerably. Empirical studies reveal that teachers frequently express positive attitudes toward the idea of inclusion but are

apprehensive about their ability to implement inclusive teaching practices due to limited resources and professional support (Ocloo&Subbey, 2008). Consequently, inclusion in many Ghanaian classrooms tends to exist more as an aspiration than as an embedded educational reality.

Beyond resource limitations, cultural and attitudinal barriers also shape the implementation of inclusive education. Deep-rooted beliefs associating disability with stigma and dependency often influence community attitudes towards exceptional learners, thereby affecting both teacher expectations and student interactions (Avoke, 2002). Addressing these perceptions requires sustained community engagement and awareness programmes that reframe disability within the broader human rights discourse, positioning inclusion as a collective societal responsibility rather than a specialised intervention.

In this context, the role of teachers as agents of change is pivotal. Inclusive education theory posits that teacher competence extends beyond technical proficiency to encompass empathy, cultural responsiveness, and reflective professionalism (Florian, 2008). In Ghana, fostering such competence requires comprehensive professional development programmes that bridge the gap between policy rhetoric and classroom practice. The integration of inclusive pedagogy into teacher education curricula is essential for ensuring that new teachers enter the profession with a sound understanding of inclusive methodologies and positive dispositions toward learner diversity.

The Ghanaian experience parallels broader trends across sub-Saharan Africa, where inclusive education policies are gaining prominence but often encounter practical implementation hurdles (Mngo&Mngo, 2018). Nigeria, for instance, shares similar systemic challenges, including inadequate teacher preparation and a lack of institutional support for inclusive schooling (Obi & Obumneke-Okeke, 2014). These parallels underscore the need for regionally adapted models of inclusion that account for shared socio-economic realities and resource constraints while building on local knowledge and cultural values.

Another dimension shaping Ghana's inclusive education discourse is the recognition of the capability approach, which defines inclusion not only as access but also as the freedom to participate meaningfully in learning and societal life (Mitra, 2006). From this perspective, inclusion is a moral and developmental imperative, ensuring that all learners have the opportunity to achieve their potential. This holistic understanding of inclusion aligns with the Sustainable Development Goal 4 (SDG 4), which seeks to ensure inclusive and equitable quality education for all by 2030.

Furthermore, the Ghanaian policy environment increasingly recognises the role of innovation and technology in advancing inclusion. The adoption of assistive technologies and digital learning tools, guided by universal design principles, has the potential to expand access for learners with disabilities (Rose & Meyer, 2002). However, such technologies remain unevenly distributed, with urban schools often better equipped than their rural counterparts. Achieving equity in technological integration will therefore require targeted investments, capacity building, and partnerships between government, civil society, and international agencies.

2.2 Defining Teacher Competence in Special and Inclusive Education

Teacher competence in special and inclusive education is a multidimensional construct that encompasses a constellation of knowledge, skills, dispositions, and beliefs enabling educators to respond effectively to the diverse needs of all learners, including those with special educational needs and disabilities. At its core, competence involves not merely mastery of content but also the capacity to facilitate equitable participation and learning opportunities in mainstream classrooms where learners present a continuum of ability levels and requirements (Sharma, Loreman &Forlin, 2012). This synergy of cognitive, behavioural, and affective dimensions means competence cannot be boiled down to isolated tasks; rather, it embodies the comprehensive preparedness of a teacher to adapt pedagogy, curriculum, and assessment in ways that dismantle barriers to learning and foster inclusion for every student.

A foundational element of competence in inclusive contexts is educators' pedagogical knowledge that blends subject matter expertise with skills in differentiation and instructional adaptation. Teachers must understand the varied manifestations of learning strengths and challenges and be able to apply that awareness in planning and implementing strategies that support students' access to the general curriculum (Majoko, 2019). Pedagogical adaptability also involves the use of formative assessment and ongoing reflection, enabling educators to identify learning gaps early and adjust their teaching to meet evolving student needs. This skill set is especially salient in contexts where special education needs may not present in overt ways yet require nuanced adjustments for students to thrive academically and socially.

Alongside pedagogical proficiency, effective inclusive teachers exhibit strong interpersonal and collaborative competencies. Inclusion is not realised in isolation; it thrives where teachers work collectively with special educators, paraprofessionals, families, and other stakeholders to create supportive learning ecosystems. The capacity to collaborate across disciplines and with diverse stakeholders, to share responsibility for student progress, and to co-construct learning supports is widely recognised as a hallmark of teacher competence in inclusive settings (Cate et al., 2018). Moreover, teachers' dispositions—such as empathy, cultural sensitivity, and resilience—shape the relational foundation upon which inclusive instructional practices are built, influencing classroom climate, student engagement, and peer acceptance.

Research focusing on Nigerian contexts highlights how teacher competence for inclusion involves specific clusters of capabilities, including methodological flexibility, motivational strategies, and evaluation skills (Universal Journal of Educational Research, 2020). In this framing, competence extends beyond subject proficiency to include teachers' abilities to create motivating environments, utilise instructional materials effectively, and conduct assessments that are responsive to learner diversity. Such competencies are essential for ensuring that pedagogical practices support equitable learning outcomes rather than perpetuate inequities.

Literature underscores that competence is not static but evolves through both formal teacher preparation and ongoing professional development. Teacher education programmes that embed inclusive pedagogy into pre-service training increase educators' confidence and preparedness to engage diverse learners (Tirri et al., 2017). Similarly, in-service professional development focused on inclusion has been shown to strengthen teachers' self-efficacy and practical competence, which are critical for translating inclusive policies into classroom realities (Nimante, 2022). These development pathways underscore competence as a continuum that deepens with reflective practice, collaborative learning, and sustained engagement with inclusive pedagogical frameworks.

Competence also involves teachers' attitudes toward inclusion, including beliefs about the educability of students with special needs and expectations for their learning success. Teachers who hold positive beliefs about inclusion are more likely to employ inclusive practices effectively, whereas negative perceptions can hinder the successful implementation of inclusive initiatives (Majoko, 2019). This attitudinal dimension interacts with knowledge and skill, illustrating that competence is not only technical but also deeply relational and belief-laden.

Global scholarship further situates teacher competence within broader socio-cultural and systemic contexts, suggesting that inclusive education is underpinned by national policies and educational cultures that support or constrain teachers' capacity to practice inclusively. Educational systems that provide robust training, accessible resources, and supportive leadership offer fertile ground for teachers to develop and enact inclusive competencies with confidence and creativity.

A recurring theme in conceptualisations of teacher competence is the importance of reflective practice and self-efficacy. Teachers with high self-efficacy are more likely to implement inclusive strategies with persistence and innovation, viewing challenges as opportunities for growth rather than insurmountable obstacles (Sharma, Loreman &Forlin, 2012). Self-efficacy is thus both an outcome and a driver of competence, fostering a virtuous cycle of reflective

action, learning adaptation, and constructive engagement with diversity.

## 2.3 Models and Approaches to Professional Development

Professional development (PD) represents a cornerstone of teacher competence and educational quality, particularly in inclusive education contexts where teachers are expected to meet the diverse needs of exceptional learners. The models and approaches underpinning professional development have evolved significantly over the past decades, reflecting shifts from transmission-oriented training to collaborative, inquiry-based, and contextually responsive learning paradigms. Globally, scholars acknowledge that professional learning is most effective when it aligns with teachers' lived experiences, school environments, and the challenges they encounter in real classrooms (Avalos, 2011). PD is therefore not merely an event or workshop but an ongoing process of professional inquiry that empowers teachers to improve their instructional practices continuously.

One of the most influential conceptual frameworks for understanding teacher professional development is that proposed by Desimone (2009), who identifies five key features of effective PD: content focus, active learning, coherence, duration, and collective participation. According to this model, professional development that emphasises subject content and pedagogical knowledge relevant to teachers' practice fosters greater transfer of learning to the classroom. Active learning ensures that teachers engage in practical, reflective, and collaborative exercises rather than passively receiving information. Coherence underscores alignment between PD goals, school improvement priorities, and national education standards, while sufficient duration allows time for deep engagement with new practices. Collective participation, involving communities of teachers from similar contexts, enhances collegial learning and shared accountability. This framework has become foundational in guiding teacher professional development globally and has influenced many education systems, including those in Africa and Asia, that seek to strengthen inclusive education through sustained teacher learning.

Guskey's (2002) model provides another critical perspective, situating teacher change as both a process and a product of professional development. He contends that professional learning must be directly linked to measurable improvements in student learning outcomes for teachers to perceive its value and sustain changes in practice. Guskey's model proposes a linear yet cyclical process in which teachers' beliefs and attitudes are transformed through evidence of positive student results following changes in instructional strategies. This results-oriented model has particular relevance for inclusive education, where teachers' sense of efficacy often depends on seeing tangible progress among exceptional learners. By connecting teacher motivation with student achievement, the model underscores the reciprocal nature of effective professional learning.

Beyond theoretical frameworks, practical approaches to professional development vary across contexts. Lesson study, originally developed in Japan, has emerged as a collaborative and reflective model that has gained traction in African education systems (Ono & Ferreira, 2010). This approach involves teachers jointly planning, observing, analysing, and refining lessons through structured cycles of inquiry. The model fosters deep professional dialogue, reflective practice, and shared ownership of pedagogical innovation. In South Africa, for example, lesson study has been adapted to promote peer learning in resource-constrained environments, enabling teachers to collectively problem-solve around challenges such as managing diverse learners and adapting instructional materials. The collaborative ethos of lesson study resonates strongly with inclusive education, as it builds teachers' collective capacity to design instruction that accommodates learner variability.

Kennedy (2014) extends the discourse on PD models by categorising them into transmissive, transitional, and transformative approaches. Transmissive models are expert-driven and focus on knowledge dissemination, often through workshops or seminars. Transitional models combine external expertise with opportunities for teachers to contextualise learning within their practice. Transformative models, however, position teachers as active agents of change who engage critically with theory and practice to reconstruct professional knowledge. Within inclusive

education, transformative models are particularly relevant because they encourage teachers to interrogate their beliefs about disability, diversity, and learning, promoting reflective praxis that transcends traditional pedagogical norms. This shift towards teacher agency underscores the social justice dimensions of professional development and its role in reimagining inclusive schooling.

In Nigeria, Oyekan (2018) observes that professional development programmes often oscillate between transmissive and transitional models, with varying levels of success in improving instructional quality. Resource limitations, inadequate policy support, and fragmented PD structures have constrained the sustainability of professional learning initiatives. However, participatory approaches—such as mentoring, school-based workshops, and peer observation—are emerging as promising strategies for building inclusive teaching competence. These approaches align with global trends that prioritise context-sensitive, ongoing professional learning embedded in teachers' daily work rather than isolated, one-off training sessions.

From a global perspective, Opfer and Pedder (2011) conceptualise teacher learning as a complex, dynamic system influenced by interactions between teachers' beliefs, professional experiences, school culture, and policy environments. This systems model emphasises the importance of coherence and feedback loops within professional learning ecosystems. Effective PD thus requires institutional support, collaborative cultures, and reflective spaces that enable teachers to integrate new knowledge into existing frameworks. This approach highlights the relational and ecological dimensions of professional learning, underscoring that teachers' growth depends on the interplay between individual agency and systemic structures.

UNESCO's international review of professional development further reinforces the need for diversified and contextually grounded models (Villegas-Reimers, 2003). The review identifies mentoring, peer coaching, school-based research, and professional learning communities as key mechanisms that support continuous improvement. Importantly, it stresses that PD should be viewed as a moral and collective enterprise rather than a technical exercise. This conceptualisation aligns closely with inclusive education's ethical foundations, which call for shared responsibility in ensuring equitable learning outcomes for all students.

2.4 Barriers to Effective Professional Development

Barriers to effective professional development (PD) in education are multifaceted, encompassing structural, institutional, cultural, and individual challenges that impede teachers' capacity to engage in meaningful learning experiences. In the context of inclusive education—where teachers are required to manage diverse learners, including those with exceptional needs—such barriers are particularly detrimental. Effective PD is fundamental for improving instructional quality, yet systemic obstacles continue to undermine its implementation, especially in low- and middle-income countries. The persistence of these barriers reflects deep-rooted educational inequities, resource constraints, and a misalignment between policy intentions and classroom realities.

Globally, a recurrent barrier to professional development is the lack of coherence between PD programmes and teachers' professional contexts. According to Borko (2004), many PD initiatives are designed in a top-down manner, detached from teachers' actual classroom experiences and challenges. This disconnection leads to limited applicability of the training content, resulting in minimal changes in teaching practice. In inclusive education, where contextual understanding is essential, PD programmes that fail to align with local realities often neglect the socio-cultural factors shaping teaching and learning. Consequently, teachers find it difficult to translate theory into practice, diminishing the long-term impact of professional learning. Effective PD must therefore be contextually grounded, responsive to teachers' lived experiences, and reflective of the diverse learning environments they operate in.

Another critical constraint relates to time and workload. Teachers often report a lack of sufficient time to participate in PD activities due to heavy teaching loads, administrative responsibilities, and curriculum pressures. Kennedy (2016) notes that teachers' professional learning competes with other

institutional demands, making sustained engagement in PD challenging. Moreover, in many developing contexts, school calendars and examination-focused education systems offer little flexibility for continuous learning. The absence of structured release time or incentives for teachers to participate in PD contributes to fatigue and resistance to professional growth. As a result, PD becomes sporadic rather than systematic, undermining its potential to promote reflective and sustained pedagogical change.

Limited funding and inadequate resources also present formidable barriers to effective professional development. In Ghana, for example, schools often operate under severe financial constraints that limit access to materials, technology, and training opportunities. Osei (2006) highlights that insufficient investment in teacher development undermines educational reform efforts and contributes to teacher demotivation. Similarly, Adeyemi (2018) observes that in Nigeria, professional development programmes are frequently underfunded, with irregular sponsorships and poor logistical arrangements discouraging participation. Teachers in rural and underserved areas are particularly disadvantaged, as they face additional barriers such as limited transportation and access to professional networks. Without adequate financial support, PD initiatives struggle to achieve scalability or sustainability, perpetuating inequities between urban and rural education systems.

Institutional and policy-level challenges further compound these issues. Opfer and Pedder (2010) argue that fragmented policy frameworks and weak coordination between ministries, teacher training institutions, and schools often lead to inconsistencies in PD implementation. In many educational systems, PD is not institutionalised as a career-long process but rather treated as an occasional intervention. This lack of systemic integration diminishes accountability and continuity in teacher learning. Moreover, bureaucratic inefficiencies in PD administration—such as unclear selection criteria for participants or inadequate follow-up after training—limit the effectiveness of professional learning initiatives. Sustainable professional development requires coherent policy structures that integrate PD into teachers' career

progression, ensuring that learning is both recognised and rewarded.

In African contexts, socio-cultural attitudes toward professional learning can also influence participation and outcomes. Komba and Nkumbi (2008) note that in Tanzania, hierarchical relationships within schools and limited teacher autonomy often discourage open collaboration and reflective dialogue—both essential elements of effective PD. Similar trends exist across other African countries, where professional hierarchies and traditional authority structures constrain teacher innovation. Teachers may view PD as a compliance requirement rather than an opportunity for genuine growth, leading to passive engagement and limited transfer of learning. Changing this mindset necessitates cultivating professional cultures that value inquiry, peer learning, and experimentation.

Global evidence suggests that access disparities represent another significant barrier. According to OECD (2014), teachers' access to PD varies substantially based on factors such as school location, socio-economic context, and level of experience. Early-career teachers and those in remote regions are less likely to receive sustained PD opportunities compared to their counterparts in urban or well-resourced schools. These inequities perpetuate disparities in instructional quality and limit the capacity of entire education systems to respond to the demands of inclusive education. Overcoming such disparities requires decentralised PD models that extend training opportunities to marginalised schools and teachers, supported by digital and community-based learning platforms.

Finally, attitudinal and motivational barriers cannot be overlooked. Effective PD requires teachers to view themselves as lifelong learners committed to continuous improvement. However, low morale, insufficient recognition, and inadequate career progression pathways often dampen enthusiasm for professional learning. In Nigeria, for instance, inadequate remuneration and unclear promotion policies discourage teachers from engaging fully in PD activities (Adeyemi, 2018). Similar patterns are observed in Ghana, where PD participation is often perceived as an additional burden rather than a

professional right or expectation (Osei, 2006). Building intrinsic motivation among teachers thus requires systemic incentives, supportive leadership, and recognition of professional learning as integral to teaching excellence.

## 2.5 Impact of Professional Development on Managing Exceptional Learners

Professional development (PD) plays a pivotal role in enhancing teachers' competence and attitudes towards managing exceptional learners in inclusive classrooms. The effectiveness of inclusion largely depends on teachers' preparedness, confidence, and pedagogical skills—elements that are strengthened through sustained and well-designed professional learning initiatives. In contemporary education systems, PD serves as a strategic mechanism to bridge the gap between policy commitments to inclusion and the practical realities teachers face in diverse learning environments (Alhassan, 2014). By improving teachers' theoretical understanding of inclusion, developing adaptive instructional strategies, and fostering positive attitudes, PD significantly influences the quality of educational experiences for exceptional learners.

One of the most documented impacts of professional development in inclusive education is its ability to transform teachers' attitudes towards inclusion. Historically, negative or ambivalent attitudes among teachers have been identified as barriers to successful inclusion, often stemming from feelings of inadequacy, lack of knowledge, and limited exposure to special education methodologies (Avramidis & Norwich, 2010). PD initiatives that focus on awareness-raising, disability sensitivity, and pedagogical adaptation have been shown to foster more favourable perceptions. For instance, targeted training programmes help teachers reframe their understanding of disability—from deficit-based perspectives to more empowering views that emphasise learner potential and diversity as an asset to classroom learning. The attitudinal shift produced by PD not only improves classroom practices but also cultivates more inclusive school cultures.

Another critical outcome of PD is the enhancement of teachers' instructional competence in handling diverse learning needs. Teachers often report difficulty differentiating instruction or modifying curriculum content to meet the needs of exceptional learners. PD equips teachers with the tools to design flexible learning experiences, utilise assistive technologies, and apply universal design principles that ensure equitable participation (Makoelle, 2014). Such training helps teachers implement differentiated instruction—adapting content, process, and product to accommodate learners' varying readiness levels, interests, and abilities. Furthermore, professional learning that integrates inclusive pedagogy enables teachers to effectively manage classroom diversity through collaborative strategies, peer tutoring, and formative assessment techniques that promote active engagement among all students.

Empirical evidence from international contexts supports the claim that PD significantly boosts teachers' self-efficacy in inclusive settings. Teachers who participate in ongoing PD tend to demonstrate higher confidence in their ability to manage exceptional learners, particularly in adapting instructional methods and handling behavioural challenges (Gavish & Friedman, 2010). This enhanced sense of efficacy is closely linked to teachers' willingness to adopt inclusive practices. In contrast, the absence of structured PD can contribute to teacher burnout, anxiety, and resistance to inclusion due to perceived inadequacies. Thus, continuous professional learning fosters resilience and professional identity among educators, strengthening their capacity to meet the demands of inclusive classrooms.

The impact of PD is also evident in the improvement of learners' outcomes and classroom dynamics. Well-trained teachers are better able to create supportive, learner-centred environments that enhance participation and engagement among exceptional learners. According to Sari (2012), in-service training programmes have been instrumental in improving Turkish teachers' attitudes and instructional strategies for students with special needs. The study demonstrated that PD interventions not only improved teachers' competence but also increased the academic and social inclusion of exceptional learners. These outcomes highlight the direct link between teacher learning and learner achievement—an essential measure of effective inclusive education.

In the African context, professional development is particularly significant given the systemic challenges that constrain inclusive education. Studies from Ghana and Nigeria show that many teachers lack formal training in special needs education, and as a result, they often feel ill-equipped to handle learners with disabilities (Fakolade, Adeniyi & Tella, 2009; Alhassan, 2014). In Nigeria, professional training programmes that include modules on inclusive pedagogy, classroom management, and collaboration with special educators have improved teachers' capacity to integrate exceptional learners effectively. Similarly, in Ghana, PD initiatives focusing on disability awareness and inclusive curriculum adaptation have enhanced teacher confidence and reduced exclusionary practices. These findings affirm that professional development not only builds competence but also challenges entrenched attitudes that marginalise learners with special needs.

Globally, PD has also contributed to the evolution of inclusive education as a reflective and collaborative practice. Teachers who engage in continuous learning are more likely to participate in professional learning communities, peer mentoring, and collaborative lesson planning, which strengthen collective expertise and innovation in inclusion (Boyle et al., 2013). Such collaborative models extend the benefits of PD beyond individual teachers, fostering institutional cultures that prioritise shared responsibility for inclusion. Through these networks, teachers exchange experiences, co-develop strategies for managing exceptional learners, and cultivate sustainable practices that extend the reach of PD.

2.6 Role of Technology and Innovation in Teacher Development

The integration of technology and innovation into teacher professional development has transformed the landscape of education globally, creating new opportunities for teachers to acquire, refine, and apply pedagogical skills in dynamic and interactive ways. Technology has become an indispensable tool for advancing teacher learning, especially in contexts where traditional face-to-face training may be constrained by geographic, economic, or institutional limitations. Professional development initiatives that incorporate digital technologies enable teachers to engage in continuous, flexible, and self-directed learning while fostering collaboration and knowledge exchange across diverse educational settings (Bates, 2015). In this way, technology enhances the accessibility, inclusivity, and scalability of teacher professional learning, contributing to overall improvements in teaching quality and student outcomes.

The digital revolution has expanded the scope and modalities of teacher professional development by introducing platforms for online learning, virtual mentorship, and digital collaboration. Lawless and Pellegrino (2007) argue that technology-supported professional development allows for personalised learning pathways that cater to teachers' specific needs, experiences, and professional goals. Unlike conventional one-size-fits-all models, technology-enabled PD promotes continuous engagement through asynchronous and synchronous activities, including webinars, online communities of practice, and interactive simulations. Such innovation fosters sustained learning experiences and empowers teachers to experiment with new instructional strategies in safe, reflective environments. Moreover, the use of multimedia and digital resources enhances teachers' ability to visualise complex concepts and translate them into classroom practices that accommodate diverse learners.

Globally, information and communication technology (ICT) has been recognised as a driver of educational transformation. Kozma (2011) asserts that ICT catalyzes rethinking both curriculum design and teacher education. In inclusive education contexts, technology facilitates differentiated instruction by allowing teachers to tailor content and assessment to learners' varied needs and learning styles. Assistive technologies—such as text-to-speech software, interactive whiteboards, and adaptive learning applications—enhance accessibility for exceptional learners and strengthen teachers' capacity to provide equitable learning opportunities. By embedding technology in professional development, educators are not only trained to integrate these tools into instruction but also equipped with the digital literacy necessary to prepare students for participation in knowledge-based economies.

Empirical evidence from Africa underscores the transformative potential of technology in teacher development while highlighting the persistent challenges of infrastructure and access. Ololube (2006) found that teachers in Nigerian secondary schools who received technology training demonstrated significantly improved instructional competencies and student outcomes. However, systemic barriers such as inadequate internet connectivity, insufficient hardware, and limited institutional support continue to restrict large-scale adoption. Similarly, Mafuraga and Moremi(2017) observed that teachers in Botswana benefited from ICT-enhanced PD programmes, which improved their instructional innovation and classroom management skills. These findings underscore the importance of contextualising technology-driven PD to reflect the socio-economic and infrastructural realities of each educational system.

Beyond the African context, global frameworks such as the European Commission's DigCompEdu provide structured models for developing teachers' digital competence. Redecker (2017) conceptualises digital competence as comprising six key areas: professional engagement, digital resource creation, teaching and learning through technology, assessment, empowering learners, and facilitating learners' digital competence. This framework underscores that effective teacher development must move beyond basic technical proficiency to encompass critical and pedagogical uses of technology. Such frameworks are instrumental in guiding national education policies, institutional programmes, and individual teacher growth in the digital era.

Eady and Lockyer (2013) highlight that technology not only enhances teachers' access to learning resources but also facilitates collaborative professional networks that extend beyond geographic boundaries. Through digital communities of practice, teachers can share experiences, co-create lesson materials, and collectively solve pedagogical challenges. These online communities foster professional solidarity and continuous reflection—key ingredients for sustaining inclusive and innovative teaching practices. In particular, teachers managing exceptional learners can exchange context-specific strategies and draw from

global best practices without being limited by physical proximity or institutional isolation.

While technology provides immense potential for teacher development, its successful implementation depends on thoughtful integration and institutional support. Bates (2015) cautions that digital tools should complement, rather than replace, human interaction and mentorship in PD. Effective integration requires professional learning models that balance digital innovation with reflective dialogue and feedback mechanisms. Additionally, equitable access to digital infrastructure remains a prerequisite for leveraging technology's full benefits in teacher development. Educational systems must therefore invest in robust ICT infrastructure, capacity-building, and digital inclusion policies to ensure that all teachers, particularly those in under-resourced settings, can benefit from technological innovations.

## 2.7 Future Directions and Policy Implications

The future of professional development (PD) and teacher competence in managing exceptional learners in Ghana—and the broader global education landscape—depends on a strategic alignment between policy, research, and practice. The evolving nature of inclusive education necessitates forward-thinking policies that bridge existing gaps in teacher preparation, institutional support, and continuous professional learning. As education systems strive to achieve equity and inclusion, teacher development must be prioritised as a cornerstone of systemic transformation. Globally, inclusive education has shifted from being a marginal policy concern to a central component of educational reform, emphasising the need for responsive, adaptable, and innovative professional development frameworks (UNESCO, 2015).

One future direction is the establishment of coherent national frameworks for professional learning that embed inclusive education within teacher training and certification standards. In Ghana, while the 2015 Inclusive Education Policy provides a strong philosophical foundation, its practical implementation requires a sustained policy framework that explicitly links PD with inclusive competencies (Anamuah-Mensah, 2015). Policies must move beyond

fragmented workshops and adopt structured, career-long professional learning systems that integrate inclusive pedagogy into teacher education curricula. Furthermore, ongoing monitoring and evaluation mechanisms should be institutionalised to assess the effectiveness of PD initiatives, ensuring they are evidence-based and responsive to classroom realities.

The conceptualisation of inclusion as a dynamic and context-dependent process also demands that future professional development initiatives emphasise adaptive expertise and reflective practice. Florian and Spratt (2013) propose that teachers should be viewed as agents of change who actively interpret and enact inclusion within their unique contexts. Professional learning, therefore, should empower teachers to question traditional notions of ability and to experiment with new pedagogical strategies that accommodate diverse learners. Policies supporting this approach must encourage innovation at the school level, promoting professional autonomy while providing the structural resources necessary for effective implementation. Such frameworks will strengthen teacher agency, enabling educators to respond flexibly to the complex realities of inclusive classrooms.

Globally, education policy trends indicate a growing recognition that inclusive professional development must be collaborative and systemic. Hardman et al. (2011) stress the importance of a systemic approach to teacher education reform, particularly in sub-Saharan Africa, where teacher development is often constrained by inconsistent policy coherence, limited funding, and fragmented institutional linkages. Future reforms must thus focus on developing integrated systems that connect pre-service preparation, induction, and in-service learning. Collaborative partnerships between ministries of education, teacher education institutions, and schools will help build sustainable ecosystems for professional growth. In the Ghanaian context, establishing regional professional learning communities could foster ongoing collaboration among teachers, encouraging shared reflection and the dissemination of inclusive practices.

Technology and innovation will also continue to play transformative roles in future PD policies. Digital platforms and blended learning models offer scalable solutions for reaching teachers in remote and resource-constrained settings, expanding access to professional learning opportunities. As global initiatives increasingly promote digital competence among educators, Ghana and similar contexts must leverage technology to democratise PD participation. Darling-Hammond, Hyler, and Gardner (2017) highlight that effective technology integration requires a focus on pedagogy, collaboration, and continuous feedback. Policies that promote investment in digital infrastructure, teacher ICT literacy, and locally relevant online resources can enhance teachers' professional capacity to manage exceptional learners through innovative, technology-enhanced approaches.

In Africa, and particularly in Nigeria and Ghana, the sustainability of inclusive education reforms depends largely on the development of policy environments that value teacher empowerment and professional identity. Fakolade and Adeniyi (2010) note that teacher attitudes toward inclusion are deeply shaped by institutional support, incentives, and working conditions. Future policies must therefore address not only training content but also broader systemic factors such as teacher motivation, workload management, and school leadership. Incentivising participation in PD—through certification, recognition, and career progression pathways—can strengthen teacher commitment and sustain engagement with inclusive practices.

At the global level, Ainscow (2016) argues that achieving equitable education systems requires a paradigm shift towards "inclusive improvement," where diversity is seen as a driver of school innovation rather than a challenge to overcome. This vision calls for professional development models that are locally grounded yet globally informed, enabling teachers to draw from international best practices while contextualising them to local realities. For Ghana, this means fostering a culture of professional inquiry where teachers, researchers, and policymakers engage collaboratively to design contextually relevant inclusion strategies.

## III. CONCLUSION

The study has successfully fulfilled its overarching aim of exploring how professional development

influences teacher competence in managing exceptional learners within the Ghanaian educational context. Through an extensive conceptual and theoretical analysis, the research has illuminated the intricate relationship between teacher preparation, professional learning, and the effective implementation of inclusive education. The objectives of identifying professional development models, examining barriers to implementation, and analysing policy and future directions were comprehensively addressed through critical engagement with global and local perspectives.

The findings underscore that professional development is a decisive determinant of teachers' ability to create inclusive, adaptive, and equitable learning environments. Teachers equipped with sustained, contextually relevant, and reflective professional learning experiences demonstrate greater competence in employing differentiated instruction, fostering inclusive classroom climates, and addressing the diverse academic and social needs of exceptional learners. Conversely, limited access to continuous training, inadequate resources, and insufficient policy coherence emerged as persistent impediments to effective inclusion. The study further revealed that while Ghana's inclusive education policy provides a strong foundation, its practical realisation requires systemic alignment between teacher education institutions, schools, and policy frameworks.

Moreover, the integration of technology and innovative pedagogical approaches was identified as a transformative avenue for future professional development. Digital learning platforms and collaborative networks were recognised as essential tools for overcoming geographic, resource, and institutional barriers, particularly in underserved educational contexts.

Based on these insights, the study recommends that professional development should be institutionalised as an ongoing, career-long process rather than an episodic intervention. Policymakers and educational leaders should invest in structured, evidence-based programmes that prioritise inclusive pedagogy, reflective practice, and teacher collaboration. Additionally, incentives for participation, equitable resource distribution, and the embedding of inclusive

education competencies in teacher certification standards are crucial for sustainable reform. Ultimately, a holistic, system-wide commitment to professional growth remains vital to achieving meaningful inclusion and ensuring that every learner, regardless of ability, attains their full potential in Ghana's evolving educational landscape.

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