Inclusive Education in Ghana: Understanding the inclusive pedagogical practices of primary school teachers in regular classrooms.

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Declaration

This thesis is the result of the author's original research. It has been composed by the author and has not been previously submitted for examination which has led to the award of a degree.

Signed: Nicholas Novignon

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Abstract

The concept of inclusive pedagogy is an effective approach for ensuring equitable, quality learning for all children in the same classroom, regardless of their challenges. Despite the ongoing discourse about inclusive pedagogy, research examining how teachers conceptualise the concept and enact practices in their classrooms in Ghana is limited. This study adopts the sociocultural theoretical perspective to examine teachers' conceptualisation of inclusive pedagogy and how they enact, adapt and justify their pedagogical practices to promote the inclusion of children with special educational needs in Ghana. The study was guided by an overarching research question: *How do teachers enact and justify their inclusive pedagogical practices in regular education classrooms in Ghana?* Three sub-questions were developed to help answer the main research question: (1) How do teachers conceptualise inclusive pedagogy? (2) What is the nature of teachers' inclusive pedagogical practices within a regular classroom context? (3) What is the rationale behind teachers' inclusive pedagogical practice? The current study provides critical insights into how teachers conceptualise inclusive pedagogy and documents useful practices regarding their pedagogical practices that could be adopted or adapted by other teachers in similar research contexts.

The study methodology was a qualitative case study within the constructionists' paradigm. Participants included ten classroom teachers who were purposively selected from five regular public primary schools in Ghana. Data were collected using lesson observations at two time points per teacher (20 observations) and in-depth interviews (n=17). Teachers' lesson notes and artefacts were collected to supplement data generated from the field. Data were analysed through a five-stage process using the reflective thematic analysis approach.

Findings revealed that classroom teachers conceptualised inclusive pedagogy in nonuniversal ways. These include teaching all children together, promoting the participation of children with special educational needs in mainstream classrooms, making separate or inclusive provisions and adopting reflexive or reactive processes. These conceptualisations were based on their understanding of inclusive education. Further, all the participants favoured including children with special educational needs in the regular classroom. However, although all six female teachers believed that inclusion would benefit all children, three out of the four male teachers thought otherwise. They believed that making separate provisions for children with special educational needs would be more beneficial than teaching them with their typically developing peers in the same classroom. Other demographic variables, such as teachers' experiences (years

taught) and their professional qualifications, appeared to have no direct impact on their views about inclusion.

Additionally, findings revealed that teachers used different pedagogical strategies to deliver their lessons, described under four main themes. The themes include (1) Providing accommodations and support for all learners, (2) Promoting lesson accessibility through multiple communication techniques, (3) Encouraging learners' action using a variety of assessment techniques and (4) Building support for learners with special needs through creative collaboration. Teachers' inclusive pedagogical strategies identified in the data comprised more generic practices such as questions and answers, multiple examples, role play and field trips. Others, such as differentiated learning, deficit or strength-based approaches and peer support, were used purposely to assist children with special educational needs.

The findings indicate that teachers continue to create several learning opportunities for children with special educational needs using various inclusive pedagogical approaches. However, observation showed that some children with special educational needs were excluded from some lessons. Challenges such as limited resources, inadequate training, and large class sizes impacted teachers' inclusive pedagogical practices. This situation was compounded by the diverse characteristics of special needs children in classrooms. The results demonstrate that addressing the barriers identified can improve teachers' practices and attitudes toward supporting all learners. Thus, given the appropriate support, teachers in resource-constrained countries like Ghana can adapt their lessons and practices to provide for all learners regardless of their needs. This research's output can help improve in-service and pre-service training programmes to enhance teachers' knowledge in effective inclusive pedagogical practices. Finally, the study proposed an inclusive pedagogical approach (Introspective Inclusive Pedagogical Approach), which could be adapted to study or improve practices of classroom teachers in all settings, including resource-constrained countries.

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List of Abbreviations and Acronyms

B.Ed.	Bachelor of Education
CAST	Center for Applied Special Technology
CT	Class teacher
DI	Differentiated Instruction
ESP	Education Strategic Plan
IE	Inclusive Education
IP	Inclusive Pedagogy
IPP	Inclusive Pedagogical Approach
MEd	Master of Education
MoE	Ministry of Education
OWOP	Our World Our People
IIPeA	Introspective Inclusive Pedagogical Approach
RT	Resource Teacher
SEN	Special Educational Needs
Soc. Sted.	Social Studies
TBM	Three Block Model
TLMs	Teaching/ Learning Materials
UDL	Universal Design for Learning
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund

CHAPTER 1: INTRODUCTION

1.1 Background of the study

Educational inclusion requires a shift from merely making special provisions for children identified with special educational needs (SEN) in regular classrooms to enhancing access, participation, and progress for all learners (Ekins, 2010). It implies adopting pedagogical approaches that create learning opportunities for all children regardless of physical, intellectual, socioemotional, linguistic, or other personal circumstances (UNESCO, 1994; Florian, 2007; Black-Hawkins, 2010; Florian, 2015). The inclusive education system has been globally acknowledged as a way of promoting equitable quality education for all children. Activists of the inclusive system cite various gains made by children with special educational needs (SEN) in reading, arithmetic and social attainments when they learn together with their typically developing peers (TDP) (Peetsma et al., 2001; Karsten et al., 2001; Myklebust, 2007). Besides, institutionalising learners with SEN deprives them of formal and social learning opportunities offered in the regular classroom context (Howgego, Miles & Myers, 2014). Educating all children in the same classroom, regardless of their abilities, has been proven to benefit both those with and without disabilities (Cole, Waldron, & Majd, 2004; Cosier, Causton-Theoharis, & Theoharis, 2013). Some have argued in favour of inclusive education based on its cost-effectiveness relative to the special education system (Armstrong, Armstrong & Spandagou, 2011; UNESCO, 2008).

On the other hand, this has been contested by others who claim that inclusive education demands modifications to or a complete overhaul of school infrastructure and the provision of more modern facilities (Hayes & Bulat, 2017). Further, inclusive classrooms are considered unfavourable learning environments for vulnerable children. These classrooms are not specifically tailored for children with SEN and, thus, do not support them in achieving expected academic and social outcomes (C, 2007; McLeskey & Waldron, 2011; Kavale & Forness, 2000; Heward, 2013; Armstrong, Armstrong & Spandagou, 2010; Heward, 2013). Others have questioned the effectiveness of inclusion by referring to barriers resulting from teachers' attitudes and practices. They include teachers' negative attitudes, reluctance to accept policy change (Lindsay, 2007; McLeskey & Waldron, 2011; Ackah-Jnr, 2020), belief systems and lack of requisite inclusive knowledge and skills (Kavale & Mostert, 2003; UNESCO, 2020). Such challenges can affect the ability of teachers to identify and adapt pedagogical strategies

to effectively support children with different learning needs while avoiding marginalisation (Florian & Beaton, 2018).

Florian (2014) argues that inclusive education implies the use of appropriate pedagogical approaches and practices that consider learner diversity. Thus, inclusive pedagogy is a critical part of inclusive education implementation. Child-centred pedagogy is recommended as a practical approach to support education and successfully promote quality learning for all children (UNESCO, 1994). However, specific pedagogical strategies that ensure participation and improved learning outcomes for children with SEN remain a dilemma for most teachers (Makoelle, 2014; Florian & Beaton, 2018). This situation is worsened by inadequate teacher training and knowledge about effective inclusive pedagogical skills (Haug, 2017; Schuelka, 2018; Kaur, Noman & Awang-Hashim, 2015).

Additionally, the lack of consensus about what inclusive pedagogy is, coupled with limited literature on effective inclusive pedagogical practices (Makoelle, 2014), shows the challenges teachers face in their attempt to support learners with diverse needs in their daily practices. While teachers are responsible for ensuring that all children benefit from classroom activities, studies that document practical examples of teachers' practices from which they may learn are lacking. Therefore, research is needed to examine teachers' conceptualisation of inclusive pedagogy and how they enact and justify their inclusive pedagogical practices.

Like many countries in Sub-Saharan Africa, Ghana has embraced the inclusive education agenda. It has moved beyond ratifying international treaties towards developing pathways to promote inclusive learning in general education classrooms. Among the initial attempts towards developing special needs learning was the enactment of the Education Strategic Plan (ESP) 2003-2015, which aimed at promoting access and participation for children with special educational needs. This was followed by the piloting of inclusive education in Ghana beginning with the 2003/04 academic year with the aim of extending this to all schools by 2015 (Gadagbui, 2008; Agbenyega & Deku, 2011: Opoku et al., 2015). Other key initiatives included making inclusive/special education one of the blocks of its Education Strategic Plan (ESP, 2010-2020) to ensure full inclusion by 2015. The Disability Act in 2006 and the inclusive education policy in 2015 were subsequently enacted. The Disability Act focused on integrating children with disabilities. On the other hand, the inclusive education policy of Ghana looked, more broadly, at restructuring and recasting the education system to promote quality inclusive

learning for all learners through the Universal Design for Learning and child-friendly learning space (Ministry of Education, 2015). Building on previous plans such as the Education Strategic Plan (ESP) (2003 - 2015), the Education Strategic Plan 2018-2030 committed to promoting access and participation of learners with special needs in regular education classrooms by building teachers' capacity to adopt more inclusive pedagogies (Ministry of Education, 2018). Following these policy enactments, studies on inclusive education in Ghana have increased significantly. Most of these studies have focused on teachers' beliefs about inclusive education, their attitudes towards including children with special needs in the regular classroom and their self-efficacy (for example, Avoke, 2002; Agbenyega, 2007; Ackah, 2010; Ackah-Jnr & Danso, 2019; Ametepee & Anastasiou, 2015; Vanderpuye, Obosu, & Nishimuko, 2020; Kuyini, Desai, & Sharma, 2018; Mprah et al., 2016). While some of these studies have reported positive attitudes towards children with SEN, others noted negative beliefs and attitudes among teachers. Research is, however, limited about specific classroom practices and pedagogical approaches enacted by teachers to support the learning of SEN children.

Further, despite policy and research commitments towards improving the implementation of inclusive education in Ghana, there are still concerns about how teachers' practices effectively support children with special educational needs. Reports suggest that children with special educational needs face neglect or exclusion in class (UNICEF, 2017; Ministry of Education, 2018; Agbenyega & Davis, 2015). This results from inadequate teacher support and limited opportunities to participate in class activities, leading to poor academic achievement (UNICEF, 2017; Ministry of Education, 2018). These challenges have been attributed to teachers' design and use of poor pedagogical strategies (Agbenyega & Deku, 2011). Teachers' inclusive pedagogical approaches have been described as prescriptive, mechanistic, and oppressive, which do not consider the diverse learning needs of children. Additionally, the lack of requisite knowledge about effective inclusive pedagogies coupled with the show of less adaptive teaching practices among mainstream class teachers is said to result in the exclusion of some learners in lessons (Agbenyega & Davis, 2015; Kuyini & Desai, 2008). These claims are supported by reports that most teachers feel they did not receive sufficient pre-and in-service training to effectively include children with SEN in their lessons (Nketsia, Saloviita & Gyimah, 2016; Mprah et al., 2016; Nketsia, 2017). Thus, teachers lack the requisite pedagogical skills to enhance teaching and learning in inclusive classrooms (Opoku et al., 2019). Consequently, promises have been made to develop pathways to improve teachers' knowledge in inclusive pedagogical practices (Ministry of Education, 2018). However, studies exploring teachers'

understanding of the concept and the nature of their pedagogical practices in the classrooms remain sparse. A lot is unknown about how teachers conceptualise and enact inclusive pedagogy, and these are crucial to promoting equitable, quality, inclusive education for SEN children. Therefore, the current study sought to fill the knowledge gap and identify practical examples of how teachers in different, resource-constrained learning contexts enact and justify their inclusive pedagogical practices.

1.2 The focus of the study

This research examined how teachers conceptualise inclusive pedagogy, its nature and the justifications for their inclusive pedagogical practices. Inclusive pedagogy is used in this study to include approaches aimed at promoting learning, participation, and effective engagement of all learners (including those with special needs) in the general education classroom. Inclusive pedagogical practice, therefore, includes the totality of what is done, including activities, communications or interactions, class arrangements, the use of teaching-learning materials and how these are adapted to foster the inclusion of children with SEN. The concept of Special Education Needs (SEN) is broadly defined in the inclusive education policy of Ghana, which includes children with identifiable and unidentifiable disabilities, chronic diseases, and socioemotional difficulties that affect their education. On the other hand, teachers in the research context refer to special needs as those with physical or identifiable impairments (knowledge acquired through my years of practice as a resource teacher and special education coordinator). Conditions such as homelessness and chronic diseases are usually not seen by teachers as forms of special needs. In this study, children with SEN refer to children with both identifiable such as cerebral palsy, muscular dystrophy, orthopaedic impairment and blindness, and unidentifiable disabilities (for example, deafness, intellectual and learning difficulties). Operationalising SEN in the current study was arrived at, bearing in mind the position of the policy framework and how most regular classroom teachers in the research context view this. Ultimately, the choice of SEN was guided by the purpose of the study. This research aimed to look beyond just children with physical disabilities. It also considered other conditions that may be unseen but could impact their engagement in lessons. While adopting this view, I was open to new ideas regarding conditions teachers count as special needs in their classes.

1.3 What informed this research journey and my positionality

My position and experiences gained from my professional practice as a classroom teacher, resource teacher, and municipal special/inclusive education coordinator informed this research. As the special or inclusive education coordinator, my responsibilities involved coordinating all education-related activities involving children with special educational needs (SENs) and ensuring they were provided for within the regular education contexts. It also involved monitoring in-class learning support provided for vulnerable children and those who were struggling with their learning (those identified with special needs). During the discharge of my duties, I collaborated with class teachers and special education resource teachers to provide varied academic and social support for children with special educational needs to ensure they learn and succeed in the general education classroom. Additionally, I supported teachers through seminars and workshops to develop inclusive practices to support children with SEN effectively within the mainstream classroom. They were taken through effective communication, questioning and class management skills. With support from resource teachers, I developed training programmes for teachers about enhancing children's engagement with SEN by promoting their acceptance as full members of the class.

Among things I noticed during reflections on my duties were teachers' acknowledgement of their critical role in educating all the children placed under their care. Teachers adopted various practices and strategies (through peer support, pairing of learners, and one-on-one teaching by resource teachers) to promote the participation of SEN learners in class activities. Additionally, teachers developed coping mechanisms to accommodate the children with severe behavioural difficulties that posed challenges to class lessons. However, teachers appeared uncertain about the effectiveness of these approaches in enhancing the achievements of SEN children in the regular school context. Thus, they often expressed the quest for appropriate instructional strategies and practices that could aid the effective inclusion of children with special needs. Consequently, some children with special education needs were excluded from lessons or given separate activities. These made me think critically about the assumption that 'special' pedagogies are not necessary to foster inclusive teaching; teachers can extend what is ordinarily available to all students (Florian & Spratt,2013; Florian, 2014). Also, regular interactions with classroom teachers and parents (of children with and without special needs) revealed that expectations and interests tend to differ. While class teachers constantly look for the best approaches that satisfy every learner without creating disadvantages, parents think about how

teachers can support individual children. These expectations tend to conflict with what the inclusive education policy demands.

Further, despite policy provisions about how to include learners with special needs, observations during my professional practice revealed that teachers' practices often differ. This observation led me to reflect on two critical issues: (1) What are teachers actually doing in class? (2) How can the inclusive pedagogical practices of teachers be documented to create a repository of knowledge and practice that can benefit others? Reflections on all these scenarios aroused my quest to embark on this fact-finding research. More importantly, this study is primarily about filling the literature gap and contributing to inclusive pedagogical practices, particularly in resource-constrained countries such as Ghana, rather than satisfying personal interests.

This study was, however, not aimed at judging how successful the implementation of inclusive education policy had been. Further, the study did not aim to discuss which teachers' practices were good or bad. The purpose of this study, as stated earlier, was to examine how teachers conceptualise the concept of inclusive pedagogy, the pedagogical practices they employ to promote the inclusion of children with SEN in primary classrooms and how the use of these practices was justified. Therefore, the outcome of this study helped provide insights into teachers' understanding of the concept of inclusive pedagogy, how these influence their support for children with SEN in their lessons and what factors impact their choices. It also helped to document examples of inclusive pedagogical practices and how teachers within similar educational contexts could adopt these to improve their lesson delivery and support for all children regardless of their needs.

1.4 Statement of the problem

As noted earlier, Ghana has responded positively to the inclusive education programme. This is evident in her ratification of important international agreements and subsequent enactment of its own Education Acts, inclusive policy and standards. Ghana's commitment towards realising the goal of inclusive education became evident when its first pilot studies began during the 2003/04 academic year (discussed in more detail in Chapter 3). Such initiatives indicate the government's dedication to inclusion in regular education schools.

Often, the purpose of educational policies is not achieved because sufficient efforts are not put into understanding the needs and practices of professionals who are expected to act on them (Wearmouth, Edwards & Richmond, 2000). There is consensus that teachers' roles are central to successfully implementing the inclusive agenda. Thus, research is growing on how teachers conceptualise inclusive pedagogy and the practices they enact to promote inclusive learning. However, in most Sub-Saharan African countries such as Ghana, studies focusing on actual classroom teacher practices are sparse. Additionally, while the government of Ghana remains committed to implementing policy provisions on inclusion and developing professional learning community programmes to boost teachers' self-efficacy in creating inclusive classrooms, it is unclear how these impact teachers' knowledge and practice. How do classroom teachers understand the concept of inclusive pedagogy? What inclusive pedagogical practices are they enacting in their classrooms? How are these practices impacting children's lives, especially those with special educational needs? How do teachers justify their approaches and practices? Although these are critical questions, there is little research to understand them. Thus, this study sought to provide answers to such questions.

1.5 Aim of the Study

This study aimed to understand the nature of the inclusive pedagogical practices of primary classroom teachers in Ghana. Specifically, it sought to develop an understanding of primary classroom teachers' conceptualisation of inclusive pedagogy, what pedagogical approaches and practices they adopted and how they adapted these practices to enhance learning for all learners under their care, particularly those identified with special educational needs. This study also aimed to understand the rationale for their inclusive pedagogies and practices.

1.6 Research Questions

An overarching research question was formulated to achieve the aim of the study: *How do teachers enact and justify their inclusive pedagogical practice in regular education classrooms in Ghana?* Three sub-questions were developed to help answer the main research question:

1. How do teachers conceptualise inclusive pedagogy?
2. What is the nature of teachers' inclusive pedagogical practice within a regular classroom context?
3. What is the rationale behind teachers' inclusive pedagogical practice?

The sub-questions helped answer the main research question and achieve the study's purpose. They were informed by issues raised in earlier discussions of literature in Ghana and situations observed by the researcher in his line of work.

1.7 Significance of the study

Literature about inclusive education reveals that teachers' conceptualisation of inclusive pedagogy varies contextually (Makoelle, 2014; Guðjónsdóttir & Óskarsdóttir, 2016). Despite growing concerns about teachers' knowledge and understanding of this concept (Tamakloe, 2018; Spratt & Florian, 2013; Florian & Beaton, 2018; Mensah & Larson, 2017), little is known about how teachers conceptualise inclusive pedagogy in the context of Ghana. This study, therefore, reveals how teachers in Ghana understand the concept of inclusion and inclusive pedagogy. It was envisaged that this study could help to uncover teachers' craft knowledge and position about approaches they consider effective to include children with special needs in lessons. Thus, this study is critical as it reveals teachers' views about including children with special needs and how these could impact their classroom practices. This knowledge provides the basis for deliberations on how to resolve fundamental issues, such as where to educate children identified with special educational needs. It also provides suggestions about addressing various factors that impact class teachers' practices and providing equitable quality education for all students.

Despite the challenge of identifying specific pedagogical practices for including children with special educational needs, the study showed that teachers continue to find creative ways of supporting them. The study documented inclusive pedagogical practices enacted by primary teachers and how these were adapted to promote inclusive learning. It also explained the rationale behind teachers' inclusive strategies and practices. These findings are significant not only because they help to fill the gap in knowledge about inclusive pedagogical practices in Ghana. They also provide valuable examples of approaches and practices teachers could adopt and adapt to support their practices. These could be particularly beneficial to teachers in resource-constrained societies.

Further, the research findings provide information about class collaboration, interagency and cooperation. How classroom teachers worked with other stakeholders, particularly special education resource teachers and their class members, was analysed. The effectiveness of the inclusive education programme relies on teamwork (Gyimah, 2006). Hence, classroom

teachers' collaboration and cooperation with professionals with relevant expertise, the special needs children themselves and their peers could help to effectively plan and deliver lessons to meet the needs of all learners. Therefore, the results of this study are expected to reveal how teachers work with such persons and how these support the enactment of inclusive education. It could also help education authorities clarify the responsibilities of personnel such as resource teachers to prevent conflicts of interest and improve relationships in teaching and learning.

This study found that teachers' exposure to inclusive classes and professional development opportunities contributed to building their confidence and capacity to support children with special needs effectively. Such findings provide clear pathways for teachers at the pre-service stage to have adequate and practical opportunities to interact with children of different abilities and needs. Further, this provides clues to the education department and units about where to focus resources while designing professional development programmes for in-service teachers.

Additionally, the research findings revealed the barriers teachers face in different learning environments and how they overcame these issues to promote equal learning opportunities for all learners. They show how classroom teachers manage classroom relationships by promoting interactions among learners with special needs and their peers to create a positive classroom environment. These outcomes highlight the importance of resourcefulness and the possibility of supporting all learners regardless of the challenges teachers face.

More importantly, following a critical analysis of the research output, as mentioned in this paragraph, I propose the Introspective Inclusive Pedagogical Approach framework, which can be used to support primary classroom teachers in enacting effective inclusive practices that respond to the different learner needs in their classrooms. At the same time, the framework could be adapted to study the inclusive pedagogies of classroom teachers in different learning and socioeconomic contexts.

In summary, this study reveals critical issues that influence the effective implementation of the inclusive education system. Issues about how teachers conceptualise inclusive pedagogy, their inclusive pedagogical practices, collaboration, teachers' familiarity with children with special needs, training, and professional development discussed in this study would support policy and practice. Such valuable information derived from this study is expected to support the Ministry of Education and Special Education Division of Ghana in developing programmes and

providing resources and support services to ensure effective inclusive education delivery in Ghana and low-resource countries.

1.8 Definition of terms

The following paragraph presents a list of terms that are used in this study and the meanings adopted to support discussions:

Children with special education needs: In this study, children with special needs refer to children with learning challenges and disabilities that affect their ability to learn and who are at risk of marginalisation.

Classroom/ class teachers: Teachers in primary classrooms who are fully responsible for the students and their learning.

Inclusive education: In this study, inclusive education means providing all learners with the opportunity to participate fully in learning and succeed in the general education classroom. This requires removing all structural and systemic barriers that cause disparities in learning outcomes.

Inclusive pedagogy: A learner-centred approach to teaching and learning that accounts for differences among students but avoids discrimination among learners.

Inclusive pedagogical practice: It refers to the totality of the teaching and learning process. This involves practices enacted by teachers that allow all learners to participate in every aspect of learning as equals, be full members of the class, and prevent the incidence of some being treated differently.

Inclusive schools are mainstream schools (not special schools) designed to admit children with specific severe or profound disabilities.

Regular/ Mainstream schools: These are not special schools and are meant to educate all learners in Ghana.

Special school: This refers to schools or institutions built purposely for individuals with specific categories of disabilities.

1.9 Structure of the study

Chapter 1 provides the background to the current study. It provides an overview of inclusive education in Ghana, looking at the transition from global to contextual issues. This section also identifies the research gap and presents the purpose of the study, research questions and the significance of the study. My position as the researcher is also briefly discussed in this chapter. Chapter 2 focuses on the research context and explains the development of inclusive education in Ghana. It discusses critical policy interventions, political commitments and their implications for research and practice. The third chapter of this study presents relevant literature about inclusive education and inclusive pedagogy. Specifically on inclusive pedagogy (the focus of the study), this chapter identifies and provides a critical discussion about pedagogical approaches considered effective for supporting all learners. In addition to these, this section identifies empirical studies based on inclusive pedagogical practices, mainly at the pre-secondary level. Further, ideas from the sociocultural theoretical positions that support inclusion and social learning are presented. The research methodology is carefully discussed in the fourth chapter. Here, sampling issues and methods of data collection and analysis are described. Further, the processes of data collection and analysis are thoroughly presented. Chapter 5 presents the study's findings relating to teachers' conceptualisation of inclusive pedagogy, the nature of their inclusive pedagogical practices and the rationale for adopting the various practices during their lessons. The research results presented in this chapter reflect the observations and interviews conducted, with supporting evidence from teachers' lesson notes and artefacts. The research findings presented in the preceding chapters are discussed in Chapter 6. This chapter gives an initial overview of the purpose of the study. This is followed by a look at the key findings, new knowledge that the study identifies and their implications for policy and practice. The final chapter (7) presents the summary and recommendation of the study. The key findings of the research and its contribution to knowledge are presented in this section. Further, the study's limitations and recommendations for future research are provided. The final part of the chapter presents the conclusion.

CHAPTER 2: THE RESEARCH CONTEXT

2.1 Introduction

Globally, inclusive education legally goes beyond the right to educational access as enshrined in the Universal Declaration of Human Rights (United Nations, 1948) or the removal of barriers declared in the United Nations Convention on the Rights of Persons with Disabilities (2006). It also looks at commitment to ensuring that all children, regardless of their needs, access 'child-centred pedagogy capable of meeting their individual needs' (UNESCO, 1994). Sustainable Development Goal 4 also aims to provide equitable and quality inclusive education for all learners (United Nations, 2015). Thus, to nations that signed on to this education system, inclusion implies adopting a child-centred pedagogical approach to learning that values diversity. This implies that teachers need to consider diversity in their practices when planning and delivering lessons. Despite these policies, evidence suggests that the disadvantaged are mainly left behind in teaching and learning (UNESCO, 2020). There is, therefore, the need to focus on what aspects of teachers' pedagogies and practices cause the exclusion of some learners.

Ghana has committed to the call for inclusion by ratifying international policies and enacting policies that expand access to quality education for all learners. Critical among these policies and legislations are the Disability Act (2006) and the Inclusive Education Policy of Ghana, 2015. The Disability Act of Ghana seeks to provide better learning opportunities for persons with disabilities in schools by promoting assessment and early detection (Government of Ghana, 2006). On the other hand, the Inclusive Education Policy (2015) promotes more inclusive opportunities for a broader range of children with special educational needs by ensuring the removal of barriers to education and providing flexible environments for all. However, despite the disability prevalence of 130,000 (1.6%) among children between 4 and 7 years old, only 29,000 were enrolled in basic and senior secondary education (Ministry of Education, 2018). The overall enrolment covered 0.2% to 0.4% (Ministry of Education, 2018). The situation may have changed because this data was drawn from the 2010 population and housing census. Also, compared with those without disabilities, children with special needs have lower attendance rates (Ministry of Education, 2018). Further, issues relating to the lower proportion of trained teachers to support learners with special needs have contributed to the significant difference between the learning outcomes of children with and without disabilities (Ministry of Education, 2018). Though the new educational reform (as set out in the 2018-2030

Education Strategic Plan of Ghana) commits to improving access and participation in inclusive education by addressing challenges inherent in the education system (Ministry of Education, 2018), there are growing concerns about teachers' abilities to teach in the inclusive classrooms as in many parts of the world.

2.2 Historical perspectives of inclusive education

Historically, the development of inclusive education in Ghana has followed a similar trajectory to that of many developing countries (Anson-Yevu, 1988; Ametepee & Anastasiou, 2015), with policy playing a significant role. Because the inclusive agenda represents a shift from special needs education, recounting special needs education in Ghana is imperative. Evidence suggests that the education of children identified with disabilities in Ghana can be traced to pre-independence days (1936-1956) (Ametepee & Anastasiou, 2015). The provision of formal education for children with disabilities was influenced by missionaries who established the first school in 1945 for the visually and hearing impaired (Anson-Yevu, 1988; Avoke, 2001; Ametepee & Anastasiou, 2015). However, before 1954, individuals considered to have intellectual disabilities were housed in the same hospital as those diagnosed with mental health illnesses at the Accra psychiatric hospital (Avoke, 2001). The lack of awareness and inability to identify differences between mental health issues and intellectual disabilities were factors that led to the housing of individuals with such conditions in the same environment. (Avoke, 2001). However, issues relating to cultural belief systems that tagged children with disabilities as evil and connected them to spirits or punishment from the gods, as demonstrated in studies such as Avoke (2001) and Anthony (2011), could have fuelled a lack of interest in the education of children with intellectual and other disabilities.

Ametepee and Anastasiou (2015) divide the historical trend of inclusive education in Ghana into three stages. The early special efforts occurred between pre-independence 1936 and 1956, the independence period between 1957 and 1993, and the period from 1990 to the present, when emphasis is placed on inclusive education (Ametepee & Anastasiou, 2015). The following section presents a summary of these stages.

2.2.1 The Pre-independence phase

The pre-independence phase accounts for the development of special education before Ghana gained independence between 1936 and 1956. During this period, children with mild to moderate disabilities were trained in vocations and trades similar to those available to their

typically developing peers (Ametepee & Anastasiou, 2015). The first special school established in 1946 by missionaries focused on blind and deaf learners at Akropong-Akwapem in the Eastern region of Ghana. Their education covered literacy and vocational skills in basketry using local resources (Ansaon-Yevu, 1988; Avoke, 2001). The Basel Mission initiated this move in 1945 with the special school for students with visual impairments and orthopaedic challenges. This initiative was followed by establishing another school for the visually impaired in Wa, in the Northern region of Ghana, by the Presbyterian and Methodist churches (Arthur & Chen, 2023). Appendix M references the regions in Ghana.

2.2.2 Independence stage between 1957 and 1993

The second stage saw the establishment and development of the public special schools system. At independence in 1957, Ghana took charge of its education system from Britain and began the roadmap for educational development (Ametepee & Anastasiou, 2015). In 1960, the Ministry of Labour and Social Welfare handed over special education affairs to the Ministry of Education, with the special education division subsequently taking complete charge of special schools in 1972.

The enactment of The Education Act of 1961 marked the beginning of a takeover of Ghana's education system by the government of Ghana from colonial powers (Ametepee & Anastasiou, 2015). The Act provided the initial grounds for all children, including those with disabilities, to receive free and compulsory basic education. This was followed by the establishment of several special schools. The Castle Road Special School and Dzorwulu Special Schools in Accra, the capital of Ghana, were established in 1971 and 1972, respectively. These were followed by the Sekondi Twin City Special School (1976) in the Western region and the Kumasi Garden City Special Schools (Ashanti region) in 1977. In addition to the publicly funded special schools mentioned above, the New Horizon Special School, a private institution, was established in 1972. Others include the Three Kings Special School in Bator, Shalom Special School (Nkoranza), Father John Unit School (Winneba), Tamale Yumba-BA Special School, Hohoe School for the Deaf (Kassah, Kasssah & Phillips, 2017) and the Cape Coast School for the deaf-blind (refer to the map of Ghana in Appendix M).

2.2.3 The era of inclusion from mid 1990s to date

The early 90s saw international emphasis on inclusive education with growth in policy initiatives. However, the impact of such policies was not strongly felt in Ghana until the ratification of the Salamanca statement and framework of action in 1994 (Ametepee & Anastasiou, 2015). In addition to the Salamanca, other international policies such as the Dakar Framework for Action, 2000 (UNESCO, 2000) and Convention for the Right of Persons with Disabilities (2006) influenced the government of Ghana's policies such as the Disability Act of 2006 and the Inclusive Education policy, 2015.

2.2.4 Current education structure of Ghana

Ghana's formal education system is structured into two main levels, which focus on providing universal education from early childhood to tertiary. These include the pre-tertiary and Tertiary education levels. Pre-tertiary education involves three main levels: two years of kindergarten, six years of primary school, three years of junior high, and three years of senior high education, now known as basic education. These are sub-divided into:

- Key Phase 1 (Foundation level comprising Kindergarten 1 & 2),
- Key Phase 2 (Lower primary level made up of B1 to B3],
- Key Phase 3 [Upper primary level of Basic (B) 4 to Basic 6],
- Key Phase 4 (Junior high school level of B7 to B9], and
- Key Phase 5 (Senior high school (SHS) level comprising SHS1- SHS3] (Ministry of Education, 2018a)

Thus, Basic education spans 14 years of an individual learner's life, from age 4 when a child enters KG to age 18, after which they may continue their education in any of the tertiary institutions (Nursing training, Colleges of Education, Technical Universities, Traditional Universities). Figure 1 presents a summary of the structure of Ghana's education system

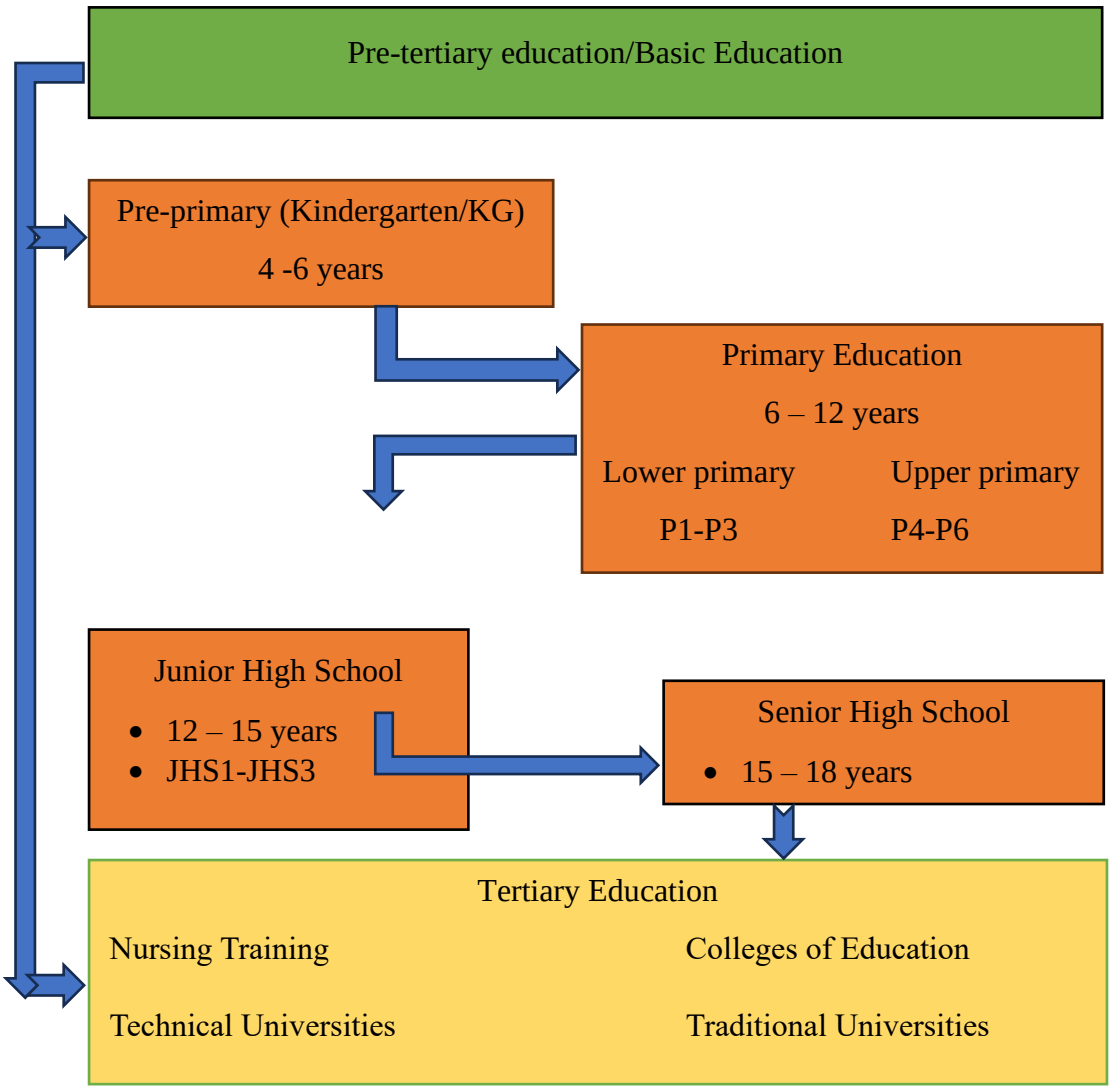

Figure 1: Summary of the education structure of Ghana

The formal education structure begins with kindergarten at age four and is the foundation for formal schooling. KG builds in the early years of children the desire to learn and prepares them for formal learning in the future. The lower primary phase promotes early exposure and supports children in developing foundational skills and abilities. The upper primary stage aims to establish a strong foundation for inquiry, creativity, innovation and lifelong learning while preparing learners for higher education (GoG, 2002 Ministry of Education, 2018a). The Junior High School phase, which covers twelve to fifteen years, allows students to explore their individual interests, aptitudes, and abilities (Ministry of Education, 2018a). The last phase of the basic education level (Senior High School/ SHS) lasts for three years. It offers individual learners opportunities to study subjects such as General Arts, Science, Technical and Vocational and Business, along with apprenticeship training. Students at this level acquire both

academic knowledge and skills needed for further education and training at the tertiary level. After successfully completing the West African Secondary School Certificate Examination (WASSCE), graduates can be admitted to any tertiary and specialised institutions (Ministry of Education, 2018a).

2.3 Tracing policy attempts to formalise inclusive education in Ghana

2.3.1 Education Act of 1961 (ACT 87) and Education ACT of Ghana, 2008 (ACT 778)

As noted in previous discussions, legalising education for individuals identified with special needs in Ghana began mainly with the enactment of the Education Act of 1961 (ACT 87), which places education within a social justice framework, ensuring that all children of school-going age are not deprived of this right. Notably, the Act treats special schools the same as other mainstream schools (for instance, in Sections 7 [1][b], 11 [1] and 21 [1]), making it a joint responsibility of the education and local government ministers (Government of Ghana, 1961). Further, special education is defined in the Act as "a school providing a course of instruction, approved by the Minister, for children who are blind, deaf and dumb or in any other manner physically handicapped or mentally affected." While inclusion is not mentioned in this document, this attempt is noteworthy because it indicates political will and commitment towards educating vulnerable children who would have been deprived of the right to education.

A notable policy direction towards formalising inclusive education occurred with the enactment of the Education ACT of Ghana, 2008 (ACT 778). Section 5 of the ACT is dedicated to inclusive education and supported by Section 6, which outlines issues related to medical examination and social welfare for children with special needs. Firstly, inclusive education is defined in the Education ACT, 2008 as,

> The value system which holds that all persons who attend an educational institution are entitled to equal access to learning, achievement and the pursuit of excellence in all aspects of their education; and which transcends the idea of physical location but incorporates the basic value that promotes participation, friendship and interaction. (Government of Ghana, 2008, p. 5).

This definition upholds the importance of ensuring that no learner in school is deprived of the opportunity to learn and succeed in the same manner as their peers. It also suggests that both the physical and social environments should be designed to ensure that all learners feel

welcomed and participate in all aspects of learning. Further, section 5 (1, 2) enjoins District Assemblies and special educational institutions to design school facilities, make them user-friendly and improve upon facilities/ provide others. In Section 5 (3), parents are encouraged to enrol their children with special needs in "the appropriate educational facility" or, "subject to the availability of resources, make a request for the provision of the appropriate education facility" (Government of Ghana, 2008, p. 5). While the focus on promoting equal access, participation and friendship for all learners is interesting as it promotes inclusion, these provisions also seem to promote special needs education. Additionally, aspects of the definition of inclusive education provided in the ACT suggest that there may be some out-of-school persons.

2.3.2 The Education Strategic Plans (ESP) (2003-2015 and 2018 - 2030)

The education strategic plans (ESP) provided a significant pathway for educating people with special educational needs. The ESP, 2003-2015 outlined specific targets such as designing inclusive early childhood programmes by 2005, improving attendance of learners with special educational needs to 50% by 2008, 80% by 2012 and 100% by 2015 and achieving inclusive education, particularly for those with mild to moderate special needs (Ministry of Education, 2003). While these targets were clearly outlined in the ESP, the achievability was questioned (Ametepee & Anastasiou, 2015). Following a study to evaluate progress made by Ghana in the wake of these policy decisions, Ametepee & Anastasiou (2015) observed from data provided by the MoE (2012a) and World Bank (2010) an initial doubling of the number of people receiving special and inclusive services between 2003 and 2009 and subsequent stability. They also assigned the tripling of growth in special education provisions to increases in special and inclusive education schools, with these mainly below the demand for such services (Ametepee & Anastasiou, 2015). Regarding the goals of the Education Strategic Plan 2003-2015, Ametepee and Anastasiou (2015) reported growth in six. Synchronising data from MoE (2012a), Ghana Statistical Service (2006) and World Health Organisation (2004), Ametepee & Anastasiou (2015) found that only 3% of children with disabilities in Ghana had received some form of education by 2011/12. Further, data from 2006/07 and 2011/12 indicated that the number of students with mild to moderate disabilities increased from 309 to 8000 (MoESS, 2008; 2012). While these numbers suggest improvement in enrolment for children with disabilities, (Ametepee & Anastasiou, 2015) argued that the inclusive system seemed ineffective. This assertion was perhaps due to disability prevalence and expected rate of increase. It was also observed that although some achievements had been made regarding

developing pathways to screening and identifying children with special needs and organising sensitisation workshops for parents about inclusion, progress in training teachers was inadequate (Ametepee & Anastasiou, 2015). Additionally, despite the target of opening 170 assessment centres in all the districts by 2004, only four had been established by 2011/12, and all were located in urban areas. Apart from the inadequacy of resources available to these resource centres, two were dedicated to assessing hearing loss, and the others were multi-purpose (Ametepee & Anastasiou, 2015). The inclusive education implementation in Ghana then was saddled with resource challenges leading to the non-achievement of major goals.

However, within this period, the Disability Act of 2006 (ACT 715) was enacted to mainly improve the lives of children with disabilities. The Act was considered an important landmark because it provided the education of Persons with Disabilities (PWDs), giving hope to such individuals (Asante & Sosu, 2015). However, these educational provisions focus on integration rather than full inclusion as they seek just access to schools. For example, Section 20 (1) of the Disability Act enjoins all general education schools to admit children with disabilities unless a recommendation is given by ministers responsible for education and social welfare and through careful assessment that they require special education. It promotes the integration of special education courses, such as sign language and braille lessons, in public technical, vocational and teacher education curricula. It also improves some public infrastructures, such as libraries (Section 22), to make them disability friendly. However, the Disability Act seems to emphasise the provision of special education with little said about promoting inclusive learning for children with special needs. For example, it makes provisions for the establishment of special schools in each region and resources to enable individuals with disabilities to benefit from school activities in addition to providing free education (Government of Ghana, 2006). Coupled with the fact that the education of individuals with disabilities in Ghana is centred around special schools (Kassah, Kassah & Phillips, 2017), shifting from the parallel system could be challenging. To date, Ghana continues to institutionalise some learners with special needs while others have their education in the general classroom.

Currently, special schools continue to provide education for children with severe to profound visual, hearing, intellectual and developmental disabilities. Children with mild to moderate disabilities, specific learning difficulties and other forms of special educational needs, such as orthopaedic impairments, receive their education within mainstream schools. However, it is worth noting that there are mainstream schools (also called inclusive schools) in Ghana that

currently admit and educate children with profound disabilities together with their peers without special educational needs. Further evidence gathered during my practice revealed that children with severe to profound disabilities are present in some regular classrooms. The debate, therefore, goes beyond the possibility of educating children with such difficulties and their peers without any form of special needs together in the same classroom. Given the resource challenges the mainstream schools face, it hangs mainly on whether such educational systems can provide quality learning support for them. The above reflects the complex nature of inclusive education and practice in the research context.

Following the previous Education Strategic Plan (2003-2015) and the 2007 educational reforms, the educational sector was partitioned to include Inclusive and Special Education. The aim was to include children excluded in general education schools, special schools, and special units (MoE, 2012). To meet inclusive parameters, the ESP 2010-2020 encouraged the design of school infrastructure and other facilities to ensure they meet the needs of learners identified with special educational needs. These projections appear similar to earlier ones. However, unlike others, the ESP 2010-2020 clearly outlined three main principles guiding inclusive and special needs education provision. These included "the right to education, the right to equality of educational opportunities and the right and obligation to be included in and participate fully in the affairs of society" (MoE, 2012, p. 17). Among the nine strategies to achieve inclusive and special education objectives are:

> a) Create and sustain public awareness of disability and special educational needs. b) Determine the prevalence rates of various disabilities and special educational needs. c) Conduct early comprehensive assessments of all learners experiencing educational difficulties for appropriate mainstream and special placement and intervention. d) Increase equitable access to high-quality educational opportunities in mainstream pre-tertiary and tertiary institutions for those with disabilities and special needs. e) Provide for and safeguard the rights of learners and young people with disabilities. f) Increase enrolment of girls with disabilities at the pre-tertiary levels. g) Ensure that those with disabilities/special needs acquire appropriate technical and vocational skills for full community integration. h) Strengthen and improve Special Educational planning and management. i) Promote the development of ICT-based solutions to enhance the educational opportunities of learners and young people with disabilities and special needs.

These were to promote equal learning opportunities for all students. A critical indicative target is achieving a fully inclusive education system by 2015. One goal within the strategic framework for developing the inclusive and special education sub-sector was to "Provide education for excluded children (including those who are physically and/or mentally impaired or disabled, slow/fast learners, orphans, young mothers, street" (MoE, 2012, p. 26). To achieve the set goal, socio-humanistic strategies involved including deprived children in the prevailing education system or making special provisions for them. Furthermore, all physically or intellectually disadvantaged children whose conditions were not severe were to be included in the regular institutions. At the same time, special units or educational facilities would be provided for those with severe disabilities.

Regarding improving special education, the ESP 2010-2020 focused on ensuring the provision of appropriate teaching and learning resources, including public libraries with necessary facilities to ensure students' development (MoE, 2012). Therefore, budgetary allocations for each targeted year from 2011 to 2020 steadily increased. An interesting initiative in the Education Strategic Plan 2010 related to prioritising mainstreaming children with mild disabilities. It explains the creation of special units for children with disabilities within regular contexts.

2.3.3 Piloting of inclusive education in Ghana

The realisation of the goals of inclusive education began with the first pilot programme in the 2003-2004 academic year. It involved 60 schools selected from 11 districts in the three regions-Greater Accra (the capital of Ghana), Central and Eastern regions (Gadagbui, 2008; Agbenyega & Deku, 2011; Opoku et al., 2015). The pilot programme was later extended to 46 districts in the 10 regions to cover 429 schools. According to the 2013 Ministry of Education sector report, enrolment of children with disabilities had reached 16,596. The progress in enrolment numbers was attributed to the increased intake of children with disabilities in general education schools (Opoku et al., 2015). The studies revealed that the pilot programmes did not achieve the desired results due to unfavourable learning environments, negative attitudes, resource limitations, and ineffective pedagogical approaches (Opoku et al., 2015; Opoku et al., 2017). Other issues included the assertion that the piloting schools were not representative of schools and districts in the country (Opoku et al., 2017). Further, Opoku et al. (2017) noted that the pilot programmes were uncoordinated because they were primarily funded by international organisations that had their priorities. Because sponsoring organisations lacked knowledge

about the context, such projects sometimes failed (Kalyanpur, 2014). It was, therefore, argued that developing a policy framework could provide a framework for operation (Agbenyega, 2007).

2.3.4 Ghana's inclusive education policy, 2015.

The launch of the inclusive education policy of Ghana in 2016 was a significant step in implementing inclusive education in Ghana. The policy provides a framework for promoting equitable, quality, inclusive learning for children at risk of marginalisation. The overarching aim of the inclusive education policy is "to redefine and recast the delivery and management of educational services to respond to the diverse needs of all learners within the framework of Universal Design for Learning and Child-Friendly School Concept" (MoE, 2015). The policy sets out four objectives to achieve the goal. The first objective looks at adapting systems and structures to ensure they meet the needs of all children and reflect inclusive education issues. These include turning existing special schools into resource centres to aid mainstream schools, adapting physical structures, developing an inter-agency approach to dealing with inclusive issues, forming new standards and providing necessary funds to promote the inclusion agenda (MoE, 2015). Objective two focuses on using appropriate inclusive pedagogy and creating safe and friendly learning for children. The UDL is identified as the main inclusive pedagogical approach to support quality education for all learners in a friendly learning environment. Curriculum modifications, assessment processes, and teaching and learning materials should be made here.

Additionally, the policy promotes the training and deployment of human resources, including class teachers, resource teachers and special educational needs coordinators and supports them with adequate resources. Further, it ensures the removal of physical and social barriers to ensure a safe and friendly learning environment for all students. It also encourages the involvement of parents and communities (MoE, 2015). The third objective focuses on building professional capacity through training. Under this objective, the policy seeks to improve pre-service and in-service training on creating inclusive classrooms, sensitise stakeholders such as head teachers and school administrators and build the capacity of resource teachers, assessment personnel, health workers, child protection and career advisors. Further, it aims to sensitise parents, community members, and traditional authorities to issues related to disabilities and special needs through the media (MoE, 2015). The final objective looks at the sustainability aspect of inclusive education. This objective promotes the provision of materials and

equipment, developing standards and guidelines for implementing the policy and ensuring the inclusivity of services for children.

Subsequently, the standard and guidelines for the inclusive education policy implementation were published in the same year, anchoring on two main action aims:

1. Forging a holistic approach to education which ensures that the concerns of marginalised and excluded groups are incorporated in all education activities and cooperating to reduce wasteful repetition and fragmentation. 2. Making education accessible to, and functional for all learners with special educational needs. A safer, easier and friendly environment for all learners benefits everyone. (MoE, 2015b)

The policy implementation is anchored on four standards. Standard one includes actions needed to ensure that all students have access to schools and are accommodated in structural designs. The document captures various designs or drafts of what should be expected in a school building (ramps, doorways, toilet facilities and classroom furniture). Standard two is about upholding health and safety in schools. It ensures that schools have requisite first aid materials and qualified personnel. Further, it notes that school environments should be secured with appropriate fencing and safe roads. Standard three focuses on ensuring that schools give all students opportunities to gain quality learning. This covers four key issues: the learning process, student, personnel and resources. The fourth standard considers monitoring and reviewing students' (with special needs) progress. This standard promotes monitoring classroom activities, assessments and learners using appropriately designed tools.

The Education Strategic Plan (ESP) 2018-2030, like the previous one (2010-2020), anchors on seven programmes with inclusive and special education as a key block (Ministry of Education (MoE), 2018). This ESP seeks to align its goals to SDG 4, which focuses on improving access to quality education and participation in inclusive education at all levels for individuals with disabilities and vulnerable and talented people. The difference between the ESP 2018-2030 and previous ones is that it adopts the position that inclusive education policy focuses on a broader range of children at risk of marginalisation. Previous Education Strategic Plans, however, focused on children with disabilities.

The 2018 Education Sector Performance Report identified positive outcomes of the implementation of the inclusive education policy targets. They included programmes on early

intervention for visually impaired children in six districts and the production of brailed manuals to be used by teachers to educate children on HIV/AIDS (MoE, 2018b). The report further indicated that 18,310 children with special needs (mainly mild and moderate disabilities) had enrolled in regular inclusive schools in 20 focus districts. However, reports indicate challenges with the enrolment gap and data issues. Despite disability prevalence of 1.6% among children between the ages of 4 and 17, enrolment for children at the Basic education level is low (0.5). For Kindergarten and Senior High School children with disabilities, enrolments are between 0.2 and 0.4 (MoE, 2018). This suggests that a significant percentage (about 0.5% or more) of these learners are not accounted for or may be out of school. Further, a recent Ghana Statistical Service report on school resources and children with special educational needs indicates that the 2021 Population and Housing Census reveals that 219,022 children aged 5-15 experience difficulty performing various activities (Ghana Statistical Service, 2023). Of these, 35,609 (16%) have never attended school. Over a quarter of out-of-school children with special needs are concentrated in 14 districts in the Northern region of Ghana. The report further reveals that 42 districts recorded more than half of children with speech difficulties, with the highest incidence in the Ashanti Region (Ghana Statistical Service, 2023). Additionally, children with severe hearing, sight, memory, concentration, and physical disabilities are disproportionately found in several districts, with significant numbers of those never attending school in southern Ghana, particularly those with severe self-care difficulties (Ghana Statistical Service, 2023). Despite the above, data regarding children with other forms of disabilities and the enrolment or presence of learners with special educational needs in mainstream schools is either lacking or limited.

Although data regarding the proportion of learners with special educational needs (SEN) in mainstream schools remains scarce, existing evidence indicates that most SEN children in Ghana receive their education in special schools across various regions. However, it is noteworthy that five of the country's sixteen regions - specifically Northeast, Savannah, Oti, Bono, and Western North—lack special education schools or dedicated facilities for educating children with special needs (Ghana Statistical Service, 2023). Figure 2 provides information about special education facilities in Ghana. Figure 2 provides information about special education facilities in Ghana.

Figure 2: Special Education Facilities in Ghana (Ghana Statistical Service, 2023, p. 6)

Further, there is a notable disparity in infrastructure between urban and rural schools (Singal et al., 2015). Urban schools typically have greater access to material resources, improved facilities, and a higher concentration of trained teachers, which enables them to offer more practical education, particularly for learners with special educational needs. In contrast, rural schools often experience infrastructural deficiencies, a lack of specialised resources, and insufficient trained personnel (Agyire-Tettey, 2017; Singal et al., 2015). These inequalities have a substantial impact on the overall quality of education, particularly for children with special educational needs, hindering their ability to receive an equitable and effective education.

The impact of resource inadequacies, unfriendly school facilities and perceived stigmatisation towards children with special needs was being felt (MoE, 2018; UNICEF, 2017). Such issues result from severe underfunding of the inclusive and special education sub-sector, as

acknowledged in the ESP 2018-2030 and reported in the Education Sector Performance Report 2018. These issues have been reported in several studies. Additionally, a major objective of the inclusive education policy (also acknowledged by the ESPs) is to develop well-informed and trained teachers in inclusive education and effective approaches to meet the diverse needs of learners (MoE, 2015). However, studies and reports continue to show that the lack of well-trained teachers remains a major barrier to the success of inclusive programmes (Opoku et al., 2015; Senadza et al., 2019; Adjanku, 2020). A significant number of in-service and pre-service teachers rate their training as inadequate (Senadza et al., 2019). This situation is exacerbated by limited knowledge of inclusive education policy and guidelines (Senadza et al., 2019). The inadequate training and knowledge could be associated with teachers' lack of confidence towards teaching in an inclusive setting (Deku & Vanderpuye, 2017; Mantey, 2014). Moreover, teachers' pedagogical skills are said to lack consideration for the diverse learning needs of students (Agbenyega & Deku, 2011). Adopting ineffective inclusive pedagogical practices limits learning for some children and excludes other vulnerable learners (Agbenyega & Davis, 2015). These issues contribute to the performance gap between children with disabilities and their typically developing peers (MoE, 2018).

2.4 Chapter summary

Ghana has made significant policy commitments towards advancing inclusive education and ensuring equitable, quality education for all learners. The enactment of the Inclusive Education Policy framework, 2015, and subsequent guidelines provide a clear pathway to carry out the inclusive agenda effectively. Continued policy considerations and progress in pilot studies and research also testify to Ghana's decision to ensure that vulnerable learners are not left behind. However, there are critical issues that need to be addressed. These include challenges with the gap in data about children with disabilities and unavailable data for children with other forms of special educational needs. Others include addressing barriers to the implementation of inclusive education, which were discussed in earlier paragraphs. Critical among these barriers relate to inadequate knowledge and training of teachers about inclusive pedagogical approaches. Although it is agreed that teachers play a pivotal role in promoting quality learning and anecdotal reports show that they are developing various practices to support all learners, information about their inclusive pedagogical practices remains sparse. Therefore, there is a need to focus attention on teachers' classroom practices to generate adequate knowledge about what they do and provide the needed pedagogical skills to enhance inclusion in classes.

CHAPTER 3: LITERATURE REVIEW

3.1 Introduction

This chapter reviews relevant literature relating to the purpose of the study. It is structured in four sections to reflect the overall aim of the study and the sub-research questions. The first section presents the theoretical framework that underpins this study. This provided an overarching framework for other discussions. The second section begins by reviewing various definitions and understandings of inclusion, the principles that support this education system, and the forms of inclusive practices identified in the literature. This is followed by how inclusive pedagogy is conceptualised. Section three identifies inclusive pedagogical approaches, including the Universal Design for Learning (UDL), The Three-Block Model (TBM), Differentiated Instruction (DI) and the Inclusive Pedagogical Approach framework (IPA) commonly found in the literature. The basic principles and assumptions of the various approaches are critically discussed. Empirical studies identified in literature both globally and in the research context are carefully examined under each of the inclusive pedagogical approaches. This section of the chapter also presents arguments about the relevance of developing special inclusive pedagogies. Further, other factors that impact teachers' inclusive pedagogical practices are discussed. The fourth section teases out the gaps identified in the literature and summarises the chapter.

The review includes educational articles, reports, books and theses gathered from major databases and search engines such as Google Scholar, Educational Resources Information Centre (ERIC), PsyclNFO, Education Full-Text, Web of Science, Science Direct and SUPrimo library catalogue of the University of Strathclyde. Search terms included keywords and concepts such as inclusive pedagogy, inclusive education, inclusive practices, inclusion, special educational needs, regular education classrooms, inclusive learning approaches, teachers and a combination of these terms. Sentences used to guide the literature search include the following: (1) How do teachers define (understand) inclusive education (inclusive practice and inclusive pedagogy)? (2) What are the differences between inclusive education, inclusive practice and inclusive pedagogy? (3) How do teachers conceptualise inclusive pedagogy? (4) What are the research outcomes on teachers' inclusive pedagogy? (5) What are some examples of inclusive pedagogical approaches? (6) How do teachers in primary classes enact inclusive pedagogy? (7) Research outcomes on inclusive pedagogy in Ghana. (8) Inclusive teaching

strategies and ordinary teaching strategies. Figure 3 below presents a summary of the literature review.

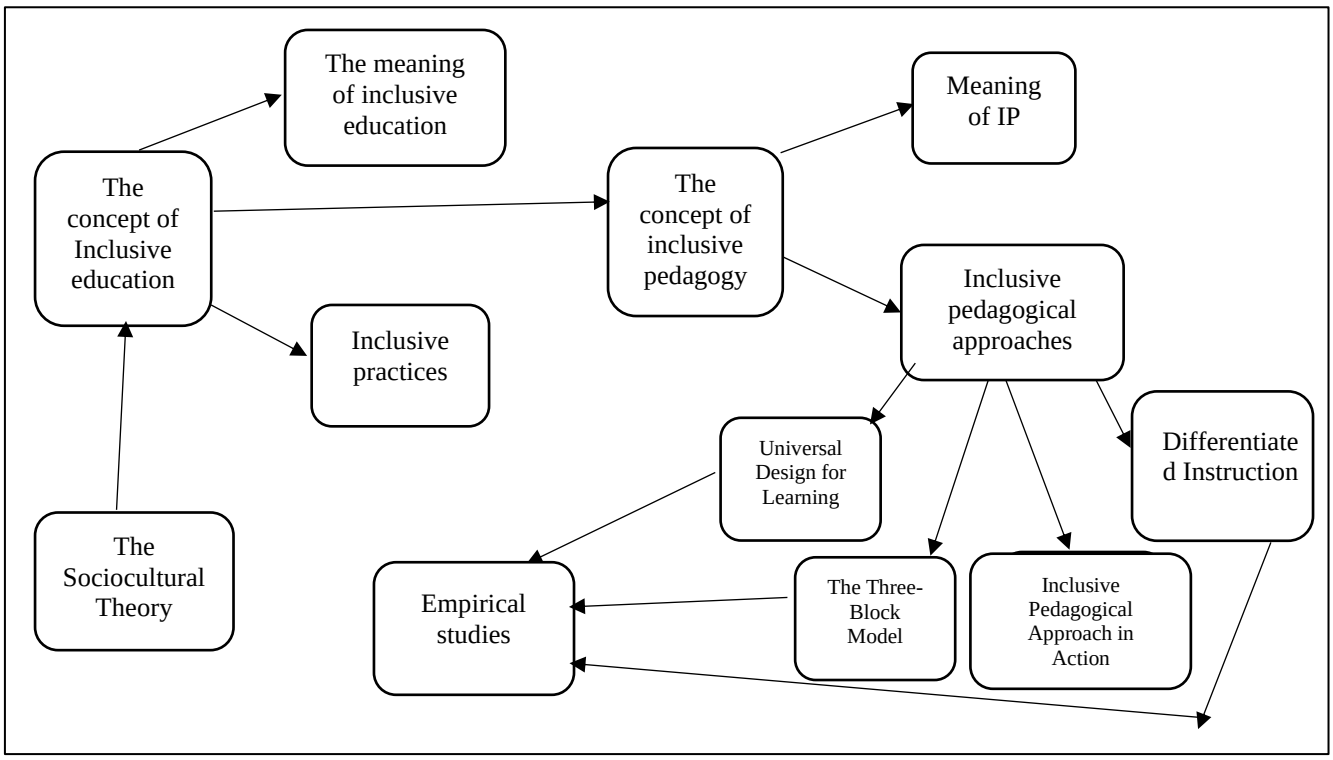

Figure 3: Summary of Literature review

3.2 The Sociocultural Theory

The sociocultural theory was adopted to underpin this study. Ideas about society's position, learners' immediate environment, and capable classroom members in promoting the inclusion of children with special educational needs (SEN) were discussed. Further, suggestions about how SEN could be viewed to enrich learning were considered. Justifications about the choice of the sociocultural theory and how its ideas could promote inclusive pedagogy were also presented.

A significant aspect of Vygotsky's work looks at the development of the mind from a sociocultural perspective. The sociocultural theory fundamentally posits that the development of children is a socially mediated process (Vygotsky, 1978). It implies that children acquire behaviour or experiences chiefly through social relationships. Emphasising the impact of socialisation on development, Vygotsky examined the relationship between culture and the child's development. According to Vygotsky (1981, p. 163),

> "Any function in the child's cultural development appears twice or on two planes. First, it appears on the social plane and, later, on the psychological plane first, between two people as an inter-psychological category, and then within as an intra-psychological category." (cited by Dixon-Trauss, 1996, p. 10)

Thus, higher mental capacity within the learner grows from relationships between people (Vygotsky, 1978). Wertsch and Tulviste (1992) argued that higher mental functioning originates from social life where interpersonal relationships exist. This implies that people learn by first engaging in interaction with their society. This learning is later integrated into the individual's mental structure, resulting in improved cognitive function. The concept of internalisation involves the progressive movement of knowledge gained from social activities to the individual's internal controls (Vygotsky, 1981; Dixon-Trauss, 1996). Thus, a learner's cognitive abilities could be improved depending on their interrelationships with people in their immediate social environment. This study argues that teachers can help improve learners' cognitive processes if they improve the quality of social relationships in classrooms. While this process may not be easy while supporting children identified with special educational needs (SEN), they would benefit from quality mediation of the interaction process.

3.2.1 Mediated learning and the Zone of Proximal Development (XPD)

The sociocultural theory regards society as paramount in developing improved mental capacity (De Valenzuela, 2006). It further posits that learning occurs through interaction with the learner's social environment and humans because higher mental functioning is derived from an individual's social life (Wertsch, 1991). Thus, one cannot detach learning and the development of the mind from societal and cultural influence.

Vygotsky (1978) considered the role of members of a child's immediate environment as crucial to their development. This was illustrated with the Zone of Proximal Development (ZPD). The ZPD represents the difference between a child's current actual level of development and their potential performance level or capacity (Vygotsky, 1978; Dixon-Trauss, 1996; Shabani & Khatib, 2010). In other words, the ZPD is the gap between what the child can do now and the level they can achieve with the support of a more capable individual. Vygotsky (1978) argued that this gap can be closed only through collaboration with more capable individuals (adults or other students). Hence, the child cannot reach their potential without the support of such individuals. It means that children learn better with the aid of others. Through collaboration

with others with higher abilities, individuals learn and internalise new concepts. Bronfenbrenner (2005) explains the idea of the 'Proximal Process' as a complex reciprocal interaction that takes place between humans and their immediate environment. This process of collaboration, therefore, requires mutual interaction among subjects, which forms the "primary engine of development" of the child (Bronfenbrenner, 2005, p. 6).

The ZPD offers children with SEN a better opportunity to develop new knowledge and skills to navigate the academic and social challenges they face in the regular classroom. To achieve this, teachers need to design their pedagogies in ways that create adequate opportunities for them to interact with their peers. While working with others may be quite challenging for some children with SEN, teachers can use social negotiation.

The ZPD suggests that every child, regardless of their needs, has a potential capacity to learn above their current level of achievement. Teachers should, therefore, have high expectations for children with SEN. However, this is usually not the case in regular classrooms. Because some children with SEN are unable to perform similar academic tasks as their typically developing peers, teachers have low expectations for them.

The notion of mediation is considered in sociocultural theory as necessary to enhance the cognitive function of learners (Vygotsky, 1978). For children to develop higher mental capacities, learning must travel from the external (social environment) to the internal (internalisation of learning) (Vygotsky, 1962). This process can be effectively carried out through mediated learning. Therefore, the sociocultural considers social mediation an important tool to facilitate the internalisation of learning (Shabani & Khatib, 2010). This depends on the mutual understanding between the learner and teacher (Dixon-Krauss, 1996), which is also known as intersubjectivity (Wertsch, 1991). It follows that to achieve learning, there should be mutual interaction and collaboration between actors in the learning space.

The fundamental principles of the sociocultural theory are important to achieving inclusive education and social inclusion as enshrined in the sustainable development goal four. The researcher deduced three major ideas from the tenets of the sociocultural theory as discussed above. First, children's social environment, including individuals such as their teachers, peers and learning environment, play crucial roles in their learning. An effective inclusive pedagogy requires that teachers focus on developing practices and activities around the children's

immediate social environment. This is because assimilating contents may be relatively easy when organised around things familiar to the learner. Developing pedagogical approaches, activities and teaching and learning materials around common, familiar things in the immediate environment provides children (with SEN in particular) the opportunity to connect what is being learned to existing knowledge.

Second, collaborative work between children, teachers and peers should be emphasised to achieve learning and cognitive development. Teamwork among class teachers, resource teachers and other classroom community members is critical to promote effective inclusive pedagogy. Teachers have been encouraged to believe in their ability to work with others to develop their practices to support all students, including those with SEN, in their classes (Florian & Spratt, 2013). However, the effectiveness of this approach depends on a clear definition of the roles of the other participants involved. It also requires teachers' understanding that they play a pivotal role in facilitating this process.

Third, the notion of the ZPD suggests that (a) all learners possess relatively differential levels of abilities, (b) there is a difference between every child's current and potential levels of ability, (c) to close this gap, learners must be provided with step-by-step guidance by more capable other who may include their teachers, peers and other important professionals such as resource teachers. Developing practical, inclusive pedagogical approaches may be more challenging depending on the characteristics of the children in classes.

3.2.2 The idea of Defectology

Vygotsky's work on 'Defectology' is one of his contributions to the sociocultural theory. Vygotsky (1993) simplifies the view on defectology in this example: 'blindness is not merely a defect, a minus, a weakness, but in some sense is also the source of manifestations of abilities, a plus, a strength (however strange or paradoxical this may seem)" (p. 97). This is consistent with the suggestion that to achieve inclusive teaching, teachers should see the individual differences of learners as a form of diversity that enriches the teaching and learning process (Florian & Spratt, 2013). It follows that children's learning difficulties must be viewed more positively to enrich the learning process.

In contrast with the view of disability as a biological problem resident within an individual, Vygotsky recognised disability as a social and cultural issue (De Valenzuela, 2014). Like other

researchers who believe in the social cause of disability, Vygotsky considers disability as a result of the dissonance between individuals and the sociocultural environment in which they live (Vygotsky, 1993). It follows that understanding disability in classrooms and schools should not be directed to difficulties within the child. Instead, attention should be directed towards society. Thus, to enhance participation and promote educational outcomes for all learners, including those with disabilities, the sociocultural environment should be appropriately examined and structured to ensure no one is disadvantaged.

By thinking about disability and special educational needs (SEN) as a way of enriching the learning process, teachers move away from looking at children with SEN as inadequate. They enact pedagogical practices that create rich learning opportunities for all learners rather than those which treat some learners with SEN as different (Florian, 2015). These are visible in activities and practices such as the use of TLMs, distributions of questions, group work or pairing of learners and class assignments.

To foster learning for all children, including those with special needs, teaching and learning should be designed to involve everyone within the learning environment if the roles peers play are critical to enhancing the development of one another. There is a need for a careful choice of pedagogical approaches and practices that encourage teamwork within the classroom because the individual learns more effectively when working with others (Shabani & Khatib, 2010). It is important to note that various learners present different ability levels. However, this difference should not lead to differential treatment if real collaboration is to be achieved. Additionally, teachers seen as more capable individuals within the learning space should serve as guides or role models, not lords of knowledge (Akpan & Beard, 2016), providing scaffolding opportunities for learners to build upon their knowledge and experiences gradually. Finally, for learning to occur in an inclusive and collaborative environment where teachers and other learners work together, everyone, especially teachers, should believe in the ability of all to learn.

The principles of scaffolding, collaboration, and the view of disability as an enrichment, not a weakness, to teaching and learning fall within the domain of inclusive pedagogy. Therefore, with the purpose of this research, that is, to examine and understand the nature of teachers' inclusive pedagogical practice, I consider the sociocultural theoretical paradigm the most appropriate theoretical basis for the study.

3.2.3 Sociocultural theory and the present study

The sociocultural theory was chosen because it helped present a critical analysis of teachers' inclusive pedagogical practices and achieve the study's overarching aim. Inclusive pedagogy and sociocultural theory build on learning as a shared rather than an individualised process. The sociocultural theoretical perspective enables the examination of individual differences in learning through the lens of various social variables rather than concentrating exclusively on internal factors within the learner (Florian, 2015). This viewpoint helps teachers to think critically about the social contexts in which learners in the classes find themselves and issues that affect the development of some learners. Additionally, teachers can adapt their pedagogies to respond to the diverse needs of all learners. This study looks at how teachers respond to the learning needs of some learners identified with special educational needs (SEN) in lessons within their classrooms. Here, the classroom is considered as the learners' immediate social environment. Apart from children with special educational needs, members of the mainstream classroom include the class teacher, the typically developing peers and sometimes, the resource teacher and other professionals who provide teaching support. These people function as more capable individuals who work together to mediate learning and help children with SEN overcome issues within their zone of proximal development. However, the activities of such individuals must be coordinated by the teacher. While teachers think about how to harness the potential of other classroom and school community members to support children with SEN, they learn new ways of enacting more inclusive pedagogical practices.

Furthermore, the idea of defectology helps teachers to find more constructive ways of thinking about disabilities and special needs. From a sociocultural perspective, teachers consider special educational needs and disabilities as a means of enriching the learning process rather than a problem. This thinking reflects on their reactions to issues and interactions with children with SEN.

3.3 Inclusion and its associated discourses

This section discusses inclusive education (IE) and the complexities associated with its conceptualisation and practice. It focuses on how inclusive education has been defined and the principles and practices that promote these systems of education. Further, this section discusses how inclusive pedagogy (IP) is conceptualised by teachers and how this and other factors influence their practices.

3.3.1 The concept of inclusive education

Due to its complexities, the concept of inclusive education has been difficult to define (Mitchell, 2010). This poses a significant challenge to developing a universally accepted definition. Thus, related terms such as inclusive practice and inclusive pedagogy are unclear, and many people use them interchangeably. Although these expressions may be similar, there are differences.

The following quote by Artiles and colleagues is an interesting way to begin discussions about defining IE: "In theory, inclusive education is about all students and focuses on student presence, participation, acceptance, and achievement. In practice, inclusive education is a multiplicity of discourses and practices." (Artiles et al., 2007, p. 2). In short, the above quote gives an idea of what inclusive education entails: the totality of what it should entail (in theory) and what it actually is (in practice). These reflect the views of most authors on the concept of inclusion, arguing that the contested nature of its definition and the subsequent contextualisation of practice poses challenges to implementation across societies (Armstrong, Armstrong & Spandagou, 2011; Krischler, Powel & Cate, 2019). This is reiterated in the statement that discourses around inclusive education lack conceptual clarity (Artiles et al., 2007). Therefore, this creates the continuous emergence of meanings ascribed to inclusion in education (Lindqvist & Nilholm, 2014; Magnusson, 2019) and other concepts associated with this concept.

The discourse of inclusion and debates surrounding the meaning of inclusive education has generated different perspectives. Despite the complexities surrounding the concept of inclusion, some attempts have been made to define or describe it. Table 1 presents an extract of these definitions.

Table 1: Samples of definitions of inclusive education

Definitions
The processes of increasing the participation of students in, and reducing their exclusion from, the cultures, curricula and communities of local schools. *Booth and Ainscow, 2002, p.3).*
Inclusive education is not a denial of individual difference, but an accommodation of it within the structures and processes that are available to all learners. *(Florian, 2005)*
Inclusive education reflects values and principles and is concerned with challenging the ways in which educational systems reproduce and perpetuate social inequalities with regard to marginalised and excluded groups of students across a range of abilities, characteristics, developmental trajectories, and socioeconomic circumstances. *Liasidou (2012, p. 168)*
A useful way of understanding inclusion is to consider the polar opposite, exclusion. Inclusive education can be viewed as a process of removing barriers to participation. *Loreman (2017, p. 1)*
Inclusive education refers to securing and guaranteeing the right of all children to access, presence, participation and success in their local regular school. Inclusive education calls upon neighbourhood schools to build their capacity to eliminate barriers to access, presence, participation, and achievement in order to be able to provide excellent educational experiences and outcomes for all children and young people. *(Slee, 2018, p. 8)*
A process intended to respond to students' diversity by increasing their participation and reducing exclusion within and from education. It is related to the attendance, participation and achievement of all students, especially those who, due to different reasons, are excluded or at risk of being marginalized. *(UNESCO, 2008, p. 13)*
Inclusive education entails identifying and removing barriers and providing reasonable accommodation, enabling every learner to participate and achieve within mainstream settings. *(WHO & World Bank 2011, p. 210)*
Inclusion is defined in its broadest sense as ensuring access and learning for all children: especially those disadvantaged from linguistic, ethnic, gender, geographic or religious minority, from an economically impoverished background as well as children with special needs including those with disabilities. *(Ministry of Education, 2015, p. 4)- Ghana's inclusive education policy*

Evident from the above, there has been no consensus about a single definition of inclusive education. However, there appears to be an agreement that inclusion is a right, with almost all the definitions presented above seeking to promote equitable quality education for all children regardless of their challenges. The definitions presented reflect two main conceptions of inclusions. These are narrow and broad perspectives of inclusive education (Ainscow et al., 2006). Ainscow et al. (2006) refer to the narrow definition of inclusive education, which focuses on promoting the inclusion of children with disabilities and special educational needs

in general education schools. In such definitions, the discussion of inclusion is centred on disabilities or special educational needs. On the other hand, the broader definition looks at supporting the diverse needs of all learners (Ainscow et al., 2006; Ainscow & César, 2006); UNESCO, 2001). These two perspectives generally represent how inclusive education is practised in different contexts.

Ainscow and César (2006) identified five ways of thinking about the concept of inclusion. These were based on the premise that no single country or school (educator) has one view of inclusive education (Booth & Ainscow, 1998; Dyson & Millward, 2000). The typologies are described below.

First is inclusion, which concerns itself with disability and special educational needs. This notion of inclusive education forms on the assumption of inclusion, which basically refers to educating children categorised as disabled or with special educational needs. Ainscow and César (2006) noted that this approach has been questioned because it emphasises disability or special needs in promoting participation for learners, neglecting the different barriers that inhibit a student's participation. This approach, therefore, reemphasises ideas such as the deficit model, which places the barriers to education within individual impairments (Ainscow et al., 2006). They, however, acknowledge that not recognising the special needs aspects of learners poses a risk of ignoring the discourse of segregation of children identified with disabilities (Ainscow et al., 2006), which is advocated by different disability groups arguing in favour of special education as an effective way to meet the needs of some individuals.

Second, *inclusion as a response to disciplinary exclusion (*Ainscow et al., 2006, p.234*)*. Here, inclusion is seen mainly as creating opportunities for children with special needs, which focuses mainly on those identified as having behavioural difficulties (Ainscow et al., 2006). Hence, while this type of inclusion resembles the former, its focus is mainly on other groups rather than disabilities.

The third classification is related to the inclusion of vulnerable groups. This involves avoiding the discrimination of individuals considered as broadly vulnerable and stand the chance of exclusion (Ainscow & César, 2006). The 'vulnerable' group is usually used to refer to individuals at risk of being unable to access quality education. To them, the challenge of this

approach is found in its focus on incorporating students identified as diverse among those perceived as normal rather than transforming the learning environment to value diversity. Fourth, inclusion as promoting education for all (Ainscow et al., 2006). 'The Education for All' broadly seeks to address how vulnerable individuals, including those with disabilities and a disproportionate number of girls, are denied participation in education (UNESCO, 2000).

Similarly, Göransson and Nilholm (2014) developed four qualitative categories of inclusive education definitions, analysing research on inclusion from 2004 to 2012. They include (A) *Placement definition*–which refers to where students with disabilities or special needs are placed. This suggests mainstreaming – where and when to place learners (Nilholm, 2020) or integrating process where learners identified with special educational needs are provided with special support in general education classrooms. (B) *Specified individualised definition* includes category A and implies providing the social and academic needs of learners with disabilities or special needs. (C) General individualised definition includes category B but refers to all learners. This implies that inclusion means meeting all learners' social and academic needs. (D) Community definition– implies creating communities in schools. This category puts the idea of community (for all learners) at the centre of the discourse. Such communities in the learning environments promote equity and care (Erwin & Guintini, 2000; Villa & Thousand, 2000) and have the potential to create welcoming classroom communities for all learners, including those identified with special needs (Villa & Thousand, 2000; Göransson and Nilholm (2014). They also provide safe spaces that encourage the participation of all learners within the learning community. These various typologies of inclusion further demonstrate the challenges in developing an ideal definition for the concept. It also reaffirms the existence of different practices in diverse contexts, hence the reality of and need for operationalisation of its meaning in individual studies.

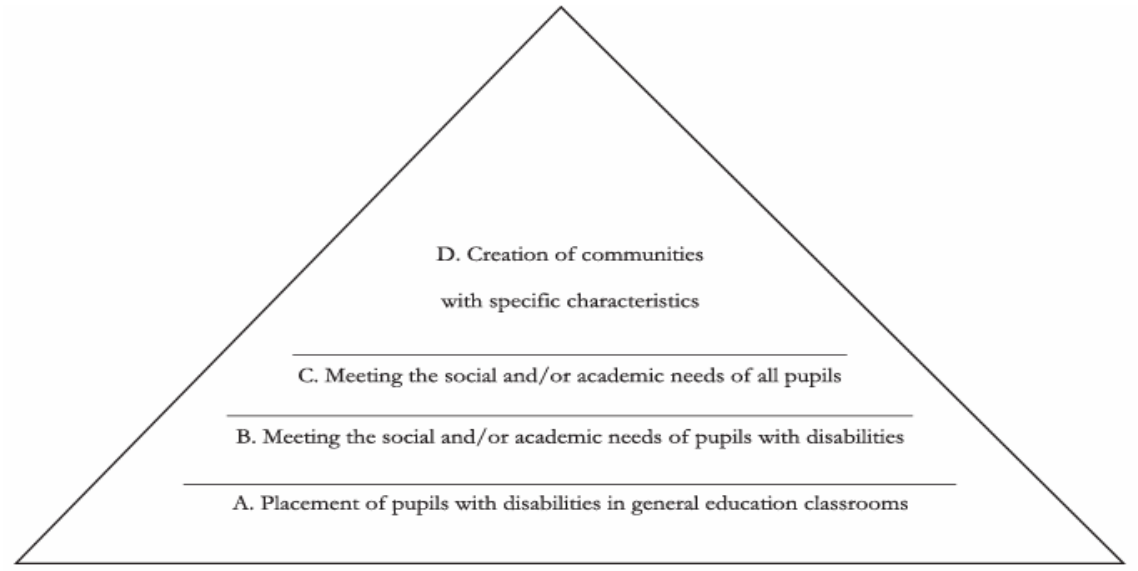

Figure 4: Categories of inclusion and their hierarchical relationships by Göransson & Nilholm, (2014, p. 268)

Despite the confusion surrounding the concept of inclusive education, its gaining international recognition and endorsement indicates its importance in education. Also, despite the view adopted nationally or internationally, inclusive education requires the removal of all social barriers that promote the exclusion of some learners in the classroom. This has been presumed to begin with steps towards social justice in education, where education is believed to be a fundamental "human right and the foundation for a more just society" (Ainscow et al., 2006). Therefore, understanding inclusive education means defining how it is practised in each context (Nilholm, 2020). Thus, it must be understood with respect to values adopted in various cultures and the broader social context.

The Inclusive education policy of Ghana adopts a broad definition of inclusion to include a wide range of disadvantaged individuals and those at risk of being marginalised. Inclusion is defined in the policy document as the practice of "ensuring access and learning for all children: especially those disadvantaged from linguistic, ethnic, gender, geographic or religious minority, from an economically impoverished background as well as children with special needs including those with disabilities." (Ministry of Education, 2015, p. 3). This aligns with the position of UNESCO (1994). Thus, the policy focuses on meeting the needs of all children identified with special educational needs. In the policy, special educational needs cover learners said to have disabilities and face all kinds of barriers that affect their ability to make optimal educational progress (Ministry of Education, 2015).

This study draws from the definition of UNESCO (2005):

> …a process of addressing and responding to the diversity of needs of all learners through increasing participation in learning, cultures and communities, and reducing exclusion within and from education. It involves changes and modification in content, approaches, structures and strategies, with a common vision which covers all children of the regular system to educate all children (p.13).

Thus, in this research, inclusion is operationalised as a process of creating opportunities for all learners in the classroom to participate fully in all forms of learning and activities. It involves the removal of all forms of social, individual and instructional barriers that hinder full participation in class activities. This implies creating safe classroom communities that value diversity and providing for the academic and social needs of all pupils, including those identified as needing special support, through adaptations. This begins with the belief that learners with special needs have learning abilities that can be a source of enriching learning. Further, despite the broad view of inclusion adopted by the Ghanaian inclusive policy, this research focuses on children identified with special educational needs. This view was adopted by experience and knowledge of the research context and what most teachers consider special needs. However, most of the participants in this research considered special needs instead in the light of disabilities.

Currently, the literature presents no single definition that has been agreed. Learners' diversity in different contexts and constant change in their characteristics require continuous development of flexible and adaptive practices in teaching and learning (Darling-Hammond, 2006; Trussler & Robinson, 2015). The needs of learners change depending on time, place and circumstances. This implies that the concept of inclusion is seen differently depending on when and where and is relative to the experiences of both teachers and learners within individual classroom or school contexts. This makes the whole concept of inclusive education and its practice complex. However, inclusive education is considered not necessarily treating some people differently or all children in the same way (OFSTED, 2007). Instead, it requires considering all learners' needs and learning experiences while designing or delivering lessons. Inclusion education basically implies "Every learner matters and matters equally." (UNESCO, 2017, p. 12). Thus, an inclusive education system should value diversity and consider every learner as a full classroom member, regardless of their need.

3.3.2 Differences in inclusion practice

The various conceptualisations of inclusive education described above indicate that no uniform practice exists in different contexts. A non-universal definition means no universally prescribed practice. It implies that the form that inclusive practice takes depends on the context. However, as in the case of the definitions, typologies have been identified in inclusive education. Guralnick (2001), in an attempt to discuss a framework for the development of early childhood inclusion, identified four typologies of inclusive programmes: *Full inclusion, cluster inclusion, reverse inclusion, and social inclusion.* The characteristics of these practices are summarised in Table 2 below. Guralnick (2001) argued that these practices represented the placement options available for children with special needs at the time.

Table 2: Types of inclusion (Guralnick, 2001)

Type	Features
Full inclusion	1. Children are full participants in general programmes 2. Activities are adapted to the needs of children 3. IEPs are drawn to ensure curriculum accommodation 4. Intermittent or continuous service of special educators and specialists is used 5. The general educator remains responsible for all learners
Cluster inclusion	1. A small number of learners with disabilities are drawn to join the typically developing ones 2. Special staff are allocated to children with disabilities 3. Children with disabilities are assigned to separate areas in the programme or classroom Children with disabilities are expected to participate in most, not all activities 4. General class teacher is responsible 5. Constant presence of special education teacher
Reverse inclusion	1. A small group of typically growing children is added to specialised classes 2. Early childhood special education teachers are responsible for the programme 3. Accommodations are made for typically growing children
Social inclusion	1. Children with and without disabilities are housed in the same general location 2. Children with disabilities have separate spaces 3. Separate staff are provided 4. Contact between learners is usually planned and it happen during play and other recreational activities

Loreman (2017, p. 1) reemphasised the idea of localising inclusive practice by arguing that "In order to discern what inclusive education is, it is necessary to consider local conceptualisations of childhood and children's rights, models, and structures of schooling, societal norms, and other regional conditions." Thus, inclusive education must be localised.

3.4 The concept of Pedagogy

The concept of pedagogy, like other terminologies, is contested. This results from complexities regarding contextual issues and assumptions that underlie the process of teaching and learning (Mortimore, 1999; Beetham & Sharpe, 2007). Pedagogy has been defined as a science of teaching (Mortimore, 1999; Beetham & Sharpe, 2007; Murphy, 2008) which involves adopting rigorous procedures, defined models, approaches and evaluative methodologies (Beetham & Sharpe, 2007) and a body of defined theory and how they are applied in the teaching process (Trigwell et al., 2000). The scientific basis of pedagogy may have evolved from development of ideas that considered learners as passive receivers of knowledge rather than active participants in this process. As the art of teaching, pedagogy mainly reflects an innate, creative ability to present knowledge, which raises questions. There is the question of whether teachers are born with the ability to 'define, describe and reproduce good teaching' (Shulman, 1987, p. 12). Shulman's (1987, p. 11) idea of the existence of "abled teachers" whose work could be collected, examined and put together to provide a body of knowledge for all exemplifies pedagogy as an art.

However, pedagogy as the science or art of teaching has been contested because it places much emphasis on the teacher to the neglect of the learner (Beetham & Sharpe, 2007). Theories of learning that emerged earlier projected the learner as an object of science that can be 'observed, normalised and regulated' (Murphy, 2008). Additionally, people are left to identify what science or arts consists of (Mortimore, 1999). This conception of pedagogy was abandoned and schools became more focused on the social and disciplinary dimensions of learning, which emphasised on the inculcation of social or moral values (Murphy, 2008).

Shulman (1987) argued that teaching goes through a cycle of comprehension, transformation, instruction, evaluation and reflection. In their Pedagogical Reasoning in Action, Shulman (1987) explained that *comprehension* reflects teachers' critical examination and understanding of ideas around the content, different ways it could be taught, when they teach and how the

content relates to other ideas in the same and other subject areas. *Transformation* involves modifying the ideas to be transmitted in ways that learners can receive. It involves preparing the given material, representing the ideas in new forms, selecting a teaching method, and adapting the presentation to meet the characteristics of learners in the classroom. *Instruction* includes approaches such as presentation, interactions, group work and questioning, active teaching, discovery enquiry instruction and explicit teaching. *Evaluation* involves testing learners' understanding of content either during or at the end of the lesson. Finally, *reflection* involves reflecting on what has been done to reconstruct or refine one's work and experiences (Shulman, 1987). Pedagogy in Lee Shulman's proposition is comprehensively described to cover pre-, during and post-teaching practices. This view has been criticised in the sense that it assumes an absolute, indisputable and fixed state and that testable knowledge should be didactic rather than a pedagogic process (Murphy, 2008). However, Lee Shulman's views of *Transformation, Instruction, Evaluation* and *Reflection* reflect current discourses of curriculum and instructional adaptations and reflective practices critical to learning in general and inclusion in particular. Besides, didactics focuses on the process through which one acquires knowledge and moves away from the actual practice, which is an important component of pedagogy (Murphy, 2008).

Similar to Shulman's conceptualisation of pedagogy is Alexander's (2004) definition of pedagogy as "what one needs to know, and the skills one needs to command, in order to make and justify the many different kinds of decisions of which teaching is constituted" (p. 11) which presents some fundamental issues. Based on this definition, pedagogy includes knowledge, skills, choices, and justification for such decisions. One important point of convergence between Shulman's (1987) and Alexander's (2004) views of pedagogy is that they both establish a strong basis for knowledge in conceptualising pedagogy. Shulman (1987) enumerates knowledge of content, teaching materials and structure, literature and theories and knowledge derived from teacher reflections and rationalisation as important pedagogical sources. The wisdom of practice provides avenues for teacher reflections and rationalisation. Further, Norwich and Lewis (2007) expand on the idea of knowledge by suggesting four kinds of knowledge that a teacher must possess: (1) Knowledge of oneself, which relates to their value and professional identity; (2) Knowledge of the characteristics of learners; (3) Knowledge of the psychology of learning required to enhance teaching; (4) Knowledge of the subject matter and strategies. Skills include planning, executing, and evaluating what is learnt (Alexander, 2004).

Contemporarily, pedagogy is placed on a broad spectrum ranging from teacher-centred and learner-centred pedagogies (UNESCO, 2021). This conceptualisation draws from the views of Murphy (2008) and Beetham and Sharp (2007). Murphy (2008) defined pedagogy as the 'interactions between teachers, students, and the learning environment and the learning tasks' (Murphy, 2008, p. 35), while Beetham & Sharpe (2007) noted that 'pedagogy embraces an essential dialogue between teaching and learning' (p.2). The teacher-learner relationship emphasised here as critical to teaching and learning presents two main pedagogical approaches. First, teacher-centred pedagogy refers to the approach that places the teacher at the centre and the primary source of knowledge (Westbrook et al., 2013; UNESCO, 2021). The second is the learner-centred pedagogy, where the learner becomes an active player and a co-creator of knowledge and experience. The learner-centred view of pedagogy evolved from child-centred learning theories (Murphy, 2008) that argue that children are not a *tabula rasa* and should be treated as active participants in knowledge construction (Akpan & Beard, 2016).

Thus, although pedagogy is a contested term, it could be broadly described as including knowledge of teaching and learning approaches; all activities enacted during the learning process take into account teachers' and learners' experiences (including learning needs). It should also consider the content(what) and context (where—the nature of the environment) of learning. Finally, pedagogy should carefully consider the relationships or interactions between the teacher and learner as critical.

3.5 Pedagogy and inclusive pedagogy

Following the discussion on pedagogy, it is apparent that pedagogy is pivotal to an effective education system. The concept of pedagogy provides the basic operative process for teaching and learning in classrooms. Therefore, the difference between pedagogy and inclusive pedagogy is in the extension of the former to promote inclusive learning for all students. In other words, while pedagogy generally looks at teaching and learning, inclusive pedagogy specifically defines how the former should be framed to ensure diversity, equity and participation in the same classroom. This connection is clarified in Loreman's (2017, p. 2) quote: "Without effective pedagogy, we have no operative method of education, and without purposeful and effective inclusive pedagogy, we have no basis for meaningful inclusion." Loreman's quote defines the critical role of inclusive pedagogy in successfully implementing inclusive education. It also creates the impression that inclusive pedagogy may come in two forms: effective and ineffective inclusive pedagogy. While this is a useful starter for

discussions about the concept of inclusive pedagogy, there appears to be a lack of agreement regarding its meaning and nature. This reemphasises the complexity of the concept of inclusive education. Hart and Drummond's (2014) principles typify teacher-learner relationships in an inclusive pedagogical approach:

1. The principle of everybody indicates the teacher's responsibility towards learners, where they commit to ensuring all the students' education is in their care.
2. The principle of co-agency- all children in the classroom are considered active participants in their education
3. The principle of trust- teachers have trust in the children's desire and ability to learn but do not blame them for their refusal to do so. Here, responsibility is laid on the teacher to find alternative ways of learning regarding varying teaching activities, materials or alterations in the environment.

The above sets the ground for discourses about how inclusive pedagogy is conceptualised. The following section discusses what inclusive pedagogy means, what it looks like, and its impact on children's learning. It also presents examples of inclusive pedagogical approaches suggested in literature and arguments surrounding their use to achieve inclusion in classrooms. Further, studies are sampled to aid a critical discussion of the concept of inclusive pedagogical practices, which forms the focus of this study.

3.6 Conceptualising inclusive pedagogy

Like the concepts discussed in the earlier sections, identifying a single definition for inclusive pedagogy has been challenging. However, attempts have been made to link the concept of inclusive pedagogy to various ideas. For example, relating to the concept of *Connective Pedagogy*, Corbett (2001) conceptualised inclusive pedagogy as a form of teaching that initially connects to the pupil's preferred learning approach and, subsequently, their curriculum and society. This approach opens learning possibilities within the same environment, fostering teacher-learner interaction to improve learning (Corbett, 2001). Also, inclusive pedagogy is "an approach that aims to make learning as accessible and welcoming to all students as possible." (Sanger, 2020, p. 32). According to Sanger (2020), inclusive pedagogy aims at ensuring equitable access to education and success in the learning environment. Further, inclusive pedagogy is considered a teaching and learning approach that helps practitioners

respond to individual learning needs (Florian & Spratt, 2013; Florian, 2014*;* Florian & Beaton, 2018).

The commonalities in these views about inclusive pedagogy are in the promotion of equitable learning, achievement and respect for diversity in the same learning environment. This implies the need to promote learning for all, not just some. Thus, "teaching inclusively is central to this approach." (Makoelle, 2014, p. 1260). Although inclusive pedagogy is usually thought of as a teaching strategy or method, it is also conceived by others to include almost all aspects of the teaching and learning process. Makoelle (2014), for example, considers inclusive pedagogy as the entirety of the teaching and learning process, including methods, approaches, and principles that promote the participation of all learners. The concept has also been extended to discuss teacher beliefs and collaboration (Florian & Spratt, 2013). Such factors are considered practically fundamental to effective inclusive teaching. Guðjónsdóttir and Óskarsdóttir (2016) thus observed that inclusive pedagogy is about teachers' understanding of inclusion and other issues relating to how to teach in inclusive schools. The ongoing conversation affirms the conclusion that there is no universal definition for the concept of inclusive pedagogy (Makoelle, 2014). It is, however, clear that while inclusive pedagogy encapsulates other things, such as beliefs, emphasis is placed on how teaching and learning are done. This implies how inclusively teachers craft and deliver the curriculum to all classroom learners. It involves the range of instructional approaches used, various practices and activities teachers enact, how learning materials are used, and methods of lesson evaluation adopted to support all learners during the lesson.

However, some argue that inclusive pedagogy recognises and seeks to contain differences among learners by "extending what is ordinarily available to all rather than differentiating for some" (Florian, 2015, p. 13). This raises concerns about the existence of specific pedagogies for inclusion. The following section discusses the need for teachers to possess special skills beyond what they already know and to teach inclusively.

3.6.1 The idea of special pedagogies for inclusion

Issues about using special pedagogies in lessons have surfaced in inclusive education discourses. There is, however, limited literature in support of this topic. In 2013, Rix et al. (2013) examined provisions made for children with special educational needs (SEN) and how these are conceptualised, operationalised and enacted in international contexts. They reviewed

documents from fifty-five (55) countries, surveyed views and interviewed individuals in ten (10) countries (4 continents) on how children with special needs are supported. The study reported a lack of clear evidence or suggestions of distinctive pedagogies for teaching (Rix et al., 2013). Meijer (2001) also identified *Cooperative teaching/co-teaching/team teaching, Cooperative learning/peer tutoring, Individual planning and Collaborative problem solving* as practices that were used to effectively support inclusive education (p. 117). The instructional strategies identified are commonly used in any classroom context regardless of the characteristics of the children. Hence, Rix et al. (2013) concluded that effective pedagogy is based on skills that teachers already possess. Norwich & Lewis (2007), therefore, advised teachers to build on the knowledge they have about themselves, theories of learning, the curriculum, general pedagogies and the nature of learners) to support all learners. There is, however, growing concern about how the varying needs of children with severe and profound disabilities could be met with special pedagogies. This debate, therefore, remains unending.

3.6.2 Common inclusive pedagogical models

The literature provides four main examples of inclusive pedagogical approaches. These include the Universal Design for Learning (UDL) by the Centre for Applied Special Technology (CAST) (Rose, Gravel & Gordon, 2014), the Three-Block Model (Katz, 2012), and the Differentiated Instruction and The Inclusive Pedagogical Approach framework by Florian and Spratt (2013).

3.6.2.1 The Universal Design for Learning (UDL)

Since its development in the 1990s, the Centre for Applied Special Technology (CAST) has drawn on research in cognition and learning to elaborate on the diverse processes through which individuals acquire knowledge (Rose, Gravel, & Gordon, 2014; Rao & Meo, 2016). Differences in how people learn are seen as a norm rather than as an exception (Glass, Meyer & Rose, 2013). It implies that differences in learning abilities among students in the same classroom remain a reality and must be treated as normal. This is because every learner possesses different cognitive, perceptual and emotional abilities, which may be complicated by cultural, linguistic and contextual differences (Glass, Meyer & Rose, 2013). Thus, the UDL focuses on promoting accessible learning to all and ensuring every learner succeeds (Rose, Gravel & Gordon, 2014; Sokal & Katz, 2015).

Contrary to the belief that it was designed to support learners with SEN mainly, the UDL is considered an important inclusive pedagogical approach which improves access to learning for students with diverse cultural and linguistic backgrounds (Mckenzie et al., 2021; Chita-Tegmark et al., 2012; Sokal & Katz, 2015; Rao, 2015; Ok et al., 2017). The UDL is considered a transformational framework that helps proactively evaluate and translate curriculum, activities and resources (Rose & Meyer, 2002; Glass, Meyer & Rose, 2013). It supports designing "curriculum resources, instructional practices and assessments" to achieve lesson goals (Ok et al., 2017). The UDL can support educators in designing teaching and learning that address the needs of all learners, including those with special needs (Rao & Meo, 2016; Rao, 2015; Chita-Tegmark et al., 2012; King-Sears, 2009). This goal is achieved by ensuring flexibility in curriculum and instruction and providing various opportunities to meet the learning needs of different learners within the same learning environment (Rose & Gravel, 2009). It rejects the notion of a one-size-fits-all approach to learning (Rose & Gravel, 2009; Ok et al., 2017), where all learners are treated similarly without regard to differences in needs.

The UDL is organised on three broad principles that support the design and development of curriculum in ways that encourage the inclusion of all learners (Glass, Meyer & Rose, 2013). The guiding principles of the UDL include *Multiple means of engagement, Multiple means of representation and Multiple means of action and expression.* The principles reflect affective (the why of learning), recognition (the what of learning) and strategic (the how of learning) networks (CAST, 2018), which represent the *what, why and how* of learning, respectively fostering the learning of all (Rose & Meyer, 2002). The framework involves nine guidelines, including recruiting interest, sustaining efforts and self-regulation (under engagement); perception, language and symbols and comprehension (under representation); physical action, expression and communication and executive functions (under action and expression) (CAST, 2018). The nine guidelines and 31 checkpoints provide a set of concrete directions applicable in any discipline (CAST, 2018) to support teachers in inculcating flexibility in their lessons (Hall, Meyer, & Rose, 2012). They also support evidence-based teaching practices that support students' different learning needs (Hall, Meyer, & Rose, 2012). Table 3 summarises the principles and guidelines of the CAST's UDL.

Table 3: A summary of the UDL (CAST, 2018)

Provide multiple means of Engagement Affective Networks The "WHY" of learning	Provide multiple means of Representation " of learning Recognition Networks The "WHAT" of learning	Provide multiple means of Action & Expression Strategic Networks The "HOW
Provide options for Recruiting Interest Optimize individual choice and autonomy Optimize relevance, value, and authenticity Minimize threats and distractions (checkpoint7.3)	Provide options for Perception Offer ways of customizing the display of information Offer alternatives for auditory information Offer alternatives for visual information	Provide options for Physical Action Vary the methods for response and navigation Optimize access to tools and assistive technologies
Provide options for Sustaining Effort & Persistence Heighten salience of goals and objectives Vary demands and resources to optimize challenge Foster collaboration and community Increase mastery-oriented feedback	Provide options for Language & Symbols Clarify vocabulary and symbols (checkpoint2.1) Clarify syntax and structure Support decoding of text, mathematical notation, and symbols Promote understanding across languages Illustrate through multiple media	Provide options for Expression & Communication Use multiple media for communication Use multiple tools for construction and composition Build fluencies with graduated levels of support for practice and performance
Provide options for Self-Regulation Promote expectations and beliefs that optimize motivation Facilitate personal coping skills and strategies Develop self-assessment and reflection	Provide options for Comprehension Activate or supply background knowledge Highlight patterns, critical features, big ideas, and relationships Guide information processing and visualization Maximize transfer and generalization	Provide options for Executive Functions Guide appropriate goal setting Support planning and strategy development Facilitate managing information and resources Enhance capacity for monitoring progress

The first principle of the UDL is *Multiple means of engagement*. This principle, which focuses on the affective domain of learning, hinges on the assumption that all learners differ regarding how they are motivated to engage or participate in learning (CAST, 2018). While some learners are motivated to learn in groups, others prefer to work alone. Multiple means of engagement require the identification of how to motivate learning to tailor instructions to suit their interest and learning styles (Loreman, 2017). This also implies providing various options to ensure optimum classroom learning (CAST, 2018). By providing a range of activities and methods that are accessible, teachers can sustain all learners' interests and engagement in activities in their environment (Mckenzie et al., 2021). These have implications for sustaining students' efforts, which consequently encourage self-regulation. Learners must be provided with opportunities to choose or contribute to lesson objectives and means of realisation.

Additionally, activities and information could be varied to ensure that they consider the learner's ability and individual learner's personal, social and cultural development (CAST, 2018). By this, all barriers and threats should be removed to ensure no child is deprived of such positive learning opportunities. Further, consistency in the focus on learning goals and objectives must be maintained. There must be alternative provision of resources and varying degrees of complexity, flexible and collaborative experiences within the community, and timely, constructive feedback to ensure mastery of lessons (CAST, 2018). Finally, self-regulation requires motivating learners by promoting positive beliefs among them, giving students chances to develop their own coping styles and supporting learners to engage in self-assessment through modelling (Meyer, Rose & Gordon, 2016; CAST, 2018).

Principle two is *Multiple means of representation*. This principle answers the "What" question. There are differences in how learners conceptualise and comprehend the information they receive (CAST, 2018). This may result from their disabilities (sensory or learning) and linguistic or cultural differences (CAST, 2018), which means learning is achieved through different means for different individuals. Thus, to achieve learning for all students within the classroom, teachers need to present their lessons in a variety of ways (CAST, 2018), present their lessons through different media and provide various examples of work that represent varying levels of difficulty (Mckenzie et al., 2021; CAST, 2018). This principle requires teachers and learners to develop various open and flexible communicative styles (Loreman, 2017). Under the multiple means of representation principle, teachers are encouraged to promote an easy perception of information for all learners by offering alternative ways of presenting lessons (CAST, 2018). Teachers are advised to promote understanding information by supplying background knowledge of what is being learnt, enhancing visualisation and information processing, and promoting easy knowledge transfer (CAST, 2018).

Principle 3 refers to providing *Multiple means of action and expression*. The third principle assumes that learners are different in the way they can create their learning environment and communicate the outcome of their learning (CAST, 2018; Meyer, Rose & Gordon, 2016). Individuals with difficulties, including movement, coordination, and language challenges, approach learning in different ways (CAST, 2018). It implies giving learners multiple options to express what they learn by differentiating strategies through which they do that (Mckenzie et al., 2021).

To allow learners to approach learning in ways that benefit them, teachers must ensure that materials, tools, and technologies are easily accessible. Teaching and learning methods must vary to respond to individual learning needs by reducing barriers evident in the physical environment (CAST, 2018). Students must be supported to use diverse means of communicating or sharing what they have learned with others. Additionally, learners should be helped to plan their own learning targets. Teachers must provide prompts and scaffolds to support students' development of challenging but realistic personal objectives. Also, students should be supported in managing the available resources to achieve their goals (CAST, 2018). Finally, providing regular and timely feedback helps learners know their progress and guides them through self-monitoring and reflective thinking (Rose, Gravel & Gordon, 2014; CAST, 2018).

The guidelines presented under the three broad principles of the UDL provide opportunities to incorporate flexibility in the curriculum and the teaching and learning process (Rao & Meo, 2016; Meyer, Rose & Gordon, 2016). The various guidelines and checklists can aid teachers in designing plans to support learners' academic and learning needs (Rao & Meo, 2016). The checklist promotes physical access (various methods of accessing and expressing information), cognitive access (scaffolding opportunities for learners to achieve learning goals) and alternative means of engaging learners (Rao & Meo, 2016; Ok et al., 2017). The UDL is increasingly receiving attention as an effective framework that supports the achievement of the goals of inclusive education (Mckenzie et al., 2021; Rao & Meo, 2016). This is because it is seen as a teaching approach that helps to eliminate or reduce learning hindrances and promote diversity in the teaching process (Ok et al., 2017; CAST, 2018; Mckenzie et al., 2021). In light of these benefits, in the 2020 Global Education Monitoring Report, UNESCO encouraged all countries to integrate the UDL and make it an integral part of their inclusive education policy frameworks (UNESCO, 2020). Similarly, the inclusive education policy of Ghana in 2015 aims to provide effective, equitable, inclusive learning opportunities for all learners through the use of the UDL guidelines. This is because the principles of the UDL are based on scientific learning that helps teachers develop a curriculum that promotes effective inclusion for all learners (Glass, Meyer & Rose, 2013; Rose & Meyer, 2002).

Additionally, the UDL is seen as a pedagogical approach that promotes inclusivity because of its ability to predict and accommodate the diverse neural, developmental and contextual differences among learners. (Glass, Meyer and Rose, 2013). This suggests that inclusive

learning demands planning for both predictable and unpredictable elements that can influence the learning process. These elements manifest in disabilities or contextual characteristics of the learner and their learning environments. Predictable features such as linguistic challenges allow educators to inculcate strategies into the planning process to provide scaffolds to facilitate learners' understanding (Glass, Meyer & Rose, 2013). However, with unpredictable variables such as learners with disabilities that require particular assistive technological support (the UDL provides avenues for), learners' needs should be responded to through differentiated instruction (Glass, Meyer & Rose, 2013).

It is suggested that the use of techniques based on the principles of the UDL has the potential to promote access and performance of all students with various abilities (Ok et al., 2017) including those with high-incidence conditions such as learning disabilities (LD), emotional or behavioural disorders and other health impairments (King-Sears et al., 2014). Thus, the UDL enhances effective teaching and learning in inclusive settings (CAST, 2018). Hence, using the UDL techniques helps to deliver lessons that address the diverse learning needs of children (King-Sears, 2009). Research has been conducted to determine the impact of the UDL on achieving inclusion for all learners.

3.6.2.2 Empirical evidence of the UDL

Studies have documented the impacts of applying Universal Design for Learning (UDL) based on interventions from both students' and teachers' perspectives. Browder et al. (2008) aimed at evaluating methods for planning and implementing shared stories for learners with multiple disabilities employing principles of UDL. The study also used a multiple probe design to explore how individual task analysis of a story affected children's responses to a one-to-one loud reading. A team designed a literacy participation programme for three children (two males and a female) with complex physical and consistent response challenges. The materials used for the lessons included three popular elementary picture books which captured the child's name as the main character to sustain their attention. Others were sensory objects that go with the storyline, and other elements, such as balloons and lights turning out, were used to surprise the learners. The adapted books and materials were used in the intervention and baseline study. The interventionist analysed the children's ability to choose books and reading tasks. The students' responses were promptly scored. The interventionists reviewed the task analysis using the principles of the UDL to improve students' responses. The interventionist conducted Daily shared stories using a *systematic prompting and feedback* strategy. Students' responses were

scored, and their performance was assessed. The research findings showed that the intervention led to improvement in the students' literacy skills. Further, the students showed interest in participating in classroom read-aloud exercises, and their consistency in communication improved (Browder et al., 2008). However, it must be noted that this study was conducted in a partially inclusive school setting where children identified with SEN received most of their instructions, including literacy, in separate classes. Therefore, the findings of this study cannot compare to those conducted in fully inclusive classroom settings. The impact of other variables, such as the contributions/presence of the typically developed peers, may result in increased or decreased progress. Further, while it was noted that the three participants were selected because they had more profound difficulties compared with the others, a higher number may have impacted the intervention process and the results.

Lieber, Palmer and Fleming (2008) examined how the Children's School Success curriculum was designed based on the UDL to promote access and academic and social progress of preschool children with disabilities. The curriculum model was a general education curriculum proposed to promote academic and social success for children with SEN and disabilities. A quantitative description was used to show how children with disabilities could make academic and social progress. Participants involved 58 children with SEN, including learners with speech and language disabilities (29) and developmental delays (19). The participants also involved one each from the following categories: emotional difficulties, orthopaedic impairment, autism and intellectual and other health impairments (Lieber, Palmer & Fleming, 2008). Nine traits (intellectual functioning, intentional communication, physical health, and social skills) were identified after the children's teachers had filled out the Abilities Index responses. This was followed by an assessment of the children at the start and finish of their preschool year. The assessment tools used included the Peabody Picture Vocabulary, Woodcock Johnso Test of Achievement, Individual Growth and Development Indicators: Picture Naming, Rhyming and Alliteration, Letter Naming and Emergent Writing. Further, teachers completed the Social Skills Rating System for all the pupils, although the rating was only for children with disabilities. Pre and post-school-year test scores showed significant improvement in children's rhyming and math skills with SEN. However, the change in social skills was marginally significant (Lieber, Palmer & Fleming, 2008). Strategies such as simplifying activities and peer and adult support helped to provide multiple means of engagement and expression for the SEN learners. Further, material adaptation, specialised *equipment*, and *environmental support* promoted their participation (Lieber, Palmer & Fleming, 2008). However, teachers observed

insufficiency in the UDL towards addressing issues regarding children's expressions and interactions with their peers (Lieber, Palmer & Fleming, 2008). It was also unclear how the teachers' strategies adapted (adult and peer supports) to resolve the challenge in lessons differ from similar approaches (adapted from the UDL) used to support the learners. Additionally, while the study described the methods used to reach the children's test scores, a clear description was not provided.

Using a cognitive tool based on the Universal Design for Learning (UDL) features, Marino (2009) examined the relationship between learners' reading abilities and comprehension of scientific concepts and processes. Sixteen regular schoolteachers implemented the curriculum in 62 inclusive schools, involving 1153 learners. The study was explorative, where learners were grouped into three reading ability levels depending on their achievements on a standardised test (Marino, 2009). The groups comprised 126 children with a severe reading disability, 205 poor and 822 proficient readers. A UDL-based cognitive tool (technology) was used to explore students' knowledge of science concepts, processes and vocabulary. The findings from a reading assessment showed that students' scores improved in similar ways. Post-test scores between students with severe reading challenges and poor readers were not significant (Marino, 2009). However, the study revealed significant score differences between low-ability and proficient readers. Proficient readers use technology-based tools more frequently, while low-ability readers do not (Marino, 2009).

Coyne et al. (2012) examined the impact of the UDL based on technology and Literacy by Design (LBD) on learners' reading achievement. The LBD model draws together the UDL principles, electronic books and software-related letters, and word recognition (Coyne et al., 2012). The focal areas were the students' comprehension level, vocabulary, fluency and phenetics. The study adopted the quasi-experimental research design with two controlled and experimental groups (LBD) groups. The participants were 16 Grades K-2 learners with significant intellectual disabilities. Four of the nine teachers who underwent literary training also participated in a day's workshop in LBD. All learners of both the treatment (LBD class) and controlled classes participated in lessons for the period. Additionally, the LBD students had 20 to 30 extra minutes of reading lessons (Coyne et al., 2012). Pre and post-intervention test scores were taken on reading and language from all the participating learners. The results indicated that children in the treatment class made significant progress in comprehension compared to the control group (Coyne et al., 2012). It was observed that LBD strongly

impacted the children's *word attack skills*, *listening comprehension*, and *concept of print* (Coyne et al., 2012, p. 169). Although the study reported that students who received LBD interventions made significant gains, questions could be raised about the difference between the UDL and the LBD. Since the development of the LBD approach is fundamentally based on the principles of the UDL, as noted by Coyne et al. (2012), clarity is needed to strengthen the worth of the former.

Siu and Lam (2012) conducted a case study to review a Computer Assisted Learning (CAL) facility developed for students with visual impairment. The study aimed to identify the challenges children with visual impairment face in using the CAL facilities and provide suggestions. Interviews and observations were conducted with users to evaluate their *learnability, effectiveness, efficiency, memorability, errors, and physical and psychological satisfaction (*Siu & Lam, 2012). Children with visual impairments participated in a workshop on the CAL facility, participants' suggestions were collected, and modifications were made using the principles of the UDL. CAL training was given to the children through other means, such as the Braille keyboard. The case study results showed that applying the UDL helped identify the difficulties children with visual impairment have in accessing and manipulating the facilities. Further, Siu and Lam (2012) proposed modifications to the CAL facilities based on the UDL principles, which makes the programme user-friendly and prevents segregation of some learners. This paper, however, did not provide clear information about the number of visually impaired children who participated in the study.

Almumen (2020) investigated the role of the UDL in students' acquisition of learning in inclusive classrooms. The study adopted a qualitative research approach. Lessons of five K-12 classroom teachers were observed (20 consecutive times), followed by interviews. The participating teachers included two kindergarten and one each of Grade 4, 10 and 11 teachers. The subjects of the 4th, 10th, and 11th teachers were Arabic Language, Biology, and History. Children with special educational needs in the classes included those with Down syndrome, Dyslexia, Attention-Deficit Hyperactivity Disorder and Hearing impairment. The results demonstrated that children were allowed to access content and express knowledge through multiple options. Further, using technology based on the UDL supported all learning environments (Almumen, 2020). It was therefore argued that UDL is fundamental to providing the required learning support to students with diverse learning needs. The study also revealed that teachers have positive perspectives about the effect of the UDL on inclusive learning.

However, they did not have detailed knowledge of the concept of UDL and recommended more training to successfully address the diverse learner needs (Almumen, 2020). Although the study identified the strategies used by teachers that are akin to the UDL (for example, using the multisensory instructional technique to support the student with Dyslexia), an adequate description of how they enacted such practices was not provided.

Using the UDL and Technology, Hall et al. (2015) conducted an experimental study to evaluate the effectiveness of strategic reading on students' progress using online tools and offline. The study focused on addressing learning disabilities. A mixed-method approach was adopted, with data collected through surveys and interviews. Additionally, a quasi-experimental design was also used with two treatment (UDL) and controlled (non-UDL) groups. Participants included 284 students. 64 of the participants had learning disabilities (LD), 8 had Attention Deficit Hyperactive Disorder (ADHD) and one hearing impaired student. The findings of this research generally showed that learners who participated in online work made significant progress in comprehension (Hall et al., 2015). Pre- and post-test scores revealed that students with LD experienced a significant increase in scores in their online conditions compared to offline. Further, the study reported that learners with LD found the online tools more beneficial compared to their typically developing peers, leading to increased engagement with the strategic reader (Hall et al., 2015).

Additionally, Rao and Tanners (2011) explored how principles of UDL and Universal Instructional Design (UID) could be incorporated into the design of online courses to support students with diverse learning needs in post-secondary schools. The study presented various elements of the universal design that may be included in online courses to provide valuable learning for students. An online course was designed for students drawing from Universal Design for Learning principles by the National Center on Universal Design for Learning, Universal Instructional Design and Universal Design of Instruction. Views of participating students were collected through surveys and interviews during and after the course to evaluate the universal design features. The study found that universally designed lessons granted valuable learning alternatives for students and met the needs of learners with diverse abilities (Rao & Tanners, 2011). This assertion agrees with the views that using the universally designed online grants learners with special needs various learning opportunities, which improve their outcomes (Al-Azawei, Serenelli, & Lundqvist, 2016; Hall et al. (2015).

Rao, OK and Bryant (2014) conducted a descriptive review of 13 studies to examine the application and evaluation of the universal design principles for learning in pre-K–12 and post-secondary educational environments. The study identified the use of some designs to explore participants' perceptions and learning outcomes of instruction and curriculum that are based on UDL. The authors noted that while researchers' interventions were considered to be based on the principles of the Universal design, their reportage lacked detailed descriptions or the connections between their interventions and particular guidelines and principles. Although researchers documented approaches that linked some universal design principles, there was no uniform or standard description of how UD was used in education (Rao, Ok & Bryant, 2014).

Similarly, Al-Azawei, Serenelli, and Lundqvist (2016) reviewed empirical studies to examine how the UDL was applied in lessons and its implication for including children with SEN. Their analysis revealed that the UDL had the potential to reduce barriers to learning and allow equal opportunities for the education of all children (Al-Azawei, Serenelli, & Lundqvist, 2016). The UDL supports the designing and implementation of the curriculum despite their abilities (Smith & Harvey, 2014). The review also revealed that special provisions for learners are unnecessary because their needs could be factored into the planning process (Al-Azawei, Serenelli, & Lundqvist, 2016).

On learners' perceptions, Al-Azawei, Serenelli, and Lundqvist (2016) reviewed 13 empirical studies to examine how instructions based on the UDL affect academic and social learning outcomes for students below grade 12. The study revealed that students showed positive attitudes and satisfaction towards using the principles of the UDL. Therefore, equipping teachers with the UDL principles can effectively support the design of teaching approaches in ways that promote flexible representation of lessons, improved engagement of learners and effective means of evaluating learners' work. What distinguishes the UDL from other pedagogical approaches is that it helps educators develop a flexible and accessible curricular and evaluative tool that can be included in the lesson right from the planning stage (Al-Azawei, Serenelli, & Lundqvist, 2016).

In Ghana, the Universal Design for Learning (UDL) is recommended as a key pedagogy for including children with special needs. The UDL is named in the inclusive education policy as the fundamental strategy for achieving the overarching aim of inclusive education (Ministry of Education, 2015). UDL framework could begin educational and social transformation in the

Ghanaian education system and society (Deku, 2017). Deku (2017) also argued that the UDL could improve the learners' socioemotional well-being by ensuring equitable access to learning. The literature search revealed a lack of empirical studies evaluating the utility of the UDL despite its adoption in Ghana. However, a brief report of a pilot study and a paper sharing theoretical viewpoints were found.

Between 2019 and 2020, Inclusive Development Partners (IDP), in collaboration with the United Nations Children's Fund (UNICEF) Ghana, Ghana Education Service (GES), and the University of Education Winneba, conducted a pilot study on the implementation of the UDL in West Gonja and Asa West Districts. Training workshops on UDL-based early-grade literacy and numeracy instructions were delivered to over 40 teachers (UNICEF, 2022). Termly school monitoring was conducted, and a *Response to Intervention Model* focusing on hearing, vision, learner assessment, and group instruction was implemented. The findings of the pilot study showed that the use of different techniques to engage children increases participation for learners (UNICEF, 2022). The study reported increased confidence in adopting the principles of the UDL in their lessons to support struggling students. Thus, programmes based on the UDL could improve teachers' preparedness to implement inclusive practices. Further, teachers were able to support learners with diverse needs in the classrooms using common strategies and materials at no extra cost. Teachers' self-efficacy beliefs increase when superiors are more supportive (UNICEF, 2022). While this is a pilot study, detailed information was not provided about how the UDL impacted the academic and social development of children with special educational needs. Further, it appears the pilot excluded other children with SEN, such as those with developmental disabilities.

Although not an empirical study, Deku's (2017) article suggests ways the UDL could support inclusive learning in Ghana. Adopting the Post-modern discursive framework (Deku, 2017) argued that applying the UDL in early childhood centres could make learning environments accessible and safe for all learners. Further, it could improve learners' socioemotional well-being by ensuring equitable access to learning (Deku, 2017). Deku (2017) further suggested using the UDL in early childhood classrooms to develop multiple ways of engaging learners, including curriculum, instructional, and material adaptations. Additionally, Dedu (2017) argued that adapting classroom climate, encouraging frequent and effective student interactions, and making accommodations could impact learners' involvement. This involves creating, discussing and displaying schedules with groups and providing numerous learning materials such as colourful toys, sound and multiple sensory activities (Deku, 2017).

Although the UDL is widely accepted and recommended as an effective inclusive pedagogical approach that fosters inclusion, there is a dearth of empirical studies examining its effectiveness (Loreman, 2017; Edyburn, 2010). Particularly in Ghana, little is known about teachers' knowledge of the UDL as an inclusive pedagogical approach and the extent of its application in classrooms. Thus, the current study attempted to document evidence of how the UDL principles were adopted in primary teachers' inclusive pedagogical practices.

3.6.2.3 The Three-Blok Model (TBM)

Katz's (2012) Three-Block Model (TBM) is based on the principles of the UDL. The TBM as an inclusive pedagogical approach incorporates features of effective learning focusing on students' use of deep thinking, self-imersion in learning through an inquiry-based approach, developing the ability to make connections between classroom learning and out-of-classroom experiences, challenging one's knowledge and engaging in critical conversation, all of which essential to the process of learning (Sokal & Katz, 2015).

The TBM is built on three blocks relating to socio-emotional learning, inclusive instructional practice/pedagogy and structures within systems that support the processes. Block One dwells on creating a compassionate learning community through social and emotional learning (Katz, 2012). This block is characterised by respect for diversity, empathy, compassion and building cooperative learning communities that enhance problem-solving (Katz, 2012; Sokal & Katz, 2015). These also imply developing classrooms that welcome all students and value individual learning styles. Teachers must lead a campaign of respect for diversity to aid all learners, including those with special needs, to develop socially and emotionally. It also implies that opportunities must be created for all learners to learn, understand what is taught and be able to express themselves and what they know freely. It supports multiple means of presenting curriculum (Katz, 2012). Based on these assumptions, Sokal & Katz (2015) identified three useful strategies under this block: "Spirit Buddies, Democratic Classroom meetings and Respective Diversity programme" (p. 69). Spirit Buddies involves creating opportunities for pupils in the same class to meet in smaller groups each day, to talk about various issues, events or ideas however related or unrelated they are to schooling. To Sokal and Katz (2015), this practice promotes social interactions by first creating a sense of belonging to a community. Further, students are encouraged to engage with others freely and they talk about issues that bother them. They are also able to work as teams to decide on issues in classes, thereby

strengthening their membership and promoting democracy within the learning community (Sokal & Katz, 2015). These views are synonymous to those advanced by theorists such as social constructivists and sociocultural proponents. Simply put, learning about and for us should be by or influenced by us.

According to Sokal and Katz (2015), the middle block- inclusive instructional practice encourages creative pedagogy and lends from understanding by design, Bloom's taxonomy inquiry-based learning, cooperative learning and differentiated learning. This block promotes the design of environments and activities that enhance access to classroom work and learning (Katz, 2012). Like the UDL, Katz's model advocates the multiplicities of instructional approaches to ensure that the needs of various learners are addressed. It focuses on differentiation, where various methods and materials are differentiated to address individual learning styles and multiple intelligences (Katz, 2012).

The third block of the TBM is about making adaptations to school systems and structures. Like many advocates of the inclusive education system, Katz (2012) argues that effective implementation of inclusive education requires changes in the policies and practices of school systems. This includes changing aspects of educational policies, improving budgetary allocations, staffing and training opportunities and school-community relationships (Katz, 2012). This requires the commitment of various players in the education system. For example, political or government commitment is needed to allocate adequate financial resources, which is key to ensuring that schools are strengthened to support learners. Unfortunately, budgetary allocations for education in low and middle-income countries are usually low because of competition between ministries over limited resources. Furthermore, by experience, parental involvement in school life is usually low, which negatively impacts school-community interaction found to be necessary for the successful implementation of inclusive education.

3.6.2.4 Evidence of the use of the Three-Block Model

Few studies that examined the effectiveness of the Three-Block Model reported some insightful findings. Katz (2013) investigated the impact of the TBM on children's academic and social engagements. The study participants included 631 students from grades 1 to 12 who were drawn from two rural and three urban schools. The study adopted a quasi-experimental design. Learners participated in classroom climate, belongingness, student autonomy and

inclusivity or exclusivity activities. Data were collected through observation and surveys before and during the intervention process. Pre and during-intervention assessments conducted on the intervention and controlled groups showed significant improvement in learners' engagement behaviour (Katz, 2013). Students became more active in lessons and exhibited better social engagement due to improved interaction with their colleagues (Katz, 2013). Further, the study reported enhanced social and academic inclusive and autonomous characteristics among learners in treatment classes as frequent interaction was observed among colleagues and adults(Katz, 2013). Although it was noted that the children's feelings of belongingness and the classroom climate did not significantly change, Katz (2013)believed that this finding positively impacted the treatment class. They reiterate suggestions about intentionally developing programmes that encourage students to value differences among learners, focusing on building a sense of belongingness and a welcoming learning community for all (Katz, 2013; Katz & Porath, 2011; Katz, 2012a). The selection process suggests some biases. Recruiting only teachers with knowledge about the UDL suggests they would have adopted its principles in their lessons. Thus, the outcome of this research may appear different in situations where participating teachers had no prior practical knowledge of the UDL. Additionally, the intervention approach relied on a differentiated instruction approach, which may lead to the categorisation of some learners.

Following the 2013 study, Katz (2015) sampled fifty-eight teachers and six hundred students (grades one to twelve) drawn from ten schools in mixed method research to examine the potential of the Three Block Model to improve inclusive learning and reducing teachers stress, improve their self-efficacy and enhance job satisfaction. The findings revealed that teachers in the treatment group showed improvement in students' social engagement, relationships, and interactions with others in class relative to reports of teachers in the control group. The TMB had a significant positive impact on the self-concept, risk-taking and resilience of children in the treatment group (Katz, 2015). Perceptions of teachers in the study revealed the effect of the model on improving the learning environment by reducing students' disruptive behaviour and enhancing their interaction with other students. Additionally, the study reported that teachers in the treatment group increased differentiated activities such as non-verbal linguistic tasks, learner-led inquiry and small group learning, promoting reflective practice and willingness to adapt practices (Katz, 2015). Teachers in the treatment group also noted that the TMB models reduced their workload and increased their self-efficacy and self-satisfaction. The researcher

noted that lesson adaptations provided more impetus for teachers to engage learners with academic differences in similar activities as the typically developing peers.

Further to the above research, Laura Sokal and Jennifer Katz (2015) explored the effectiveness of the Three Block Model on learners with special needs. Unlike the studies described in earlier paragraphs, Sokal and Katz's (2015) study aimed to investigate how the principles of the TBM could be used to address the reduction in early and middle-year learners' engagement, which was noticed during their school period. The focus was on male children who fell within the minority ethnic groups and identified with special educational needs. The study included 183 Grades 3 to 8 students drawn from 10 schools across a central Canadian city. Although pre-intervention tests in all three domains (academic, social and intellectual) showed significant differences between the control group and treatment group (control group with higher levels), the post-intervention results reported a positive change for the treatment group (Sokal & Katz, 2015). For example, changes in the mean score in intellectual engagement were positive (0.98) and negative (-0.90) for the intervention and control groups, respectively, which is significant. On the other hand, there were changes in academic engagement (0.02) and social engagement (0.03) in the intervention group. The negative change reported in the study for the control group (0.27 and 0.62) was interesting. Findings revealed significant improvement in the social and intellectual engagement of the treatment group as compared to the control group. On the other hand, the control group was more engaged in academic work. (Sokal & Katz, 2015). Sokal and Katz (2015) argued that the TMB can control the decline in learners' engagement, as described in previous studies by Willms et al. (2009). However, the findings indicate that despite the gains made by the treatment group (Children with SEN) in social and intellectual engagements, the TBM may need further modifications to support children's academic involvement.

While the Three Block Model provides an interesting perspective of the Universal Design for Learning (Loreman, 2017) and presents an approach to developing inclusive learning communities (Katz, 2012a), this is not without challenges. Katz (2015) identified challenges relating to assessment processes, collaboration and professional learning, resource availability, school and government policy and education (knowledge of parents) as barriers to the effective implementation of the TMB. Additionally, most of these studies focused on general academic, social, and intellectual engagement among learners, with limited focus on how the model impacts learners with special needs and others with different learning needs. This reaffirms the idea (for example, of limited evidence of the model towards effective inclusive education

implementation (Loreman, 2017). Further, the absence of studies that examine how the TBM could support inclusive learning in resource-constrained and culturally different contexts, such as Ghana, constitutes another limitation of the approach.

3.6.2.5 Differentiated Instruction

A strong foundation has been laid for Differentiated Instruction (DI) as one of the most effective approaches for meeting diverse learning needs (Tomlinson, 2008, 2014). Presenting justification for the DI, Tomlinson (2008) noted:

Differentiated instruction is student-aware teaching. It is guided by the premise that schools should maximise student potential, not simply bring students to an externally established norm on a test. To grow as much and as rapidly as possible, students must not only learn essential content but also increasingly take charge of their own lives as learners (p. 27).

Therefore, the DI as a pedagogical approach focuses on content delivery or mastery and supports learners to develop their own identities (Tomlinson, 2008). It, therefore, requires developing the learning process to support all students, including those with characteristics resulting from cultural, ethnic and socio-economic differences (Tomlinson, 2014; D'Intino & Wang, 2021). However, unlike other pedagogical approaches discussed in this section, the DI aims to develop separate instructional strategies to meet students' different learning needs in the same classroom (Loreman, 2017). Thus, differentiating instructions implies providing content, materials, activities and assessment adaptation for all learners (De Jesus, 2012). This approach ensures that the curricular contents are carefully designed and delivered to support a variety of learners (Loreman, Deppeler, & Harvey, 2010) by first identifying their needs. The curriculum is, therefore, tailored to suit the individual learners.

The use of the DI approach implies the acknowledgement that traditional teaching and learning styles do not favour some individual learners in the class. It also appreciates differences among learners in the classroom and the need to ensure that teaching approaches provide children with similar opportunities to succeed (De Jesus, 2012; Loreman, 2017). The following practices have been suggested by Sousa and Tomlinson (2011) as necessary for the effective use of the DI approach:

- The learning environment must invite learning. That is, it must be safe, challenging, and supportive for each student.
- A teacher should be able to clearly delineate what constitutes essential knowledge, understanding, and skills in a content area, unit, and lesson.
- The teacher should persistently assess student proximity to the essential knowledge, understanding, and skills throughout a study segment.
- When ongoing assessment data indicate that a student is confused about, has learning gaps in, or has mastered essential knowledge, understanding, or skills, the teacher should use that information to plan upcoming instruction. The idea is to address those needs—whether for remediation or acceleration—that, if unattended to, will most likely impede student growth (p. 9).

3.6.2.6 Evidence of the usefulness of Differentiated Instruction

Although DI has been approved and adopted (in different settings) as an effective instructional strategy to support different learners, Loreman (2017) noted that most studies focused on individual cases because it appears to be an individualised approach. DI has been connected to improved literacy, reading, and mathematics outcomes and positively affects the self-perspective of low academic achievers in classes.

Valiandes (2015) conducted a quasi-experimental study with 24 teachers and 479 grade four elementary learners to evaluate the impact of DI on learning in mixed-ability classrooms. They found that DI strategies supported students' progress in comprehension and literacy. It was reported that progress made by learners who were placed in the experimental classroom (where DI was adopted) was better relative to those in the control group (Valiandes, 2015). They also noted that the quality of differentiated practices had a corresponding influence on learners' success in learning. Additionally, the researchers observed similar progress for students across various socio-economic statuses, which implies that the DI could meet various learning needs as it reduces achievement gaps. Hence, Valiandes (2015) recommended using DI approaches among mixed-ability learners.

Goddard, Goddard and Minjung (2015) adopted a quantitative approach to examine how the use of DI influenced the relationship between school teaching climate and the mathematical and reading success of fifth-grade learners. A stratified two-stage random sampling method

was used to generate data from 78 Michigan elementary schools. The findings showed that a significant positive relationship was established between schools' support for differentiated instruction and mathematics and reading achievement of learners. It implies that students make better progress in mathematics and reading in schools, which creates an environment that enhances teachers' use of DI compared to those that support such practices (Goddard, Goddard & Minjung, 2015).

In a different experimental study, (Little, McCoach & Reis, 2014) adopted a multi-site cluster-randomised design involving 2,150 students and 47 teachers to examine the impact of teaching approaches that involved DI on student achievements. The Hierarchical Linear Model was used to collect data on students' reading fluency and comprehension. A Schoolwide Enrichment Model-Reading framework (SEM-R) based on differentiated instruction was designed and presented to teachers to help enrich their reading lessons. Teachers were trained to adopt the SEM-R model in their classes with the treatment group, while the control group received regular reading lessons. Pretest and post-test outcomes showed an overall similar result for both the control and treatment groups of learners. However, the treatment group in the two schools performed better in reading fluency. The intervention led to similar or higher outcomes in fluent reading and similar results in comprehension (Little, McCoach & Reis, 2014). These results show that the impact of the SEM-R model was not significantly felt. This suggests the use of more flexible teaching approaches that promote learners' independence and choices, as well as the effective use of differentiated instructional strategies to effectively promote the achievement of diverse learners as it encourages engagement through its emphasis on their interests.

Prast et al. (2018) examined the impact of a professional development programme based on the DI approach on children's mathematics achievement. The quantitative methodology was used in this study, and data were collected using questionnaires. 30 primary schools, including 5658 students in grades 1 to 6, participated in the study. The participants were put into three cohort groups over two years. Teachers in Cohort 1 and 2 received professional development in year one and year two, respectively. Cohort 3 was controlled. The findings of the study class where teachers underwent professional development showed significant positive progress similar across all levels of students' mathematics achievement. While the proportion of positive change seemed small, it was revealing because no significant achievement was recorded in the years two and three, where professional development was not provided to teachers (Prast et al.,

2018). They concluded that DI could potentially enhance the achievement of all learners with different abilities. Although the study identified the participation of schools and students, it did not specify how teachers engaged in professional development.

Roy, Guay and Valois (2015) used hierarchical linear modelling to identify how DI strategies could impact the academic self-concept of 422 elementary students in 27 Canadian classrooms. It also aimed at demonstrating the effect of DI on the socioemotional impact of learners. The researchers suggested from their findings that using instructional adaptation strategies can discourage low achievers from conducting self-assessments using colleagues' performance. Instead, it could encourage learners to focus on their achievements, which would help them develop their French self-concept (Roy, Guay & Valois, 2015). However, they acknowledged that their study did find a positive association between instructional adaptation and French self-concept.

Evidence demonstrates that most regular class teachers in Ghana use differentiated instruction to facilitate inclusive teaching. The following paragraphs discuss empirical studies conducted on this approach at the basic education level in Ghana.

Using a sample of 289 basic schoolteachers, Bobi and Ahiavi (2023) conducted a quantitative study to examine teachers' perspectives on the differentiated instruction approach to promoting creativity, critical thinking and cooperative teaching and learning among learners. The study was conducted in all 117 basic schools in one educational district in Ghana through an online Google survey tool. The findings showed that the Basic school teachers in the sampled schools were aware of the impact that the use of differentiated instruction approach has on pupils' knowledge acquisition and performance (Bobi & Ahiavi, 2023). They also reported that teachers acknowledged how differentiation could positively impact children's learning styles and motivation for improving learning results.

Bingen et al. (2022) adopted both survey (31 teachers) and interview (2022) methods to investigate the knowledge and practice of science teachers who taught at the Junior high school level in one educational district in Ghana. Their study revealed that most participants had the requisite knowledge about using differentiated instruction. The teachers acknowledged that every learner has different characteristics and expectations about learning, and these should be considered in planning (Bingan et al., 2022). The author also noted that teachers claimed that

they differentiated learning for the learners. The participants, however, identified large class sizes, lack of resources, time constraints and complications in responding adequately to individual differences as some of the prominent challenges to the effective use of the approach (Bingan et al., 2022).

Amoakwah and Donkoh's (2023) study adopted a descriptive survey research design to investigate the understanding and use of differentiated instruction among basic school teachers. 95 basic schoolteachers, comprising 44 private and 51 public school teachers, were selected through the stratified sampling technique. Unlike the findings in the studies presented earlier, the results of this study reported that participants did not possess good knowledge of DI and how it is used in the classroom. The authors confirmed that teachers did not use the DI strategy. Participants noted that they had not received in-service training on the approach. This explains why they are unable or not motivated to use the DI approach.

Similarly, Owusu-Ansah and Apawu (2022) used the quasi-experimental design to explore teachers' views and use of the DI strategy in Mathematics lessons. Lesson observation and qualitative interviews were the tools for data collection in this study. Participants included two junior high school mathematics teachers. Participants were taken through a three-day training in DI and allowed to implement it for eight weeks. The study reported that the teachers used grouping, tiered, and end-of-unit assignments to differentiate lessons. Materials such as worksheets and ICT tools were used to support the differentiation processes (Owusu-Ansah & Apawu, 2022). At the end of the implementation, interview results revealed that the teachers considered the DI approach effective as it made the lesson more interesting and encouraged students' participation. However, they noted that sometimes, teachers had to provide resources such as laptops, projectors, extension cables, and speakers because they were unavailable in the schools. As Bingan et al. (2022), the participants said the use of DI was time-consuming.

Using the sequential explanatory mixed method, Padmore and Ali (2023) examine the use of differentiated instruction to promote effective teaching and learning at the basic school level. Overall, the study involved 125 participants. They included 50 early-grade teachers, 25 upper primary school teachers, 30 junior high school teachers, 10 heads of school, 9 school inspectors and one mathematics coordinator. Data was collected through questionnaires and interviews. The research findings showed that using the differentiated instruction approach led to improved academic performance of students (Padmore & Ali, 2023). However, most respondents (71.4

%) disagreed that teachers should adopt various materials apart from the standard texts. Additionally, most participants were uncertain that teachers are responsible for providing different support mechanisms for learners in mathematics classes (Padmore & Ali, 2023). This was confirmed by interview data, where respondents considered using various materials impossible due to the unavailability of large class sizes. Like studies discussed above, common challenges identified by participants include overcrowding in class due to large class sizes, limited time, the lack of support from management and lack of resources. Because of these challenges, it was concluded that using DI in mathematics lessons appeared challenging (Padmore & Ali, 2023).

The studies reported that all teachers acknowledge the impact of differentiated instruction on children's learning, participation in critical thinking skills, and the achievement of learners with diverse characteristics. However, the DI approach is limited by several factors. These affect teachers' ability to use the strategies effectively.

While the studies are relevant to the current study because they were conducted at the basic education school level, most of them investigated teachers' knowledge. Additionally, these studies focused on science and mathematics, with little known about using DI in other subject areas. Additionally, few studies attempt to identify and explore specific differentiated instructional strategies. For example, only one of the studies reported here (Owusu-Ansah & Apawu, 2022) attempted to identify particular DI strategies and materials used by the class teachers.

3.6.2.7 The Inclusive Pedagogical Approach in Action (IPAA)

The fourth inclusive pedagogical approach identified in the literature is the IPAA. The IPAA was developed to respond to educational problems associated with pedagogies based on 'bell curve' provisions where the needs of children are identified to provide them with additional support (Florian & Spratt, 2013; Florian, 2015, p. 5). This idea poses a negative impact on special educational needs (SEN) learners (Hart et al., 2007; Florian, 2015) because it is used to justify failure and the exclusion of vulnerable learners (Fendler & Muzaffar, 2008). It also forms the basis of ability groupings and judgement based on learning capacity (Florian, 2015), which could widen the inequality gap and defeat the fundamental purpose of inclusion (Florian, 2015). The IPAA (Florian & Spratt, 2013) fundamentally aims to provide the opportunity for

students to fully participate in learning by extending what is ordinarily available to all members of the classroom community. This suggests that no unique instructional strategies or methods are needed for some learners in the classroom. The IPAA was developed to serve as a tool for collecting and assessing Evidence of inclusive practices (Florian & Spratt, 2013).

Three key principles underlie the Inclusive Pedagogical Approach in Action (IPAA). First, difference must be accounted for as an essential aspect of human development in any conceptualisation of learning (Florian & Spratt, 2013, p. 124). This principle discourages deterministic beliefs about some learners and encourages transformative views of ways to effectively support children with SEN to succeed in inclusive learning. Florian and Spratt (2013) problematised the idea that some learners (with SEN especially) have fixed or limited abilities and argued that this forms the basis for education systems. Teachers are, therefore, encouraged to believe that all pupils can learn and progress. This idea is disputed by others who are convinced that some children with particular special needs are better off in separate institutions. This unending debate continues to influence educational provisions for children with SEN, including Ghana. Second, teachers must believe (can be convinced) that they are qualified or capable of teaching all children. Florian and Spratt (2013) suggested that educators consider the challenges learners encounter in the learning process as puzzles they must unravel rather than problems in the child. Focusing on children's impairments causes a reduction in expectations about children's achievement (Florian & Spratt, 2013). In line with Vygotsky's (1993) ideas of Defectology, framers of the IPAA framework encourage teachers to adopt a more transformative view of disability and special educational needs (SEN). Disability should be seen as a way of enriching teaching and learning rather than a problem for teachers. Therefore, teachers should focus on supporting all children and not a child's inabilities. Third, the professional must continually develop creative ways of working with others (Florian & Spratt, 2013, p. 124). Teachers must be active professionals (Florian & Spratt, 2013) in developing teamwork and creative collaborations with others in the school or classroom environment. The subject of collaboration is acknowledged as an important means of professional development. It creates a professional learning community that allows teachers to share ideas and learn from others.

3.6.2.8 Evidence of the usefulness of the Inclusive Pedagogical Approach in Action

The IPAA framework was developed mainly through the research work of Florian and her colleagues. The following paragraphs describe some empirical evidence for using the IPAA framework. In 2011, Florian and Black-Hawkins published a qualitative inquiry into the craft knowledge and practice of 11 teachers in Scottish classrooms. The study investigated teachers' understanding of inclusion, what they do in class, and why and how they enact their inclusive practices. Data were collected through lesson observation and interviews. The study found that teachers adopted various inclusive practices that met the basic principles of inclusive pedagogy. They adapted their regular or ordinary teaching practices in some ways to meet the needs of vulnerable children (Florian & Black-Hawkins, 2011). This was exemplified in how teachers explored work choice and play zones. Regarding work choice in an inclusive pedagogical approach, it was observed that children were allowed to choose how, the place, the time and those with whom they would learn (Florian & Black-Hawkins, 2011). This shows teachers' confidence in students' abilities to make such decisions. Teachers consulted with every learner to determine how best to support them. Teachers also worked with colleagues to plan and execute support services for those learners who required additional needs (Florian & Black-Hawkins, 2011). At the Play zone, play choices were provided by teachers, which ensured the participation of all children, including those with SEN (Florian & Black-Hawkins, 2011). The outcome of children's assessments helped teachers to determine their progress, celebrate their accomplishments, and direct their learning. Therefore, The time zone supported students' self-directed learning (Florian & Black-Hawkins, 2011). However, it was observed that some of their practices were adjudged as less inclusive because they did not support some learners (Florian & Black-Hawkins, 2011). An activity that reflected exclusion was evident when children's tasks were set according to their abilities, leading to low expectations for some learners and the assumption that they could complete the work independently. (Florian & Black-Hawkins, 2011). Lessons were clearly differentiated for learners who faced challenges with their colleagues' work. Florian and Black-Hawkins (2011) observed that practices that meet inclusive pedagogical standards should be encouraged because they would support all while preventing teachers from focusing on individual differences or stigmatisation. These findings contributed to the development of the basic principles of the IPAA framework.

Florian and Spratt (2013) conducted a follow-up study with the IPAA framework to examine the inclusive practices of seven primary six and seven probationer teachers in three Scottish

local authority schools. The study focused on exploring how the concept of inclusive pedagogy occurred in the practices of new teachers and how contextual complexities influence their perspectives of inclusive pedagogy and actions in classrooms. A qualitative methodology was adopted for this study. Data were collected through lesson observations and semi-structured interviews. The findings revealed that teachers exhibited beliefs that reject deterministic views about some children's learning. This was shown in adopting practices that did not focus on differentiated instruction and ability grouping (Florian & Black-Hawkins, 2011). The study also revealed the teachers' practice of planning for all learners and avoiding circumstances where learners with SEN in their classes were treated differently. This is similar to the point made by Florian and Black-Hawkins (2011), which is that the teachers' commitment to planning for and teaching everyone evidences their belief in the principle of social justice. It was observed that the teacher consistently provided opportunities for learners to make choices and ask their views concerning issues (Florian & Spratt, 2013). These are demonstrated in the social constructivist position that learners must play an active part in learning and constructing knowledge. One limitation, acknowledged by the researchers, relates to the small sample of participants for the study. They, however, responded that the study sought to examine teachers' practice relating to inclusive pedagogy and not to generalise it to all graduates. Further, although the study was conducted in different contexts, it is important to note that circumstances in other schools and classrooms, particularly in developing countries like Ghana, are different. Thus, other variables such as resource availability, training, and teachers' values can affect the outcome of research that adopts the IPAA framework.

Klibthong and Agbenyega (2018) examined the participation of Thai teachers in a professional development programme facilitated by the Inclusive Pedagogical Approach framework. The study aimed to critically analyse how the participating teachers' professional being, knowledge and inclusion abilities were transformed through the programme. 16 teachers participated in the study. Initially, data on teachers' demography, prior knowledge, beliefs, experiences with teaching SEN children and their knowledge of inclusive pedagogy were collected through interviews (Klibthong & Agbenyega, 2018). A professional development programme was developed with the initial findings using the IPAA framework. Teachers participating in the programme were placed in inclusive schools for 3 weeks. Additional data were collected at an open professional forum. The findings showed that professional interactions promoted teachers' personal and cultural transformation. Teachers gained insight into different inclusive practices, which changed their perceptions about children with disabilities. For example,

teachers who participated in the study noted that, unlike their initial practices, such as working individually, the teachers who mentored them worked with other professionals, such as therapists. It was also reported that teachers expressed that the knowledge gained in teamwork would inform their practices. (Klibthong & Agbenyega, 2018). Also, although before the immersion programme, teachers exemplified fear and incapability in their perceptions about teaching children with special needs together, the post-training outcome showed courage and confidence among the participants (Klibthong & Agbenyega, 2018). The researchers noticed that the collaboration among the professionals and knowledge-sharing questioned teachers' long-held values and beliefs, which influenced their knowledge, personal beliefs and inclusive work. Further, this enhanced the development of reflective practice and professional networking among teachers (Klibthong & Agbenyega, 2018).

Similarly, Brennan, King and Travers (2021) examined how a professional learning community (PLC) based on the Inclusive Pedagogical Approach in Action (IPAA) framework could support in-service primary teachers in Ireland to develop their inclusive pedagogies. The qualitative single-site case study approach was adopted in this study. 10 participants comprising 8 classroom teachers, the principal and the deputy of a school participated in the study. Activities included a monthly PLC meeting for six months, introducing participants to the IPAA framework and a monthly engagement in dialogue and sharing among teachers. Teachers kept a learning log to reflect on what they had learned, which also guided the research. The researcher later observed four participants' lessons to generate data on the teachers' pedagogies and practices. Participants expressed how their knowledge about the negative impact of ability thinking and labelling limits expectations for some learners' achievements and engagements (Brennan, King & Travers 2021). Thus, the research outcome demonstrated a change in teachers' thinking about the ability of some learners (Brennan, King & Travers, 2021). Additionally, teachers observed that differentiation by choice (offering learners opportunities to make choices) enhanced special needs children's lesson engagement. It further improved the quality of work produced by learners who struggled academically (Brennan, King and Travers 2021). Further, participants' self-efficacy was improved through the exercises. Increased willingness for collaborative work among teachers and their principals was observed. The research, however, did not provide adequate information about the characteristics and nature of the learners with special needs involved in the study. It is a general fact that learners differ markedly in their characteristics and needs. Meeting their individual needs is usually

more challenging for teachers depending on the learners' impairments or special needs. This study provides little clarity regarding how the IPAA worked for such children.

Masunungure and Maguvhe's (2023) study employed the qualitative research approach to explore how mainstream secondary school teachers understood the concept of inclusion. The inclusive pedagogical approach (IPAA) framework located within the sociocultural paradigm was adopted as the theoretical basis for this study. Twelve professional secondary school teachers with more than five years of teaching experience in mainstream classrooms participated in the study. Data were collected through interviews. The study revealed that teachers understood inclusion as accommodating all learners, supporting those with disabilities, treating all learners equally and avoiding discrimination (Masunungure & Maguvhe, 2023). As noted earlier, this study focused on how teachers understood inclusion. Therefore, it provided information on teachers' perceptions, not classroom practices. Moreover, the study provided little information about how the IPAA is used in practice. Further, the choice of teachers with more than five years of experience fits within the research purpose. However, including information on those with less than five years of teaching experience would have provided opportunities to understand their perceptions of inclusion.

3.7 Research gaps

A common limitation identified in the literature relates to inadequate empirical studies that support the usefulness of the inclusive pedagogical frameworks discussed in the preceding paragraphs. However, the literature suggests that the Universal Design for Learning (UDL) and Differentiated Instruction (DI) have received global recognition compared to the others. This is because most of the studies about inclusive pedagogy identified in the literature adopted the UDL or DI as an underpinning framework. This situation is similar in the research context.

The inclusive pedagogical approaches discussed in this chapter were also designed to fit into Western educational contexts. The argument, therefore, is that these may not fit in non-western countries such as Ghana because of the differences in educational and cultural systems and other contextual issues such as limited resources and overcrowded classrooms. The absence of studies investigating teachers' inclusive pedagogical practices in mainstream classrooms and the utility of some of them, including the Three-Block Model and Inclusive Pedagogical Approach framework, deepens the gap in the literature. This extends the debate about the

potential of the approaches to meet the needs of other educational systems, mainly developing countries because contextual issues likely to impact inclusive education present themselves differently in such countries.

Unlike the UDL, which provides specific guidelines regarding classroom practices and how activities, teaching, and learning could be carried out to foster inclusion in the classroom, the IPAA broadly examines principles and assumptions. Regarding the main purpose of developing the IPAA framework, a debate could be generated around its suitability for actually supporting inclusive practices. However, considering the non-universal nature of definitions and what counts as inclusive pedagogy may be justified (Makoelle, 2014).

It is evident from the ongoing discussion that inclusive pedagogy is not another teaching approach, nor does it present peculiar teaching strategies different from existing ones. The difference may be in principle and whether or not the teaching style or practice considers differences between learners. On the other hand, inclusive pedagogy looks at how effective teachers' practices are in ensuring that learning is made available to all and not the majority while others are given additional support (Florian, 2015; Florian & Beaton, 2018). While this may look feasible in theory, it requires much adaptation, making it nearly impossible.

A major issue that needs consideration is whether special pedagogies and skills are needed to effectively support learners with special educational needs (SEN) in inclusive settings. Are there special pedagogies with special practices (Rix et al., 2013) that teachers need to be trained on? What teaching approaches and practices effectively support the full inclusion of children with SEN in the mainstream classroom? Given their cultural and contextual circumstances, can teachers adapt and extend ordinary teaching practices to support all students without identifying or categorising them? Are the inclusive pedagogical approaches suggested in literature enough to support teachers in resource-constrained countries like Ghana in improving their inclusive practices? This study sought to answer such questions by examining teachers' understanding of inclusive pedagogy and how and why they enact their inclusive pedagogical practices to promote quality inclusive learning for all the children under their care.

Although studies about inclusive education have increased in the Ghanaian context, little is known about actual classroom practices. As demonstrated in the literature review, Differentiated Instruction has received the most attention in Ghana compared to the other

inclusive pedagogical approaches. However, out of the five studies that examined the DI, three reported on teachers' knowledge and perspectives rather than how it was adopted or adapted in lessons as an inclusive pedagogy. Although the inclusive education policy of Ghana identifies the Universal Design for Learning as the approach for the delivery of inclusion in the classroom, a dearth of studies explore its utility. While the global trend is towards understanding teachers' knowledge about the concept of inclusive pedagogy and their classroom practices, a literature search reveals a significant gap in empirical studies about inclusive pedagogy and classroom practice in Ghana.

3.8 The present study

This study aims to fill the literature gap by exploring teachers' conceptualisations of inclusive pedagogy and how and why they enact their inclusive pedagogical practices. The outcome of the research provided information about how teachers' understanding of inclusive pedagogy affects their classroom practices. The study identified practical examples of classroom practices and how these could be adapted to support children with different learning needs. It also examined how the principles of the various inclusive pedagogical approaches appear in teachers' lessons. Additionally, this study discusses how the immediate social environment influenced teachers' inclusive pedagogies and the learning of children with special educational needs. Further, justifications for teachers' inclusive pedagogical practices were explored to understand various barriers, opportunities and context-related issues.

Regarding methodology, this study adopted a qualitative approach to gain a detailed understanding of this complex phenomenon. Lesson observations, interviews and Evidence of lesson plans and learning resources were adopted to present more insight into teachers' classroom-inclusive practices. The following chapter (4) presents a detailed discussion of how the study was conducted.

CHAPTER 4: METHODOLOGY

4.1 Introduction

This chapter describes the methodology chosen for the study and the rationale for its use. It discusses the research paradigm, approach, design, sampling, and data collection and analysis methods. It then presents a detailed discussion of the research context and pre-, during, and post-data collection activities. These involve gaining access to the case schools, selecting participants, and ethical considerations. The last part of this chapter looks at the experiences I gathered from the fieldwork and other emerging ethical concerns.

4.2 Philosophical Position- Constructionism

Studies about social phenomena are based on research paradigms that inform choices and processes of enquiries that subsequently impact the nature of data generated (Bryman, 2016). Research paradigms are perceptions, general views of the world, and beliefs or assumptions that guide inquiry (Guba, 1990; Creswell, 1998; Denzin & Lincoln, 2017). These beliefs are connected in three ways: ways in which reality is expressed (ontology issues), the relationship that exists between the researcher and the researched (epistemological issues), the role of values in a study (Axiological issues) and the process of research (the methodological issues) (Guba & Lincoln, 1989; Creswell, 1998). It implies that the researcher's choice of methodology is dependent on and interrelated with how participants perceive reality, the nature of the researcher-researched relationships, and the values that manifest in the research. These, consequently, guide the researcher through knowledge gathering (Bryman, 2016; Guba, 1990). The qualitative approach adopted in this study supports the constructionist's philosophical stance and the general research aim and questions (Denzin & Lincoln, 2008).

As an ontological position, constructionism holds that social actors continuously influence social phenomena (Bryman, 2016). Considering the constant state of social interaction between actors, knowledge is seen as 'indeterminate' because it undergoes 'constant revision' (Bryman, 2016, p. 29). Both researchers and the researched continue to construct and present their version of knowledge or social reality through their interactions (Creswell, 1998) and study of cases. Thus, to the individual, reality may be derived from their interaction with the social and physical world. Therefore, people's knowledge and reality of their world are based on their experiences and interpretations of situations. These, in effect, impact their perception of their lives and that of others (Cohen, Manion, & Morrison, 2007; Searle, 2006).

Unlike the positivists' or realists' perspective that holds the view that a single reality exists, which is independent of any individual's influence, the researcher argues from the relativists or the interpretivists' stance, which posits the existence of multiple realities, and these are constructed by both the researcher and the researched (Bryman, 2016; Yin, 2014). Hence, it is acknowledged here that every individual, including participants in this research, has their subjective definition of inclusive pedagogy (Makoelle, 2014) and what counts for inclusive pedagogical practice in the classroom. This is defined within the individual's position or practice adopted through experiences, built over time and resulting from interactions with others within their circle. Teachers' position of their pedagogical approach adopted in inclusive classrooms in Ghana is based on their experiences with children with special needs and what constitutes reality or practical while supporting all children, including those with special needs. Given this, the researcher aimed to document the inclusive pedagogical practices of all sampled teachers that represent reality to them within their various contexts and identify some similarities or otherwise within their practices (Charmaz, 2014).
Additionally, I acknowledge the importance of spending time in the field and collaborating with participants to generate a comprehensive knowledge of teachers' inclusive pedagogical practices.

The presence of values and subjectivity in research means that biases are inevitable (Creswell, 1998). My axiological position was centred on the belief that research is inherently value-laden and that the researcher's values and perspectives influence the interpretation of data. I acknowledge that my cultural background and personal and professional experiences predisposed me to some biases. These could shape how I approach the research process and the analysis of findings. To mitigate these biases, I remained reflexive throughout the study by critically examining how my values may affect the research design, data collection, and interpretation. By being transparent about my axiological stance, I ensured that the findings were presented in a manner that was authentic and mindful of these influences. Ultimately, recognising and managing my values, following experiences gained from my professional background, enriched the research process and contributed to a more nuanced understanding and interpretation of the phenomenon under study. Further, classroom practices were interpreted by taking cognisance of meanings from teachers' perspectives. These philosophical positions influence the researcher's decision to adopt the qualitative research methodology and the case study design to study teachers' inclusive pedagogies.

4.3 Research Approach

Literature presents two basic methodologies through which scientific inquiries are carried out. These are the quantitative and qualitative approaches (Almeida, Faria & Queirós, 2017). Scientific research methods are systematic inquiry processes used to explore and interpret phenomena about the real world (Almeida, Faria & Queirós, 2017). Fundamentally, quantitative research entails collecting and analysing numerical data through statistical procedures (Almeida, Faria & Queirós, 2017; Bryman, 2016). It requires the use of structured procedures to collect and analyse data systematically. Quantitative research aims to collect and analyse data objectively and with a larger sample size, representing a larger population's views (Almeida, Faria & Queirós, 2017; Martin & Bridgmon, 2012).

On the other hand, a qualitative study focuses on generating deeper meaning about phenomena, relationships, attitudes and beliefs that cannot be quantified (Maxwell, 2013). Qualitative research is "an inquiry that explores a social or human problem" (Creswell, 1998, p. 15). Creswell (1998) argued that a qualitative researcher 'builds a complex, holistic picture, analyses words, reports detailed views of informants and conducts the study in natural setting' (p. 15). Qualitative research uses a 'naturalistic approach' to interpret practices (Denzin & Lincoln, 2017, p. 10). Qualitative researchers collect data to provide a rich interpretation of social practices considered 'trivial' but meaningful to others (Bogdan & Biklen, 2007). Unlike quantitative research, which quantifies research, using a qualitative approach to studying phenomena means engaging in examinations to understand social issues through words (Bryman, 2016). Differentiating between a quantitative and a qualitative approach, Almeida, Faria and Queirós (2017) contend that qualitative research provides a more extensive understanding of context-related cases, ensures closer proximity to the problem under study and offers greater flexibility to data collection and "explanatory analysis" (p. 371). Additionally, Denzin and Lincoln (2005) argue that qualitative research allows for a holistic understanding of a phenomenon and focuses on exploring relationships within particular social contexts. These qualities permit vivid descriptions of specific happenings on the field to aid understanding of prevailing issues within given research contexts.

The qualitative research approach was adopted for this study because it supported the development of a deeper understanding of the complexities surrounding teachers' inclusive pedagogical practices that may not be thoroughly examined through other (quantitative) means

(Bryman, 2012). The qualitative research approach allowed flexibility in research techniques (Merriam, 2002) and the collection of evidence about social reality (regarding engagement of learners with special needs within the inclusive classroom), which are not usually static (Yin, 2011; Bryman, 2016). Thus, the qualitative research approach was employed because it helped to collect and analyse teachers' views to gain a deeper understanding of how teachers conceptualise the concept of inclusive pedagogy. Further, this qualitative inquiry aided in examining the core issues about how teachers enacted their inclusive pedagogical practice while interacting with all learners in the natural classroom setting and provided insight into such complex activities (Creswell, 2012; Denzin & Lincoln, 2005). Finally, the qualitative approach provided flexible opportunities for teachers to justify why they enacted certain practices and activities in particular ways in their lessons.

4.4 Research design

The instrumental case study research design was selected as the means of inquiry. Researchers have proposed various definitions of case study. Yin (1989) defined a case study as 'an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when boundaries between phenomenon and context are not evident; and in which multiple sources of evidence are used' (p. 23). Stake (1995) reckons that case study is "the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances" (p. xi). According to Merriam (2009), a case study is "an in-depth description and analysis of a bounded system" (p.40).

Yin's definition identifies the empirical nature and need for contextual connection with a case study, while Stake (1995) and Merriam (2009) take a flexible look and focus on a particular case (Harrison et al., 2017). These definitions hold in common that a case study involves studying a case in a natural and specific context. The case study approach describes social situations that involve individuals, groups or organisations (Mills, Durepos & Wiebe, 2009) and allows in-depth description and analysis of a complex real-life or social situation (Stake, 1995; Yin, 1994; Merriam, 2002).

Taiwo (2015) conducted a qualitative study using the case study design to examine how teachers in mainstream classrooms in Nigeria negotiate their inclusive practices. Garza (2016) explored the experiences of special education teachers who work in inclusive settings using a

case study design. Drewry (2017) conducted a case study on multiliteracies and inclusive pedagogies. These three researchers agree that the case study approach allows a deep understanding, description and analysis of participants' experiences in those contexts.

Thus, the qualitative case study design is considered appropriate for this study because it will allow the researcher to explore, in detail, the nature and practice of teachers' inclusive pedagogy in specific classroom contexts. The case study design was adopted to investigate the nature of teachers' inclusive pedagogical practice (a contemporary issue) of regular classroom teachers with special needs learners. It sought to examine teachers' conceptualisation of inclusive pedagogy and how and why they enact their inclusive pedagogical practices. The case study approach helped to deepen understanding of teachers' practices enacted during classroom interaction with learners, including those with special needs. Premised on the idea that a case study could help to bridge the gap between theory and practice (Mills, Durepos & Wiebe, 2009; Yin, 2009), the approach was used in this study to develop an understanding of what teachers do (relating to their pedagogical practice) and reveal how these practices agree, or otherwise, with generally identified inclusive practices both in national and global contexts. The design also helped to uncover consistencies or inconsistencies between their conceptualisation, practices and justifications.

Stake (1995) described three types of case studies: instrumental, intrinsic and collective. The instrumental case study approach by Stake (1995, 2003) is used in this study to develop an understanding of a social phenomenon- teachers' pedagogical practice. This study focuses on generating a richer understanding of a case. Stake (1995) argues that although the object of study is being observed in an instrumental case study, the main focus is to understand something more. The object being studied assists in better understanding the case of interest. In this study, though the researcher observed and interviewed teachers while teaching and learning took place, the main focus was not to determine how well they were teaching. The aim was to understand how and why teachers enact their inclusive pedagogy and how these practices respond to the needs of all learners. This study focused not on the classroom teachers per se but on what they did and why they implemented those pedagogical practices, as this provided valuable insights into the dynamics of an inclusive classroom setting. Therefore, the elements such as teachers' values and beliefs cannot be overlooked. As noted earlier, the study draws from the underlying principle of Stake's intrinsic case study (Stake, 2003). While the primary aim of this study was to gain a deep understanding of the case, my experience as a special education resource and coordinator, particularly in how learners with special needs are

engaged in regular classrooms and their academic progress, influenced the study. In Stake's intrinsic perspective, teachers offer essential background information to help facilitate understanding (Stake, 2003) of the complexities of developing inclusive practice.

The study was neither a descriptive (Yin, 2009) nor a collective case study (Stake, 1995, 2003). It aims to gain a detailed understanding and analysis of the nature and rationale behind teachers' inclusive pedagogical practice in inclusive primary classrooms. Furthermore, the project does not aim to draw all cases together. The study concentrates on identifying and analysing each teacher's inclusive pedagogical practice in the context of their classes. Thus, each case was unique and instrumental to learning about inclusive pedagogical practice.

4.5 Population, Sampling Method and Sample size and processes

This section describes, in detail, the study participants and the processes through which they were selected for the study. It also provides a summary of the study settings, the dynamics of each context and how these contributed to the gathering of rich data.

4.5.1 Target population

This study's target population was primary teachers in the regular education classroom in the Central Region of Ghana. Given that a qualitative study is conducted to understand specific phenomena in specific contexts (Brantlinger et al., 2005), this study chose primary classroom teachers as its target population because of their rich experience to ensure a deep understanding of the case under study. Primary school teachers are pivotal in developing the teaching and learning process (Majd et al., 2023) because they face unique challenges regarding addressing learners' diverse needs, adapting instructional strategies and managing the classroom environment. They also contribute significantly to developing and improving students' educational experiences from the very early stages of their lives. Further, because primary education provides children with critical academic, physical and socio-emotional development (Rahmannia et al., 2020), teachers' perspectives on inclusive pedagogy are crucial to understanding how to develop effective inclusive teaching practices. Additionally, primary teachers were accessible through my professional networks, which aided their recruitment.

4.5.2 Sampling technique

The purposive and snowball sampling techniques are commonly used in qualitative research, with most studies adopting purposive sampling (Bryman, 2016). Purposive sampling is the process of selecting participants for a study based on their ability to provide relevant information to the problem under study (Lodico, Spaulding & Voegtle, 2010; Oppong, 2013). The purposive sampling method, therefore, involves selecting individuals from specific contexts depending on the purpose of the study. This method allows the researcher to generate data that would otherwise not be gathered from others. (Maxwell, 2005). The purposive sampling method was used in this study. The current study focused on primary classroom teachers who taught children with special educational needs and the typically developing peers in the same class. The purposive sampling strategy was adopted to gather relevant data to answer the research questions.

This research sought to explore how primary teachers in schools in Ghana enact their inclusive pedagogical practices. Primary teachers were the target population. Because this study focused on understanding teachers' inclusive pedagogical practice, throughout the study, the target was to identify teachers in regular primary schools who engage in practices and had experiences that were relevant to the purpose of my study and research questions. Additionally, teachers with diverse characteristics who could provide data to address the research questions were actively sought. Against this background, sampling of the participating teachers was purposively done using four-item inclusion criteria. The sampling criteria included the following:

- Participants should be primary school teachers in general education or mainstream schools.
- The schools included in the study must admit and support children with and without special needs.
- The selected schools should have at least one special education resource teacher attached to them.
- Teachers must have at least one learner with special needs in their class. The learners identified with special needs should have any needs or impairments to which the class teachers were expected to respond during their lessons.

The inclusion criteria presented opportunities for selecting teachers with various beliefs about inclusion, gender, qualification, and experience levels. Therefore, it created a pool of heterogeneous participants. The process enriched the data gathered and presented various dynamics to its analysis.

On the other hand, teachers who did not have a child with special needs in their classes were excluded from this study despite their past experiences. The study focused on understanding how children with special educational needs were supported in their learning. Therefore, this step was taken to ensure the data collection from the right participants to achieve the study's aim. Further, while teachers appeared to have varying perceptions about inclusion and inclusive practices, this was not considered a threat to the study. This approach presented different dynamics to the data analysis and discussions. It was, however, ensured that participants met the identified inclusion criteria.

This study adopted snowball sampling as a secondary strategy to collect additional data. As a widely used sampling method in qualitative research (Parker, Scott, & Geddes, 2019; Noy, 2008), snowball sampling supports the researcher to access informants through referrals and contacts provided by other participants Noy (2008). The challenge of using this sampling method relates to selection bias, representativeness of samples and generalisability of results (Noy, 2008). However, its strength lies in flexibility, reliance on network and social capital (Noy, 2008) and the ability to access hard-to-reach participants (Woodley & Lockard, 2016). While the snowball sampling method was not the primary tool in this study, it offered valuable support in generating additional participants at two critical time points: initially when identifying case districts/ schools and to gain other participants when some selected teachers declined participation. Snowballing supported the use of social networks to identify additional participants for the study. However, each participant was measured by the inclusion criteria.

4.5.3 Sample size

Qualitative research usually identifies a sample size considered adequate for given research (Oppong, 2013; Bryman, 2016) to ensure the credibility of findings. Because it is impossible to collect data from all the earmarked population of a given study due to costs and time limitations (Mack et al., 2005), researchers must select a proportion of the targeted population as subjects (Oppong, 2013). Samples may be too small to ensure adequate support for claims

or achieve data saturation or too large to allow for in-depth analysis of a phenomenon. It makes the selection of samples in qualitative study relative (Onwuegbuzie & Collins, 2007; Sandelowski, 1995). Despite the lack of agreement regarding precise samples for particular qualitative studies (Mason, 2010; Guest, Bunce, & Johnson, 2006), some writers have argued that between 20 and 30 participants may be considered adequate for a qualitative study (Morse, 1995; Creswell, 1998; Morrow, 2005). Others, such as Crouch and McKenzie (2006), argued that a sample size smaller than 20 improves the chances of gathering good-quality data by allowing researchers to engage more closely with participants. Despite the diverse positions identified, researchers have been advised to give attention to data overload and saturation while determining the number of respondents for a study (Mason, 2010; Morrow, 2005; Bryman, 2016). In qualitative studies similar to the current one, Garza (2016) and Taiwo (2015) used 15 and 18 participants, arguing that this allowed them to achieve rich data gathering and saturation. Although these suggestions were considered when determining the sample size for this study's participants, I was guided by what this study aimed to achieve. Ten (10) participants were sampled for this study. The selection of 10 participants was influenced primarily by the purpose of the study, the method identified for data collection, what data was collected and the amount of data that would be generated from the fieldwork. Although this number is lower than the ones identified in the studies discussed above, it was considered adequate because data was collected across multiple sources and times. Data were generated through lesson observations and in-depth interviews with each participant at two-time points and teachers' documents (Brantlinger et al., 2005; Bryman, 2016). Thus, care was taken to avoid data overload. The time and cost involved in collecting data from schools in three different educational districts were equally considered.

4.5.4 The study setting

The study was carried out at the campuses of mainstream basic schools in Ghana. Data collection was conducted in classrooms and school heads' offices. These were mainly secured places, providing a serene atmosphere for the data collection. The venues were reached through consensus with participants and the permission of the appropriate authorities, that is, education directorates and school heads.

4.6 Gaining access and recruiting study participants

The University of Strathclyde granted ethics approval for this study after satisfying the conditions required for a successful ethics application and data collection. This was followed by approval from the headquarters of Ghana Education Service (GES), regional and district education offices, and heads of the various schools, respectively. The snowball sampling technique was used to support the selection of the educational region, districts and schools. Initially, nine (9) schools were identified with the help of my contacts and former colleagues (Special Education Coordinators and resource teachers) who were professionals in the field. Six out of the nine schools are located in one region in Ghana, while the remaining three are in two other regions. Upon further consultation, a decision was reached to focus on the Central region. As the region from which six schools were initially named, it allowed the opportunity to explore the experiences of classroom teachers from different mainstream school contexts, including those openly known to admit and include children with special needs (inclusive schools). Further, the decision to focus on the Central region was based on logistical reasons and its leadership in adopting inclusive education policies. This choice allowed for more detailed, region-specific data on inclusive pedagogical practices. It also ensured a diverse group of schools, including those with experience in including children with special needs, which was essential for understanding the varied experiences of teachers in inclusive settings. The recruitment strategy aided in selecting schools representing various inclusive practices across different regions.

The six schools were spread across three districts within the region. Following further engagement with the district offices and special education coordinators in charge, one of the proposed schools was dropped because they did not have a resource teacher directly stationed in it. Resource teachers are assigned or attached to specific schools, although their duties often extend to other schools. Information from the resource teachers in the case schools indicated that they were assigned to a minimum of four (4) schools, with others working with five. However, the case differed in one of the case schools where the resource teachers were two at the time of data collection. This situation was mainly because of the nature of the work and the presence of children with special needs (mainly learners who were blind). Selecting such schools helped to gain insight into the nature of collaboration between the classroom and resource teachers. However, the classroom teachers remained the primary participants because it was only their experiences that this research focused on understanding.

Additionally, the districts and schools represented different sociocultural and economic contexts. Further, school A (also called inclusive school) was located in the regional capital and had access to resources and donor attention because of its position and design to purposely include children with visual impairment. Schools BCD and E were located in peri-urban communities where resources were much more limited than school A's. Information from the case teachers and resource teachers (especially in school BCDE) revealed that while some parents had positive perceptions about disabilities, many did not favour educating them with their children. Table 4 provides a brief context about the schools. These allowed the collection of different data that presented significant dynamics to this study regarding how teachers in those settings enacted their inclusive pedagogical practices and the explanations they provided. It allowed the study of the phenomenon in urban, peri-urban, and rural settings where resources were usually unequally distributed.

Table 4: Brief description of the case schools

School A School A is an 'inclusive school.' 'Inclusive schools' are purposely designed to provide the educational needs of children with specific disabilities and their typically developing peers. School A specifically admits children with severe and profound visual impairments and educates them alongside other learners without disabilities. Students with low vision and total blindness were identified across primary and junior high classes. During the fieldwork, it was observed that such children sat in the same classroom with others, were taught the same lessons and participated in similar classroom tasks and activities. Resource teachers specially trained in brailing are assigned to aid the effective education of the children with visual impairments in School A. These resource teachers must support teachers to adapt their lessons to include students with visual impairment. They also have a core duty to support visually impaired learners directly. Their responsibilities cut across drawing the learners' attention to lessons, transcribing their work and providing emotional support. School 'A' is located in the regional capital and receives frequent visits from special education authorities.
Schools B, C and D These schools are located in one district. Although not labelled 'inclusive schools', it was acknowledged that the schools admitted children with special educational needs. Among children with special educational needs identified in these schools are visually impaired (can be categorised as moderate), hearing impaired (severe), attention deficit hyperactivity disorders and intellectual disabilities. The standard practice was that children were expected to be formally assessed at an assessment centre at the entry point or when the challenge was detected. However, information gathered showed that many of these children did not undergo the assessment due to insufficient funds. Parents were responsible for bearing the cost of the assessment. In school C, for instance, a child suspected of intellectual difficulties and referred by the resource teacher to take the assessment had not gone through the process because of financial difficulties. A similar situation was observed at School D, where a child whose visual difficulties were identified by the class teacher and referred by the resource teacher could not attend their appointment because of financial constraints. Schools were not resourced to pay for the expenses.

School E School E is located in a different district but had similar conditions as Schools B, C and D. However, the child whose class was observed had undergone their assessment and was diagnosed as having multiple disabilities. He had severe visual impairment, intellectual and challenges with coordination. These significantly impacted his total development and participation in lessons. The most typical situation observed regards large class sizes and class congestion.

With the support of the resource teachers and heads of schools, classes that had children with special needs were identified (nuances surrounding this and how it was done have been discussed under the ethics section). The consents of teachers of the identified classes were sought. A meeting was arranged with the selected teachers to brief them about the nature of the research, as outlined on the Participants Information Sheet, and what was required of them. All the identified teachers agreed to participate in the study. All participants duly signed the consent forms except for one teacher who agreed to participate in the study but did not append their signature for personal reasons. They, however, gave verbal consent, which the headteacher confirmed. The data of the said teacher was used in the study as verbal consent was considered adequate for this study. Also, despite earlier agreement to participate in the study, two teachers in one school withdrew their consent on the day scheduled for data collection. This occurred after initial familiarisation visitations to the school and classroom observations. They expressed discomfort about audio-taping their lessons and interviews. All attempts to reassure them of anonymity and confidentiality were unsuccessful. They were, therefore, not included in the study, and new participants were recruited through the recommendation of participants (snowballing) in the other case schools.

These sampling processes allowed the inclusion of participants with heterogeneous characteristics that reflected a broader range of teachers. Teachers span a range of age groups, possess varying levels of experience, hold diverse qualifications, and teach a wide array of subjects across different grade levels. Further, they differed in their experience (Tsui, 2003), qualifications, age, gender, and value sets, presenting interesting dynamics to the data. Most of the participants in this study possessed a bachelor's degree in basic education, with only one having a master's degree (not in education). Both female and male teachers were selected for this study. Study participants taught in primary classes (1) to six (6).

Regarding the number of years taught in the inclusive setting, participants' teaching experiences ranged between 3 months and 12 years, although all teachers had two or more years of teaching experience. Table 6 details the participants' characteristics. Some experienced and novice teachers include people with five or more years (Martin, Yin, & Mayall, 2006; Richards & Farrell, 2005; Tsui, 2003) and below two years (Gatbonton, 2008) respectively. Experience has also been associated with possessing copious knowledge in the field, making sound judgements (Tsui, 2003), improving classroom management skills, recruiting learners' attention and directing lessons (Rodríguez & McKay, 2010). While not disagreeing with the above views, this study did not focus on judging who was or was not an experienced teacher. All the participants had been teaching in the general education classrooms, meaning they would have engaged mixed-ability learners. Nevertheless, the different levels of experiences provided some dynamics to the data regarding how their views or practices differed from others.

4.7 Description of participants and class

Table 5 summarises participants' information. It also highlights the class size and the special educational needs of children in each class during the fieldwork.

Table 5: Participants and class information

SN	CT	Gender	Class	Qualification	Years taught	Exp. in inclusion	Class size	No of SEN
1	Victoria	Female	P 1	B.Ed. Basic Edu.	3	1	39	1
2	Sarfoa	Female	P 2	B.Ed. Basic Edu.	2	2	28	2
3	Cecelia	Female	P 6	M.Ed. Social Stud.	10	10	65	1
4	Agnes	Female	P 3	B.Ed. Basic Edu.	8	8	61	5
5	Oforiwaa	Female	P 5	B.Ed. Basic Edu.	8	3 months	54	2
6	James	Male	P 5	B.Ed. Basic Edu.	8	8	51	4
7	Banahene	Male	P 5	B.Ed. Basic Edu.	18	2	38	2
8	Mariam	Female	P 3	B.Ed. Basic Edu.	7	3 months	35	1
9	Dickson	Male	P 4	B.Ed. Basic Edu.	10	10	60	3
10	Ocquaye	Male	P 6	B.Ed. Basic Edu.	7	10	71	1

Overall, ten (10) classroom teachers participated in this study. Females constituted the majority (6) of participants in this study, while males (4) were in the minority. Four lower primary and six upper primary class teachers participated in this study. All the participants in the study were professional teachers who had received pre-service training in various colleges of education or higher education institutions to teach within a regular school context. One out of the ten participating teachers holds a master's degree (though not in education), while the others have bachelor's degrees in various aspects of education.

The maximum number of years taught in primary school is 18, while the teacher with the least had 2 years of teaching experience. Most (7) teachers had taught at the primary level between seven and ten years. On the other hand, two participants had the minimum years of experience (3 months) in the inclusive setting, while three had the maximum (10 years).

Participants had an average of about 50 children in their classes, with six classes above the average number. Despite this, the maximum number of learners with special needs (confirmed) in a particular class was 5. The rest had between 1 and 2 learners with special needs. Special needs children were identified by both class and resource teachers and later referred for further assessment after an initial examination. These characteristics present interesting dynamics to the data.

4.8 Piloting of the research tools

Before the fieldwork, experts carefully examined the drafted lesson observation and interview guides. The experts included my supervisors and other specialists in inclusive education and practices. Each expert reviewed and provided suggestions to improve each item. The team reviewed the interview and observation protocols the second time after the questions and items were updated. Subsequently, the tools were approved by the ethics committee of the University of Strathclyde.

The research instruments were later piloted in two randomly selected general education primary schools in Ghana. The pilot involved two classrooms, one from each school. The lesson observations and interviews lasted forty-five (45) and thirty minutes, respectively. Lesson observations were conducted after the class had returned from break, and the interviews with class teachers took place in the headteachers' offices after school hours.

Three primary benefits were derived from the testing of the research instruments. Firstly, the pilot study helped to refine the observation items to capture specific issues such as where children with special educational needs sat in the class, their mood and responses to conversations. These helped to observe what and how learners with special needs are motivated to participate in class activities. Secondly, the pilot study helped to reform some interview questions, remove ambiguities and simplify them to aid participants' understanding. For example, it was deduced that some teachers were unfamiliar with concepts (such as inclusive pedagogy or the Universal Design for Learning). They also felt quite uncomfortable when they felt their responses to questions relating to such concepts were inadequate. Hence, before the actual interview, teachers were reassured of anonymity and encouraged to ask for clarity in questions openly. Participants were also engaged in informal conversations, which provided information that informed the questioning style during the main interviews. Furthermore, rather than directly asking: "What do you understand by the concept of inclusive pedagogy?" initial questions to the participants were: "Do you have any idea about the concept of inclusive pedagogy?" or "Are you familiar with the term inclusive pedagogy?" Thirdly, the piloting drew attention to how various school and classroom dynamics could impact decisions about when and how to collect data. While the proposed itinerary for the lesson observation and interviews had been designed, participants agreed, inculcating some flexibility.

The pilot study participants were allowed to give feedback about the exercise, which was included in the changes. The tools were then updated and prepared for the actual data collection exercise. However, these were constantly revised to ensure that new ideas and areas that needed investigation were included.

4.9 Methods and processes of data collection

Multiple data collection methods were used to gather meaningful data to understand the phenomenon(Stake, 2006) comprehensively. These include semi-structured non-participant observation and semi-structured interviews. The observations and interviews constitute the two methods that are predominantly used in qualitative research (Almeida, Faria & Queirós, 2017). In addition to these methods, teachers' lesson plans and artefacts (teaching learning materials) were collected to help provide insight into what I noticed during lesson observations and interactions with the participants (Bryman, 2016). Using semi-structured observation (as the primary data source), qualitative interviews and artefact collection methods helped to gather

rich data from participants. Additionally, data generated with each method complemented each other and supported further inquiry and understanding of cases participant's experiences (Bryman, 2016)

4.9.1 Semi-structured non-participant observation

The semi-structured non-participant observation method served as this study's primary data source. The observation was necessary for this qualitative study because it allowed rich data collection (Stake, 2006; Yin, 2011; Bryman, 2016). This data collection method generated in-depth information from a natural, real-life situation characteristic of non-participant observation (Cooper, Lewis & Urquhart, 2004). As the primary data source, lesson observations were conducted to document teachers' pedagogical practices within the natural classroom environment during teaching and learning. It also helped to explore key issues noticed during the interview.

Adopting the non-participant observation position was beneficial in two main ways. Firstly, this position helped define and clarify the intentions for conducting the study and not interfering with classroom activities. This made participating teachers and children comfortable throughout the data collection. Maintaining this atmosphere was necessary to ensure continuous permission to access schools and participants for the study (Bryman, 2012; Hammersley & Traianou, 2012). Additionally, this method allowed the collection of primary evidence of teachers' pedagogical practices in the classroom (Taiwo, 2015). While this allowed the observation of the teaching and learning process, it afforded the chance to document practices and understand them as they occurred in the natural classroom context (Cohen, Manion & Morrison, 2011; Taiwo, 2015). Adopting the non-participant position ensured that learners focused on the lesson without distractions. This position also provided the chance to notice other important elements such as class organisation, positions of learners with special needs, the nature of classroom interaction and relationships that influenced teaching and learning.

As a researcher in the classroom, I acknowledge that my presence could influence the behaviour of learners (including the teacher), their responses and interactions in class. This could impact the overall data collected as pupils and participants were aware and might be curious about being observed. I created rapport with the pupils and participants through earlier

class visits to mitigate these impacts. This promoted the learner's familiarity with me and increased trust. Further, during lesson observations, I maintained a non-participant position and sat at places where my presence had no interference with lessons and the natural classroom dynamics. Additionally, I continuously reflected on my role, position in the class, and actions throughout the data collection period. Thus, I was able to identify and avoid or reduce all these potential biases and influences that could negatively jeopardise the data collection process.

4.9.2 Conducting lesson observations

Lesson observations and observation notes were audio-recorded to ensure that essential aspects of the lessons relating to classroom interactions were recorded. Two different audio devices were used to ensure the backup of the data. The devices were placed in front and at the back of the class to capture all discussions while avoiding distractions from learners' attention. The recordings were listened to after every session, providing direction for each observation.

Prior to the actual data collection, at least two lesson observations were conducted in the case schools. It helped me to familiarise myself and build rapport with the participants and learners. Both the teachers and learners were more comfortable with my presence. Therefore, data was collected in a natural and more friendly environment, allowing the opportunity to pay attention to critical issues that would have gone unnoticed.

A total of twenty (20) lesson observations were conducted. Two lesson observations were conducted for each of the ten (10) classroom teachers at different times. The lesson observations lasted between 58 minutes and one (1) hour. Although lessons were supposed to last 30 minutes each, the timetables were usually designed such that a subject had two straight periods. This meant that lessons on subjects generally lasted one hour. Class teachers were required to teach, give and mark exercises within this time frame. Most lesson observations fell below the one hour because teachers either had to organise the class for the lessons or wait for learners to return from break.

Different subjects, including English Language, Mathematics, Science, History, and Our World Our People, were observed at different times of the day. This made it possible to note the dynamics in how teachers enacted their inclusive pedagogical practice in different subject areas and at different times of the day.

Lesson observations formed the primary data source for this study because the purpose was to understand teachers' classroom practices. Thus, observations were carefully conducted to document significant aspects of the lessons, which were later probed further during the interviews. An observational guide (Appendix F) was developed for the lesson observation and data collection (Patton, 2002). The guide was used with some flexibility because of the possibility of identifying interesting issues that were not captured in the guide. The observation guide focused on what teachers do during the teaching and learning process, their instructional strategies and how the strategies, activities and materials were adapted in lessons to respond to the needs of all learners (particularly those with special needs). Additionally, it captures the nature of relationships (teacher-learner with special needs, learner with special needs and typically developing students) that existed in the classrooms, classroom organisation and the contributions of other professionals in developing the lessons. These helped to observe the level of engagement and participation of students with special needs in the classroom activities. Observation notes were also taken, allowing me to write detailed descriptions of the lesson process. Notes captured significant aspects of the teaching and learning process. The notes provided the chance to reflect on the observation after each session to help inform questions for observations and interviews (Patton, 2002; Robson, 2002).

4.9.3 Semi-structured interview

An interview may be described in research as a process of data collection, which involves an interaction between the researcher and the participants (Kvale & Brinkmann, 2009). In an interview, participants (interviewer and interviewee) work jointly flexibly and conversationally to document both past, present or future events or activities (Patton, 2002). Qualitative interviews are also regarded as extended conversations meant to derive meanings from the words of participants during interaction (Kervin et al., 2006). The qualitative interview was, thus, employed in this study to gather data that provided insight into teachers' inclusive pedagogical practice in a flexible, conversational and collaborative way.

4.9.4 Conducting interviews

The interviews were conducted after the lesson observations to explore and gain deeper insights into the meanings behind observations. Focusing initially on the issues from the lesson observations, we (the participant and I) reflected on practices enacted during the teaching and learning process. The interviews also focused on determining teachers' conceptualisation of

inclusive pedagogy and the rationale behind the pedagogical approaches they used in class. During the interview, questions about why and how specific actions were taken in class were explored to understand teachers' practice. Through the interviews, I sought to document what the participants' views counted as inclusive pedagogical practice and what they believed about teaching all learners in the same classroom. Additionally, through the interviews, I explored issues that influenced their inclusive pedagogical practices.

While coming up with the interview questions, careful thoughts were put into the purpose of the study. That is, to understand the nature of teachers' inclusive pedagogy in primary classrooms in Ghana. Some salient observations and reflections of the field notes influenced the interview questions. Additionally, despite this, I maintained a flexible and conversational posture to allow exploration of complex issues (Patton, 2002). Adams (2015) suggests that "The dialogue can meander around the topics on the agenda rather than adhering slavishly to verbatim questions as in a standardised survey and may delve into totally unforeseen issues" (p. 492). Interviews were conducted in a relaxed atmosphere, which allowed participants to speak freely about what they did. The flexible nature of the interviews allowed for a thorough examination of teachers' inclusive pedagogical practices. A blend of open and closed-ended questions was used (Adams, 2015). Participants openly answered questions about what they did in class and why learners with special needs were engaged in specific ways. However, I was guided by the purpose of the study, which helped to reduce departure from the subject matter. I maintained openness within the interview process to document other important issues raised by teachers but not captured in the questions formed earlier. The interview guide, therefore, was not considered as finite.

All interviews were audio recorded. The audio recordings were revisited to aid thorough examinations of participants' responses (Bryman, 2016). The participant's responses were used to guide subsequent observations and interviews. In addition, the recorded data allowed me to refer to and correct errors in the transcripts.

Two interviews were organised for each participant. Each interview followed an observation session. The purpose was to explore the rationale behind certain inclusive pedagogical practices and other observations made in the teaching and learning process. The second or follow-up interviews provided the opportunities to generate further details on issues identified during the second lesson observations. The interviews were mostly done a few minutes after the

observations. One occasion, it was conducted a day after because the teacher was called on to perform some assignments. The initial interviews lasted mainly between 30 and 35 minutes. In one case, the interview paused for about ten minutes because the participant had to attend to an urgent matter. Though they soon returned for the interview to continue, the flow of the conversation was interrupted. However, the main issues were covered. Most of the data was generated in the first interviews. The follow-up interviews were meant to explore further issues captured during the second lesson observations. Follow-up interviews also provided opportunities to seek answers to questions that were not asked or probe other responses that appeared unclear upon reflection. This explains why the follow-up interviews usually lasted only a few minutes (Shown in Table 6). Although interviews were not conducted in three cases because participants did not consider it necessary, I considered the data collected in the first session adequate to provide a good analysis of the case.

Table 6: Summary of observations, interviews and documents collected

Teacher	School	Class	Observation		Interview		Documents	
			1	2	1	2	LP	TLM
1. Victoria	A	P 1	51 minutes	43 minutes	31 minutes	-	✓	✓
2. Sarfoa		P 2	44 minutes	45 minutes	32 minutes	-	✓	-
3. Cecelia	B	P 6	35 minutes	45 minutes	31 minutes	15 minutes	-	✓
4. Agnes	C	P 6	54 minutes	49 minutes	31 minutes	30 minutes	✓	-
5. Oforiwaa		P 3	56 minutes	52 minutes	30 minutes	11 minutes	✓	✓
6. James		P 5	1 hour	40 minutes	31 minutes	-	✓	✓
7. Banahene	D	P 5	42 minutes	46 minutes	25 minutes	15 minutes	✓	✓
8. Mariam		P 3	50 minutes	45 minutes	30 minutes	9 minutes	-	-
9. Dickson	E	P 4	40 minutes	46 minutes	35 minutes	11 minutes	-	-
10. Ocquaye		P 6	58 minutes	41 minutes	30 minutes	13 minutes	✓	✓

4.9.5 Lesson plans and artefacts

Saldana and Omasta (2017) suggest that qualitative researchers should collect and analyse things that are "owned, used and created" by people in their inquiry because they constitute core parts of social life (p. 63). Some of these items in teaching may include documents used in lesson planning and artefacts used as resources in teaching. These items are symbolic and may hold deep meanings regarding values, attitudes and beliefs (Saldana & Omasta, 2017).

Documents or artefacts hold norms and principles that drive their lives and what they do (Daiute, 2014), hence providing the basis for the values they place on them. These values are intrinsically reflected in one's thoughts and feelings (Saldana & Omasta, 2017). Thus, resources designed and used by teachers were considered valuable information sources that helped develop an in-depth understanding of their inclusive pedagogical practice. Despite the challenges with availability and accessibility, documentation and physical artefacts provide stable, exact and broad information coverage (Yin, 2009). Additionally, physical artefacts provide insight into the activities and work of learners (Yin, 2009).

Lesson plans and learning materials used by classroom teachers were collected to augment data through lesson observations and interviews. Teaching and learning resources provided insight into teachers' activities (Yin, 2009). The lesson plans provided information about the approaches teachers intended to adopt in their teaching. Also, the plan revealed class teachers' intentions and plans for learners with special needs in the regular classroom. Thus, collecting these resources was important because they provided better insight into teachers' inclusive practices and what provisions were made for some learners (those with special needs). Data from lesson plans and TLMs were mainly used to support findings from the observations and interviews.

Although the documents, especially lesson plans, were requested before the start of the lesson, most participants only made them available after the lesson. Two participants could not provide all two lesson plans, with two presenting one each. However, this did not affect my ability to observe and critically reflect on teachers' practices. Receiving the lesson plans after the lesson allowed me to reflect on what was observed in class and the original decisions about preparations made. This led to interesting findings about the teachers' intentions and actual practices.

4.10 Methods and process of data analysis

This study involved the collection of several pieces of data, put together and analysed (Lodico, Spaulding & Voegtle, 2010) to develop an understanding of primary classroom teachers' inclusive pedagogical practices. Data was primarily analysed through an inductive process. As a data-driven approach (Braun & Clark, 2006), the inductive process provided an opportunity to interrogate the assumptions underlying the frameworks critically and analyse teachers' practices within their contexts. In addition to this, the deductive approach was used to support

data analysis. Known as theory-driven (Bryman, 2016; Clarke & Braun, 2006), ideas from the sociocultural theory and inclusive pedagogical frameworks such as the UDL, the TBM and IPA frameworks were adapted and developed to underpin the study. Data were analysed through a five-stage process using Clarke and Braun's reflective thematic analysis approach (2022).

The research findings were presented under the sub-research questions to ensure coherence and clarity of the output. Firstly, participants' characteristics and data collected were presented. These were followed by teachers' conceptualisations of inclusive pedagogy and an analysis of the nature of their inclusive pedagogical practices and how these promoted learning for all learners. Teachers' rationale for adopting such practices was partly presented with their approaches under the research question to facilitate understanding the results. A summary of their justifications and factors that influenced their practices were presented under question three.

Qualitative inquiry usually involves the collection of large and unstructured texts (Bryman, 2016) because they involve collecting information based on people's feelings, opinions, words, beliefs and materials (Walliman, 2016). Analysing such data requires a creative approach to make meaning of it (Robson, 2011). While negotiating this stage, different approaches to qualitative data analyses, such as Grounded theory (Charmaz, 2000, 2014), Narrative analysis (Riessman, 2007), framework analysis (Ritchie et al., 2003) and Interpretive phenomenological approach (Smith, Flowers, & Larkin, 2009; Smith & Osborn, 2008) were carefully thought about. Despite the benefits of the listed analytical approaches, thematic analysis was considered suitable for this study (Braun & Clarke, 2006). This approach was chosen based on the purpose of the study, the kind of data collected and how to present it in a meaningful, coherent and persuasive manner (Braun & Clarke, 2006, 2022).

Thematic analysis provided a more flexible means of data analysis. Further, the thematic analysis does not require in-depth technical or theoretical knowledge(Braun & Clarke, 2006, 2022). This approach can be employed within a realist and constructionist framework (Braun & Clarke, 2006, 2022). Additionally, most of the methods mentioned earlier involve elements of thematic analysis (Braun & Clarke, 2006). Braun and Clarke (2022) have presented six phases of reflexive thematic analysis (similar to previous phases with some updates). A summary of the phases is presented in Table 7.

Thus, reflecting on the purpose of the study, the kind of data gathered from the field and how to present it in a meaningful, coherent and persuasive manner (Braun & Clarke, 2006, 2022), the Thematic Analysis approach provided the flexibility to think about, identify relevant themes and discuss the research findings in ways that make analytical sense. Therefore, based on Braun and Clarke's (2022) six phases of reflexive thematic analysis, the data were analysed using a five-stage process. The stages detail how the data set was approached, described and interpreted. I also incorporated Charmaz's (2000) ideas of coding and memo-making. This provided a transparent process of creating codes, identifying themes, and illustrating how the themes were developed.

Table 7: Summary of Braun and Clarke's (2022) six phases of reflexive thematic analysis

Phase 1: Familiarising yourself with the dataset generated	This involves going through the content of the data including reading transcripts and other materials, listening to recordings and writing notes.
Phase 2: Creating codes	At this stage, the researcher examines the dataset carefully to note interesting aspects that could help answer the research questions and give them names. Here, levels of coding are encouraged: semantic, referring to explicit or superficial meaning and latent, indicating implicit meaning.
Phase 3: Generating initial themes	After developing codes that usually hold one meaning, the researcher collates different codes that relate to similar ideas. These codes that are meaningful and could answer the research questions are put together under a concept to form candidate themes
Phase 4: Develop and review themes	Here, the candidate themes identified at the previous stage are assessed to ensure that they relate to the codes and the dataset. The researcher tries to find out whether the themes form a pattern in the data and relate to the research questions. Candidate themes may either be split put together or even discarded. This stage is characterised by "radical revision."
Phase 5: Refine, define and name themes	Adjustments to themes are made to ensure they are formed around essential concepts. The analyst examines how the themes connect to their main themes and the kind of story they tell. Particular themes could be discarded or redeveloped if found not in tune with the main research question.

Phase 6: Write up	This is a critical phase in thematic analysis. The aim is to analyse your work such that it tells a clear, coherent and convincing story about your study. The story should ultimately feed into the research questions and overall purpose of the study. it involves putting together the introduction, method and concluding part of the report and careful editing.

4.10.1 Stage 1: Preparing and organising

This phase involved reorganising, storing and reviewing the data collected. The process started in the field after collecting the first data set. After each day, lesson observation, interview and documents data collected were organised, code named (for example, CT1 Obsv., CT2 observation, CT1 Int., CT2 Int., CT1 Doc., CT2 Doc.) and initially stored in separate folders. The codes given to each participant allowed easy referencing. The complete data set of individual participants was stored separately afterwards to allow easy identification. The process continued throughout the data collection period. Backups for the data were created to forestall data loss.

This stage also involved repeated review of audio recordings, field notes and lesson notes. This allowed reflection on the data collection process to gain insight into what transpired in classrooms and consider what could be refined or improved). It helped to identify issues that could be of interest and tailor questions to specific contexts (Patton, 2002). Before the following lesson observation and interview sessions, teachers were engaged in informal conversations to find out if they had any concerns about the process or clarifications to make. In one instance, a teacher provided clarity about an answer regarding what informed the sitting position of the child with special needs. Participants were allowed to reflect on their practices. These steps are repeated throughout the data collection process.

4.10.2 Stage 2: Familiarising and developing an understanding of data

The data set was carefully reviewed at this stage to enable immersion and a deeper understanding of its contents. Recordings from lesson observations and interviews were listened to, and field notes were read repeatedly. This process was carried out continuously on each participant's data to familiarise myself with the data and understand their circumstances

and contexts. During the process, the names of participants and children were changed and replaced with pseudonyms.

All the observation and interview recordings were transcribed verbatim, taking notes of pauses in the conversations. The aim was to ensure data originality and prevent misrepresentation or misinterpretation (Vanderpuye, 2013). Aspects of the sentences in the vernacular were transcribed verbatim into the English Language. Examples of how transcription of lesson observations occurred include:
Teacher: This is what?
Pupils: 1 cedi
Teacher: "Again"
Pupils: 1 cedis
Teacher: Let us take 30 pesewas from it. How much will be left?
Pupils: 70 pesewas (learners gave chorus answer)

The following is an example of how the breaks and pauses in sentences were recorded: Yes, they have to do their work … they are in a hurry … they won't … they won't spend all the time on you …you, the child, because they have to do something to show to officers. The recordings were listened to continually alongside the transcribed versions. This was done to correct all errors and insert sentences that had been omitted. It also aided meanings and the development of concepts in the data set.

4.10.3 Stage 3: Developing initial focus codes

The first coding cycle involved the initial coding of the data (Rogers, 2018) conducted through an inductive process. Codes were generated differently depending on the data type. Observations were initially coded, followed by the interviews and lesson plans. Codes were initially generated independently for the first four participants. These codes were compared, revised, and used to code the data sets of the rest of the participants. The codes generated from the lesson observations for all the teachers were put together. The same was done for codes generated in the interviews. The observation notes and lesson plans were coded onto the observation transcripts. Categories were developed separately for the observation and interview codes. The actual process of coding and categorisation are described in the following paragraphs.

The initial coding involved line-by-line naming of the transcripts. At this stage, the codes identified were mainly descriptive with manifest coding (Boyatzis, 1998; Charmaz, 2014) and In Vivo coding. Code names that suggested direct meaning and participants' exact words were used in developing the initial codes (Rogers, 2018; Saldaña, 2016). Hence, words and ideas that presented direct meanings and connected to the purpose of the study were coded. This process resulted in the generation of a large number of codes. Recurring ones were identified and merged by reviewing the codes, while others were renamed. Names that were more analytical and provided insight into underlying meanings of expressions and ideas within the data were created. This led to the development of latent codes. Because of the cyclical nature of coding and data analysis (Rogers, 2018), renaming, refining names, and merging codes continued throughout. I used NVivo to negotiate the coding process, although I conducted the actual task of naming ideas.

New codes were developed and constantly reviewed in subsequent participants' data sets by comparing them. Matching and comparing codes helped to identify patterns (Miles & Huberman, 2014). Memos about comments in the transcripts and teachers' activities were kept to support discussions. Through constant comparison, codes were collapsed and combined to form more refined ones. Names were also revised to reflect concepts and ideas. In developing clear codes and descriptions, extracts were thoroughly read to clarify ideas and identify code patterns. A constant review (merging, collapsing and refining) of codes led to more focused ones (Charmaz, 2014).

4.10.4 Stage 4: Categorising and Identifying themes

This stage began by developing categories for the observation and interview codes developed in stage 3. The categories were developed separately for the observations and interviews. Mind maps and hierarchies were created to identify common ideas, patterns, and relationships among the focused codes (Miles & Huberman, 2014). The process was repetitive and open, including emerging ideas that did not match the already developed codes. Continued revision of categories and creation of hierarchies helped to form initial themes and sub-themes. Themes were finalised through further comparison and refining of initial ones. The theoretical ideas and principles of inclusive pedagogical frameworks adapted to guide this study were referenced. Final themes and sub-themes were interrogated with constant reference to the purpose of the study and research questions. Appendix C provides illustrative examples of

themes, sub-themes and corresponding quotes. The data were thoroughly reviewed to develop notes on ideas that support the themes. The process of creating memos and annotations helped to develop the themes and subthemes. They served as starting points for discussing findings and picking on specific examples that occurred in the data.

4.10.5 Stage 5: Conceptualising ideas and preparing reports

The writing-up stage involved presenting the narrative meaningfully and chronologically. This also included conceptualising ideas and reading through available literature to support analysis (Kina, 2015). The research findings were analysed and presented under the identified themes and sub-themes. The research findings were presented under the research questions to reflect the research aims. The sociocultural theory and available literature on inclusive pedagogy guided the interpretation of the research findings.

Figure 5: Summary of the analytical process

4.11 Ethical considerations

In social science research such as this study, ethics issues arise at various stages that must be dealt with cautiously (Bryman, 2016). Ethics related to two key points. These included how the participants in the study should be treated and whether or not the data collection process involved activities that required their consent (Bryman, 2016). In this regard, the study was conducted per the ethical guidelines for educational research outlined by the British Educational Research Association (2018) and the University of Strathclyde Ethics Committee codes.

Upon meeting all the requirements, ethical clearance to conduct the studies was granted by the Strathclyde Institute of Education ethics committee (Appendix A). This was followed by receiving permission from the Ghana Education Service (GES) headquarters, regional and district offices (Appendix B) and school authorities in that respective order. Thereafter, the consents of individual participants were sought. In the process, participants were made fully aware of the nature and purpose of the study, including every relevant information. Minded by the idea of flexibility and general guidelines of various researchers such as Kervin et al. (2006), Yin (2011), Bryman (2016), and BERA (2018), the following ethical issues were adhered to:

1. Teachers' consent to participate in the study, whether verbal or nonverbal, was documented. Discussion sessions ensured that participants understood and approved the issues enumerated in the consent forms.
2. Participants were assured they could participate in or withdraw from the study, with or without explanations. They were not bound to participate and could opt out at any point.
3. Confidentiality of the data collected and the anonymity of participants were ensured. This was mentioned to the participants to ensure the development of trust between the researcher and them. Pseudonyms were assigned to all participants, and data generated were securely saved and used only for the purpose to which participants consented.

The research was conducted in line with the COVID-19 restrictions. Because data were collected during COVID-19, I took an antigen test before starting the research journey. Upon arrival at the research context, I observed a mandatory self-isolation for the required days. During the fieldwork, wearing face masks, social distancing, frequent hand washing and sanitising were observed. I also adhered to all other school and classroom rules.

In addition to the above, using electronic devices to audio record lessons and take pictures of documents required the consent of participants. To avert possible withdrawal from the study due to suspicion, the purpose of the recording and how it was used were explained to participants, and appropriate consent was obtained (Rapley, 2018).

An important ethical issue involved determining which participants had children with special needs in their class. The challenge related to identifying these participants and the children with special needs without promoting the incident of labelling. Resource teachers and headteachers were, therefore, carefully engaged in selecting the classes. Teachers were also informed about intentions to prevent focus on children with special needs and shared their views regarding where to be positioned in the class.

Drawing from the researcher's previous experience and professional role, teachers tend to display more sympathy and devote attention to persons with special needs when they pick up signals that the learners constitute an element of the study. Although this was difficult to prevent, conversations with teachers and lesson observations were conducted to prevent suspicions and attention on the child with special needs. This helped to reduce the tendency of teachers to act unnaturally and ensured that the presence of the learner with special needs did not cause neglect of the lesson, teachers and other learners. Additionally, to minimise challenges regarding power relations and duality resulting from the researcher's former position, study sites and participants were selected from schools outside my jurisdiction during my service. Participants were also informed of my current status as a student researcher.

4.12 Trustworthiness of the research

Establishing research credibility and trustworthiness is a key element in research. Steps were taken to encourage openness with participants throughout the process to ensure credible and trustworthy research. Further, data accuracy was promoted through participant validation interviews, careful data analysis, and dealing with all biases (Yin, 2011). These helped establish the credibility of the research process and outcome (Guba & Lincoln, 1989).

During the data collection process, openness was maintained with participants about what was being collected and how and for what purpose it was used. The teachers' values and inputs were considered to maintain mutual trust during their engagement. The anonymity of the participants

was assured and maintained at all times (Creswell, 1998). Pseudonyms were assigned to participants, pupils, and schools were necessary.

Member checking was used to maintain the credibility of the data collected (Guba & Lincoln, 1989). Interview data were checked and rechecked, and participants were debriefed on the transcriptions. The participants were provided opportunities to clarify their responses where needed. This helped to correct errors and ambiguities within the data. It also helped to identify, examine, and control biases to strengthen trustworthiness (Yin, 2011).

The use of multiple methods for data collection in this study promoted the dependability of the research outcome. Recognising that no single data collection method has a complete advantage over the other (Yin, 2009), this study adopted multiple sources to ensure triangulation, promoting consistency among the various tools and generating insightful data (Flick, 2009). Multiple sources of data collection are "highly complementary" (Yin, 2009, p. 101). Additionally, as noted in earlier sections, the researcher aimed to make the selection of participants and data collection processes transparent. Further, the theoretical framework and modules that influenced data collection and analysis were properly outlined (Yin, 2011).

4.13 Chapter summary

This chapter generally examined the methodology employed to conduct the study. It outlined the researcher's philosophical stance, the qualitative research approach, and the research design. The section also identified and discussed the methods and processes of data collection, sampling processes, and selection criteria. Finally, issues relating to ethics and trustworthiness were discussed and addressed.

CHAPTER 5: RESEARCH FINDINGS

5.1 Introduction

The previous chapter discussed the methodology adopted to achieve the research aim. This chapter documents the results of the study. Overall, the findings are presented under five main themes. The themes are described in relation to the three sub-research questions under an overarching research question: *How do teachers enact and justify their inclusive pedagogical practices in regular education classrooms in Ghana?* The sub-questions reflected how teachers conceptualised inclusive pedagogy; how they enacted and justified their inclusive pedagogical practices in lessons. A summary of the research theme, sub-themes and illustrated quotes are presented in Appendix C.

5.2 Perspectives of inclusive pedagogy

Overall, participants' conceptualisations of inclusive pedagogy fall under four broad themes. Whereas some defined it as a single theme, others' views covered multiple themes. Teachers' conceptualisations of inclusive pedagogy were categorised as teaching all learners together, promoting the participation of learners with special needs using different strategies, a separate or inclusive teaching process and adopting reflective or reactive teaching strategies. Figure 6 below presents a summary of how participants conceptualised inclusive pedagogy.

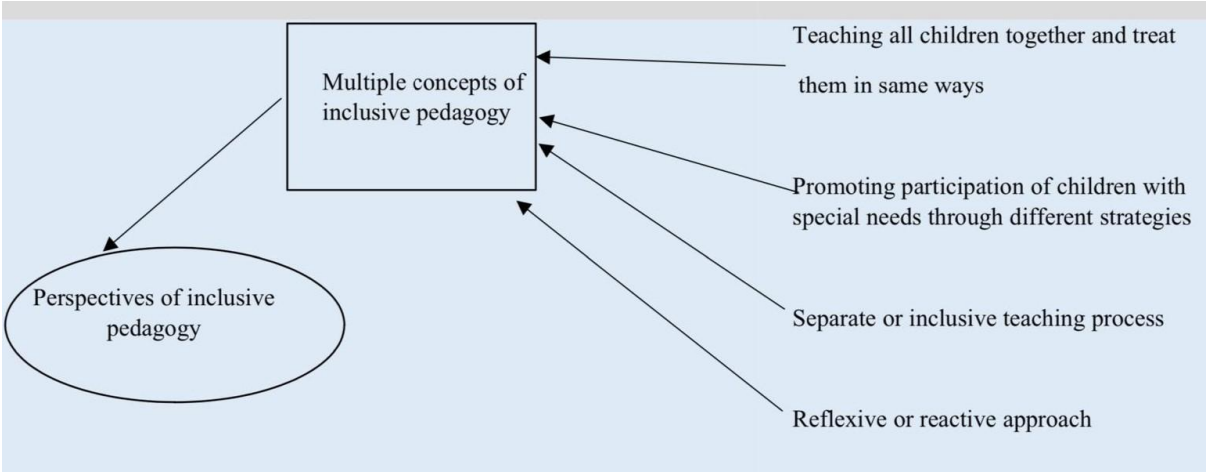

Figure 6: Summary of conceptualisations of IP (research question 1)

5.2.1 Teach all children together and treat them in the same way

Participants viewed inclusive pedagogy as a process of teaching learners with and without disabilities- referred to as ‘normal’ and ‘challenged’ learners - within the same regular classroom setting. In defining the concept of inclusive pedagogy, teachers tended to use 'normal', 'challenges' and 'disabilities', which focus on some learners. Also, teachers' definitions moved towards integration. For instance,

> I think it (inclusive pedagogy) is a way of teaching that involves all children, both the ‘normal’ and those with challenges. We put them together and teach them. (Oforiwaa)

> Inclusive pedagogy involves getting both those with disabilities and others without disabilities to learn in the same classroom ... They are supposed to learn together. (Sarfoa)

> This (inclusive pedagogy) means blending or including them in my teaching. Including them means a lot: adding them to normal children, teaching them together and so on. (Agnes)

Additionally, teaching all children together was considered mandatory in inclusive pedagogy. Teachers expected all learners in their classes to be treated the same. They expressed that some learners should not be considered special individuals. Rather, opportunities must be created for them to learn with their colleagues.

> Inclusion means treating everyone the same, not some as special. It’s inclusive education, so I am not concentrating on them only; all. It is not about them being special. (Mariam)

> We have been taught that we are integrating them. Therefore, you can’t separate or use different materials for them. We need to put them together so that they can learn. That is what inclusion is all about. (Dickson)

> Practising inclusive education means teaching all learners, despite their challenges, in the same environment as the others. They need to learn together with their friends in the same classroom. (James)

5.2.2 Promoting participation of children with special needs through different strategies

Inclusive pedagogy was considered the process of developing teaching and learning to enhance the participation of learners with disabilities and special needs. To the participants, promoting participation for learners with special needs involved adopting different strategies tailored to the needs of all learners within the classroom. Promoting participation required uplifting the interests of the disadvantaged during learning. It also involved the use of non-discriminatory approaches in teaching. Extracts from teachers' descriptions that support this claim include the following:

> It (inclusive pedagogy) is developing different processes of learning and teaching strategies to involve them (children with special needs)… We need to use different strategies that suit their needs. Because they are different learners, we adapt the strategies to make sure they participate in the lesson. (Mariam)

> Inclusion means involving the children with disabilities in the lesson. Use strategies that do not discriminate against them. We need to promote their acceptance. It is also inclusion. The strategies that will promote their acceptance are inclusive. (Dickson)

> Because we need to include them… this is a strategy that allows the special needs children to also participate in the lesson. We need to put things in place to ensure their involvement. (Agnes)

> Like I said, we need to get all the learners plus those with disabilities and other conditions involved in the lessons. So, we must continue to boost the interest of the children with disability in the class and develop the learning process to encourage their participation. This is the process of inclusive pedagogy. (Cecilia)

Developing various approaches to promote the inclusion of learners with special needs was seen as the responsibility of teachers. For example, "…we need to include them…we need to put things in place to involve them" (Agnes); "…we need to get all the learners plus the those with disabilities and other conditions involved in the lessons." (Cecilia)

Additionally, Dickson's definition shows they held multiple views about inclusive pedagogy apart from teaching all learners together. To Dickson, inclusive pedagogy included developing

strategies that promote the acceptance of children with disabilities. This view echoes teachers' emphatic statement, "We need to promote their acceptance." Promoting acceptance was employed as a way of adapting pedagogies, and these are explained further in the following paragraphs.

Teachers' definitions of inclusive pedagogy and others' comments about how they thought it should be enacted revealed two important issues. These include discourse about separating or including learners with special needs and inclusive pedagogy as a reflexive, progressive process or fixed, pre-defined approach.

5.2.3 Separate or inclusive teaching process

The special and inclusive education discourses influenced participants' understanding of inclusive pedagogy. These ideas were evident in teachers' views about pedagogical approaches that promote inclusion. Teachers' views fell under segregation (institutionalising learners with special needs), partial inclusion or additional support, and full inclusion. The benefits of these approaches often influenced their positions. For example, advocating for segregated provisions for learners with special needs, a teacher remarked:

> I will say, first, that when they are in their own school to me, I think it will help them better because here (in a regular education classroom), we don't have the exact provision for them. That is my problem; we don't have the exact provision that will really help them grasp what they need to know. (Sarfoa)

Other teachers who favoured partial inclusion shared the following views:

> They (learners with special needs) should be put in a separate classroom on the same compound…than mix them up with the others. That is also inclusion, I think. They can play together during break, but when it comes to learning, what others are learning may be difficult for them. Remediation will help because he may be feeling shy to come out when you teach the whole class, but if you teach only him, he will be able to ask questions and help. So, I think getting time for the child alone will help. For me, this is the best pedagogy that can be used to include him. (Ocquaye).

> But I think if there had been a special tuition for them, it would help because there are special needs teachers. I think if we allocate time and have special tuition, it will help as compared to having them in the class. That is my opinion...I think it will help because they have special training for that. (Mariam)

> They (children with special educational needs) are not able (to perform some class exercises), and that is why I said I go to them and explain for them to understand (the content) better. It is the way I am able to teach them and include them; the best approach. (Oforiwaa)

These arguments were based on the notion that children's needs and difficulties usually differ. Thus, depending on the challenge's severity, some learners are excluded or included. For instance, a participant argued that:

> Their problems are not the same. His (impairment) is very serious, so it is good we separate such children, but we have those with partial ones. We can include them. If the situation is 'normal', we can include them, but if serious, we should separate them… When it comes to the extra-curricular activities, they can do it together, but when it comes to the actual learning in the classroom, they should be separated. (Ocquaye)

These views suggest segregation and integration or mainstreaming, as expressed by Ocquaye. During the study, it was observed that one of the schools in the same district where Ocquaye taught had separate provisions, with a different administration, for learners who were identified with 'severe' challenges. The extent or level of special needs was, therefore, a yardstick to measure the practice participants consider suitable for educating children with special needs. There was no clear differentiation of inclusive education and integration concepts or mainstreaming.

On the other hand, a teacher believed that full inclusion provides an opportunity for learners with special needs to work together with other learners and develop untapped or new skills. They argued that:

> …when they mingle with other children, you see them doing other things you think they might not be able to do. We need to put them together and teach them in the same class; that is what inclusive education is. Add them to class and let them work with others. (Cecilia)

5.2.4 Reflective or reactive approach

Inclusive pedagogy was conceived as a process that goes beyond teaching strategies. It was regarded as a process that involves thinking about knowing the learner in question and developing strategies that suit their learning needs. For example, participants noted that:

> Sometimes, you (the teacher) have to slow down (lessons) because if it were to be 'normal learners' (typically developing peers), I would have moved very fast (Agnes).

> If you don't study them and imagine that that is how they are, you will just teach, and they will not benefit from it. So, you need to know them. Know that these children are special so that you would know how to teach. (Banahene)

Hence, both knowledge of the learner and approaches are paramount. These would enable teachers to develop appropriate inclusive pedagogical strategies. (Agnes) She affirmed this when she noticed, "I think I have to develop another strategy to teach them with the rest of the learners."

On the other hand, Victoria thought that thinking carefully to adopt a particular approach in class would help the learner with special needs. She argued that an "acceptance approach" promotes inclusive learning. They suggested that,

> You let her (the learner with special needs) feel accepted. Any answer she brings in, accept it. If there is a little correction, maybe it will even help those in the classroom. So, if she brings in something, you just accept it. Make a little correction for her to understand and move on. (Victoria)

This position is reflected in Victoria's classroom practices. The teacher appreciated the efforts and accepted all answers given by the child with special needs. However, the teacher provided guidance for the learner to correct the errors. Although teachers varied in their conceptualisation of inclusive pedagogy, I did not identify any patterns between their responses and background characteristics.

5.3 Enacting inclusive pedagogy within a regular classroom context

This section accounts for the actual teaching and learning process. It described how lessons were organised and the lesson delivery process, including approaches and practices teachers enacted. Specifically, the lesson observations focused on adapting lessons to include children with special needs. This is presented under two broad themes: (1) Providing accommodations and support for all learners and (2) Building a positive classroom culture. In presenting the results, teachers' pedagogical approaches and how they adapted to include learners with special needs were described. These were interwoven with reasons teachers used those pedagogical approaches. This approach presented a more precise and broader understanding of the results. However, a summary of the justifications for the use of the pedagogical strategies has been presented under research question three. Figure 6 presents a summary of the findings under research question two.

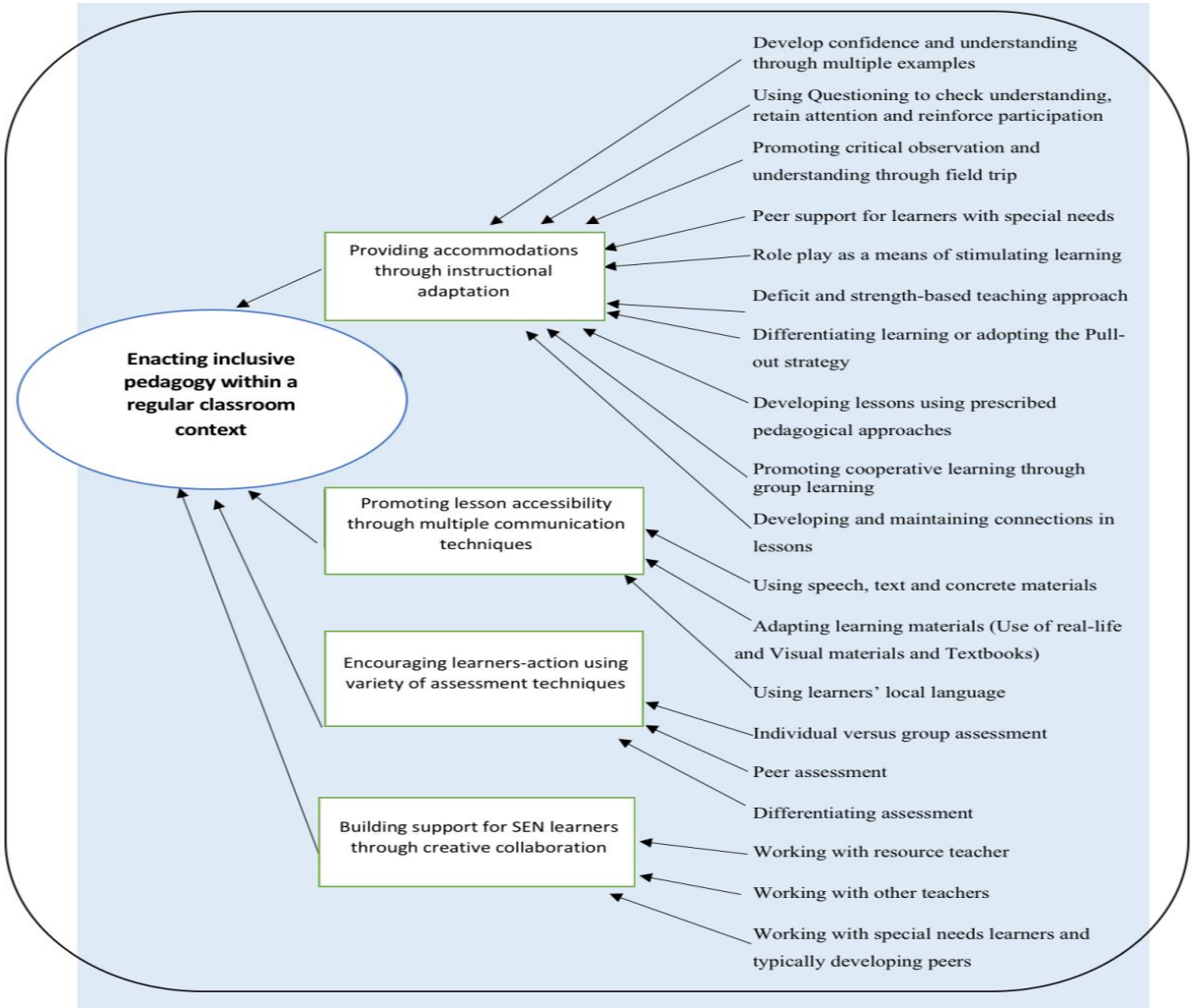

Figure 7: Summary of findings on teachers' IPP (research question 2)

5.3.1 Providing accommodations by adapting teaching strategies.

Teachers approached teaching and learning using various strategies to promote the inclusion of all learners in their lessons. Paramount among these was the use of questions and answers to direct discussions. Other nonspecific approaches used included field trips, grouping or pairing, guided play, role play and peer support. Additionally, teachers adopted prescriptive teaching approaches, strength-based approaches, storytelling, pull-out strategy and positive competition. Descriptions and explanations were provided for activities, phrases and terms. These strategies aimed to enhance the participation and understanding of all learners in their classrooms, including children with special educational needs. Specifically, the differentiated learning strategy was adopted to include learners with special needs in lessons.

5.3.1.1 Developing confidence and understanding through multiple examples

Most of the teachers introduced and built their lessons by citing multiple examples. Children were also given the opportunity to provide and practise several examples. This was prominent in Mathematics classes, although it also occurred in other subjects. For example, upon observing teachers' lessons, the following insights were derived from my observation recording:

> Teacher: So, we are to find 3 x 8, so what you do is that 3 x 6 =18. 6 groups of 3 is equal to 18. So, 3 groups of 8 will be what? ... We are going to use another strategy. 3 x 6 =18. So, how many groups of 3 must we add to get this?... 3 x 6 =18+3. Now, they are asking what 3 x 8 will be…So, 5 x 7 = 20 + 5+5+5=35… How do we write it? 4 x 9 = …. (James)

> … okay, now I am going to give you another one. Let us go on. 8 by 5 and then, 6 by 5. 8 by 5, I have given you 40 as the answer…So, the last example. 5 x 7…. (Banahene)

> Teacher: Now, let's look at these numbers, 2 and 18. What can you say about this and this? So, what are we going to do? 2 and 18…Now, let's go to 3… Pupils: You look for 2 numbers when you multiply, you get 18…. (Ocquaye)

> I said there are some main ones. So, let us look at the main ones…Pupil: x…Teacher: x as what? Pupils: 10. Teacher: The next one. Pupil: xx; Teacher: xx as what? Pupils:

20…Teacher: Let's do the main ones. Pupil: L; Teacher: L as what? Pupils: 50. Teacher: And the last one; Pupil: c; Teacher: c as what? Pupils: 100. (Cecilia)

What did I say is in our heads?... Pupils: Brain…Now, let us look at this one too. There is eye, or don't they have eye? We use our eyes to do what? Pupil: See... What do we use our ears for? Pupil: Hearing. (Victoria)

Teachers believed that providing several examples and opportunities to practice promotes understanding of the content. The attention of initially distracted learners could be gained by repeating and solving multiple examples. Some of the teachers' responses are as follows:

With the repetition and examples, I want them, the whole class, not necessarily the visually impaired, the whole class. Some, you say it for the first time, the person will not be attentive. I say it once, the second time and then the third time. And then the visually impaired too, I consider them because you will be saying something, and they will be either brailling or … so I do that so that they will get what I taught. (James)

When they are involved in whatever is being done in the class when they get involved, they may understand it and form part of the class during demonstration time. (Cecilia)

So, that is why first, I introduced everything in its opposite meaning/ opposite name. That is why I made them to do steps. One will be moving to the negative side and the others will be moving to the positive side. So, I think they will understand that one more. (Oforiwaa)

I wanted them to know that the things in their environment contain water, so when the sun shines, it evaporates and then goes to the atmosphere to form rain. So, I gave the examples that tree in their environment contain water. So, I wanted them to know that things in their environment like tree, animals, etc, they all have water in them. That is why I tell them what evaporation, condensation, precipitation, and transpiration mean. (Banahene)

Yes, when you invite them to the board, they comprehend more. Sometimes, they pay attention because they can be called to the board. So, when you use that method, it helps them to learn. (Ocquaye)

When asked how this strategy supported children with special needs in their class, teachers argued that they (the learners with special needs) also get opportunities to express their knowledge about things around them. In addition to James' views above, Banahene confirmed how this instructional strategy benefits learners with special needs.

> I wanted them to come out with things they know when rain falls. That is why they were telling me that when rain falls, water evaporates into the atmosphere, and it condenses and falls back as rain. But I add what they don't know. Once the thing is in their environment and they see them all the time, they will also come out with what they know. So, I involve them, and they come up with what they know. (Banahene)

It was, however, noticed in the teachers' lesson plans that this strategy was not captured. On the other hand, examples of calculations were identified in Ocquaye's and Dickson's mathematics lesson plans.

Introducing various examples was seen as a means of promoting understanding and participation for learners with and without special needs. However, in isolated cases, such as in one upper primary class, the learner with special needs was mostly quiet and sat at the back of the class. They did not participate in the lessons. This was confirmed in Ocquaye's response: "Yes, I can say 80% of the lessons. As I said, the level of that child is not up to the standard. Whatever is taught in class, he finds it difficult to understand. So, when he is given special attention, that will help." This was attributed to their non-involvement, which was linked to the learners' low ability levels, particularly those with special educational needs.

5.3.1.2 Using questioning to check understanding, retain attention and reinforce participation

Lesson observations showed that questions and answers were used throughout the teaching and learning process, regardless of the subject (Mathematics, English, Science, History or Our World Our People. Questions were asked verbally to find out if learners were attentive or understood the lessons and to draw their attention to discussions in class. For example, to assess whether learners were paying attention to class discussions, teachers asked questions and allowed 'choral answers' from children. The following were recorded during lesson observations:

Teacher: Roman numeral from 'I' to 'C' is from one to what? Pupils: 100… Teacher: 'I' as what? Pupils: 1…Teacher: The second one is what? Pupils: 'II'…Teacher: 'II' for what? Pupils: 2… We mentioned some roman numeral that you can use for 3 times. What are they?... Teacher: In our previous lesson, we learnt that if you see a sign like this (Teacher demonstrates the sign) on the board with your right hand facing this side, it is called what? Pupils: 'Greater than. Teacher: We mentioned some Roman numerals that you can use 3 times. What are they? .... (Cecilia)

Teacher: Now, let us look at this one too. There is eye, or don't they have eye? Pupil: They have eyes…Teacher: Do you have eyes? Point at your eye and let us see (all learners point at their eyes) …Teacher: We use our eyes to do what? Pupils: See…Teacher: Or does anyone walk with their eyes? Pupils: No…Teacher: What do we use our eyes for? Pupils: We look at things with it…. (Victoria)

Teacher: What was their motto at that time? Pupils: The talking drum…Teacher: The talking drum was their motto. Are you sure? Pupils: Madam, please, their motto was self-government. (Agnes)

Teachers justified this approach by arguing that questioning effectively ascertained learners' understanding and drew their attention to the lesson. Individual or direct questions also helped to regain learners' attention. They also observed that posing direct and individual questions could make timid learners hold back. Participants expressed this in the following statements:

Sometimes, I allow chorus answers because some of the learners, when you call them by name, get frightened, but when you give them the free space to operate, one or two, then later you streamline them. This and this are what I want; then it leads you to what you want. So, I allow chorus answers, maybe one or two questions. But the same questions, I direct to specific people to answer. Some… may even know the answer, but when you mention their name, they get quiet. Aha, so I allow them some free space to operate… I ask the questions to draw their attention. (Cecilia)

The general one, I do that to know those who understand and can come out on their own to answer. And then the direct one, when I realise from the look on your face, maybe you don't understand or are not concentrating, I give you the direct one. (Cecilia)

> Okay, because it's reading, if you don't do that, most of them will not pay attention. For grammar, as you are teaching, examples will be coming from them, but with reading, it will be one person and another will read. It is not all the class that will be involved. So, if you don't ask questions as they are reading, at the end of the passage being read, most of them will sit down as if they have not heard what you have read. So, you ask questions in between, after two or three paragraphs, to see that you have their attention. (Agnes)

> For them to understand what they are learning... What they were doing, I wanted them to understand it well. So, I have to throw questions, even if they answer, I can give the same answer to another…to answer just to let me know if they have understood what they have learnt very well. (Victoria)

Participants posed questions to nonspecific people to find out if learners understood the lessons. Initially, teachers pose non-direct questions and allow everyone to answer them.
Teachers believed that this strategy supported children with special needs. For example, it was argued that "he (the learners with special needs) might have heard somebody whispering the answer, so when you direct the question to him, he will also be able to repeat what the person said."

Additionally, teachers posed questions directly to individual learners by first mentioning their names. At other times, questions were posed to the whole class without the mention of specific names. Most specific questions were posed to the typically developing learners, while learners with special needs in the class were occasionally given direct questions. Whereas names of the typically developing learners were mentioned shortly after the teacher posed questions, learners with special needs were called first before direct questions were posed to them. For example,

> Teacher: "Now, let's all go into it. Lucy (a learner with visual impairment), what are the two numbers?" Pupil (responded): "2 and 24" (James).

While the whole class questions gave all learners equal opportunities to attempt to provide answers, pupils who raised their hands were invited to give answers. The typically developing peers formed most of such learners.

Lesson observations revealed that most teacher questions (especially in English, History and Our World Our People) were focused on recall. For example: "Teacher: "So, Dr. Kwame Nkrumah is one of the leaders of the UGCC. Who else?" Pupil: "J B Dankwah" (Agnes). On the other hand, science and mathematics questions posed by class teachers demanded learners demonstrate learning by explaining processes, working with similar examples, or suggesting numbers. Examples include:

> Teacher: When you wash or deep your hands in water, but they dry up … ask yourself, where does that water go? Pupil: It evaporates… water changes from liquid to gas. (Banahene)

> Teacher: Now, let's all go into it. What are the two numbers? Pupil: 2 and 24…Teacher: This is a prime number; this is a composite number; you look for two numbers; what are they? Pupils: 2 and 12…Teacher: 2 and 12… Okay, is this (12) also a prime number? So, you look for two numbers. Pupils: 2 and 6. (James)

The lesson observation revealed that few class teachers posed questions to learners with special needs compared to their typically developing peers. Further, the learners with special needs did not respond to questions or were not involved. Most verbal questions posed to them did not have the same difficulty level. This occurred mostly in upper primary classes, where learners with special needs sat quietly and alone.

5.3.1.3 Promoting critical observation and understanding through field trip

Experiencing learning first-hand provides a good opportunity for both teachers and children to explore new things in their environments. Only one teacher of the 10 participants directly employed a field trip approach in one of their lessons. This was conducted in the ‘Our World Our People’ subject by a male class 4 teacher. The class was conducted during the afternoon, just after the break. The trip, which lasted 11 minutes, was carried out on the school's compound. The purpose of the field trip was to get the learners to observe the sun to help them identify its nature and benefits to humanity.

At the start of the class, the teacher led learners to revise the previous lesson on pollution. The teacher then informed learners about the topic for discussion- 'The sun.’ Teachers led the class

outside to engage in brief observation of the sun. Directions were provided about the observation process. The teacher spelt out ‘dos and don’ts.’ For example,

> Don’t look at the sun directly; it can spoil your eyes. From here, you are going to describe the sun or tell me the importance of the sun. So, just look at the sun, and when we go in, we will discuss the importance of the sun (Dickson).

The field trip experience sparked interest and excitement among learners. The class teacher led learners with questions to guide discussion on the importance or benefits of the sun. Optimising learning for this teacher and the class implied promoting maximum participation for all learners, including those with visual impairment.

It was evident from the class teacher’s instruction that the focus of the field observation was to aid learners in appreciating the nature and importance of the sun: "From here, you (learners) are going to describe the sun, and when we go in, we will discuss the importance of the sun." (Dickson). The class teacher believed that observing things in their natural state promotes information retention and understanding of the content. This was evident in their justification for the use of the field trip:

> We were learning about the sun, and I know every child can identify the sun. But observation is very important. To see is to understand. That is why I picked them to look at the sun and tell me what they see. So, if they see the sun one day, they will remember that our teacher sent us out to observe the sun and say something about it. That is why I moved them out. Otherwise, you may be teaching without the children observing what you want to teach them. (Dickson)

Although generally, the learners were engaged in the observation exercise on the field and actively interacted with others, the participation of the learners with special needs in the exercise depended on the support of other learners. Unlike other learners who were actively observing the environment and the sun as directed by the teacher, the attention of the learners with special needs was drawn elsewhere rather than the actual purpose of the exercise. They focused on interacting with other learners. I noticed during the observation that one of the SEN learners was seeking to find out how others felt about the sun and its rays. However, they received less attention from their colleagues, who were also engaged in the activity.

5.3.1.4 Peer support for learners with special needs

Throughout the lesson observation, there was evidence of learners with special needs receiving support from their typically developing peers to accomplish tasks such as writing notes, answering questions or reading sentences. For example, Okine (a pseudonym) in primary 6, who had multiple deficits, including visual, speech and hearing impairment and motor deficits, sometimes had his notes written for him by the typically developing peer sitting by him. In other instances, sentences written on the board were read to him by the learner, who sat close to him while Joshua repeated them. Similarly, Labi (A learner with special needs in primary 2) was guided by her pair to read sentences during the lesson. Additionally, classroom seating arrangements were designed so learners identified as special needs or those considered low achievers were paired with their peers and sat on the same dual desk.

The lesson observation showed that the peer support strategy provided to special-needs learners appeared unplanned and unstructured. The learners were supported by others who sat close to them when the need arose. Class teachers visited tables of learners with special needs to guide them through reading and writing words or sentences. However, this was not frequently observed during the lessons. Teachers saw the paring of SEN children with their typically developing peers as a means of helping learners with special needs to engage in the day's activities. They noted that pairing children allows others to provide reading and writing support for the vulnerable ones. Teachers said the following about SEN preferences and adopting the peer support learning approach:

> Some even prefer writing for them so they can complete the day’s work. So, he will be relying on that friend. (Cecelia)

> So, that is one, and as you saw, they are all paired with pupils, so they assist them, say, if we are writing notes on the board. The translators do that for them. In the process of writing, they will be telling them to write. So, they will read the words for them, and when it comes to spelling, you will hear Joan (a learner with special needs) say- 'spell it for me. The translator will sometimes spell it for them. Sometimes, they will ask them to read the notes loudly for them to get it clearly. (Agnes)

> So, I tried to manage to let someone to sit with him. At least when we are doing group work, he will be with a group. Through that, I managed to associate him with the rest. (Sarfoa)

In this situation, the typically developing peers were considered more capable learners and assumed the role of both a friend and a teacher. This, however, seemed to redirect the attention of the learners with special needs to their peers rather than the teacher. Interactions between the learners with special needs were mainly determined and directed by the typically developing peers paired with children with SEN, although teachers occasionally provided some direction. It was also observed that the typically developing peers were easily distracted from learning as they focused on supporting learners with special needs. Thus, this case class's peer learning approach proved rewarding and challenging.

5.3.1.5 Role play as a means of stimulating learning

During a history lesson in a primary six class, role play was adopted by a class teacher to guide discussion. Learners were selected to play the roles of the queen, governors and chiefs in a lesson to discuss "the Direct and Indirect rule systems." Learners were given the chance to volunteer to participate while learners selected other participants. The teacher provided a guide to students by describing their roles and correcting their speeches during the act. The teacher paused the acting at various points of the lesson to provide further explanations, descriptions or open discussions on specific issues. A certain level of freedom allowed learners to have discussions among themselves and provide answers without having to raise their hands (a traditional way of conduct in class). Although the teacher moderated the play regarding how the actors communicated, there was flexibility about what they were permitted to say during the actual performance.

The role-play was structured so that the actors followed the strict directions of the class teacher. It was considered an effective strategy for teaching content that requires multiple activities simultaneously. According to the teacher, the role-play approach “stimulated learners' interest and promoted activity because learners had to perform actions and talk at the same time” (Cecilia).

All roles were played by typically developing children, while learners with special needs sat quietly throughout the performance. The decision to exclude the learner with special needs from acting was due to their disability and the delay that including them might cause. The teacher observed that:

> I intentionally did that. The learners were supposed to demonstrate and play some roles and that will lead to the understanding of the concept. So, when you bring him on board, and he is not able to do it, it derails the understanding of the lesson. Most of them, they needed to perform an action or talk. He cannot speak loudly to the hearing of the whole class. If he is not able to demonstrate the exact thing that we want, it will derail the understanding. Most of the learners have it in mind that as for this Joshua (a learner with special needs) cannot do it, so when you bring him on board, they will be making noise. Moreover, it will make the class rowdy. (Cecilia)

Learners' impairments were seen as a potential limitation for effectively delivering content. Their involvement would negatively impact effective communication and understanding of the lesson. Their disability became the yardstick for decision-making about including them. Further, other learners' reactions and expectations were considered paramount.

5.3.1.6 Deficit and strength-based teaching approach

The deficit approach to learning focuses instruction on the challenges of learners. Usually, learners considered low achievers are likely to be taught by identifying and analysing their difficulties, while the strength-based teaching approach focuses and builds on the learners' capabilities (Elder, Rood, Damiani, 2018). Observation data revealed that most teachers' approaches to supporting children with special needs focused on their strengths. For example, "teachers simplified questions and guided learners with special needs to provide answers" (reflected in the observation notes of all the classes). Some participants provided support for learners with special needs based on their strengths. Interview data support this claim. Teachers acknowledged that the learners with special needs in their classes had interests and special abilities such as writing and drawing. These abilities were seen as strengths through which they could be engaged. For example, class teachers noted that,

> She (a child with SEN) likes writing a lot. So, when you give her that, she'll concentrate on that." (Victoria) Similarly, "He (learner with special needs) becomes happy. Even his friends without special needs sometimes go to him for their work to be done. Because he knows how to draw, he assists them. So, when it happens like that, he becomes happy. You see him smiling and happy, but when it comes to the other subjects, he doesn't talk. (Ocquaye)

Class teachers appreciated how learners with special needs felt about their strengths. However, data revealed that most participants expressed that children with special needs could not learn or perform tasks similarly to their typically developing peers. Learners with special needs were perceived as special children with limited academic abilities and, thus, could not be assigned similar tasks as others. For example, a primary four teacher expressed, "These children need special help. I see them that academically they are weak, so I try to involve them all the time so they will pick up. I see those people to be weak in reading" (Banahene).

Similarly, (Mariam) noted that,

> We know that they have problems. Because he can't speak … He can't! How do you involve him in activities or exercises such as spelling and dictation? He can't; that is what I have observed. When you ask him to mention it, he can't. Even the writing, he can't. I can't give the same exercise because he can't do it.

Further, children in these classes were sometimes observed to be negatively engaged in things other than the ongoing class activities and, at other times, doing nothing. In one of the upper primary classes (Banahene's Mathematics lesson), the child remained quiet throughout the lesson, with their head often on their table. Generally, the impact of the deficit thinking or approach to teaching was evident in most of the classes.

Additionally, identifying the strengths or interests of the children with special needs to engage them in activities that match their abilities resulted in differentiated learning. Observation data showed that children with special needs were primarily engaged in diverse ways. For one of the case schools, this also led to the child with special needs being pulled out of the class at certain times and provided with additional learning elsewhere.

5.3.1.7 Differentiating learning or adopting the Pull-out strategy

In some lessons, differentiation occurred mainly in-class exercises and assignments. Learners with special needs were assigned different work while others engaged in the main exercises. For example, in a case class (Agnes), class members were put in and were asked to produce sketches on a subject matter. Learners with special needs, on the other hand, answered objective questions:

> …Those who will draw to my satisfaction will get the best mark ... It is group work. The learners with visual impairment will not participate in the drawing. They will list the names of the leaders of the Big Six… In which year was the UGCC formed? (Agnes)

In other classes such as Mariam's, Victoria's and Sarfoa's, the learners with special needs were engaged in writing, which the teacher considered either their strength or more suitable. Two teachers noted that:

> …the difference is- the work that we are going to do, as we did in the morning, will be a little different because I know she can't write well. So, this morning, we were doing dictation, but she was doing writing, so she also felt she was writing something. (Victoria)

> …when it comes to drawing, I have not seen them drawing before, and they should also do something for me to mark. That is the question I gave them because they can't draw, so I gave them in a question form so that they will also give me something to show that they have learnt and they understood my lesson very well. (Agnes)

Sometimes, the volume of work assigned to the learners was reduced to allow early completion:

> …so maybe if the whole class is to do an activity of about 4 or 5 questions, we can give them about 2 so that they will also manage with it…If they are to prepare a TLM themselves, it's complicated. We give them the least difficult one to do. (Cecilia).

Other times, the duration for work completion is extended: "During the break, we tell them to use about 10 minutes to complete it and go out for break" (Sarfoa), or the exercise is suspended so that they can join their colleagues at the break.

Exercises were differentiated because some teachers were convinced that learners with special needs were considered weak and incapable of learning or performing the same tasks as their typically developing peers. For example, teachers asserted that:

> That is the question I gave them because they can't draw. I gave them a question form so that they would also give me something to show that they have learnt and they understood my lesson very well. (Agnes)

> I see them as academically weak, so I try to involve them all the time so they will pick up. I see those people to be weak in reading. (Banahene)

> We know that they have problems. Because he can't speak…He can't! How do you involve him in activities or exercises such as spelling and dictation? He can't; that is what I have observed. When you ask him to mention it, he can't. Even the writing, he can't. I can't give the same exercise. Because he can't do it. (Mariam)

In the upper primary classes, there was no significant difference between what children with special needs and their typically developing peers were taught. Teachers taught the same content to everyone in the class. This was noticed in their lesson notes, where no mention of scaffolding or differentiating the content was made. Teaching approaches did not discriminate between students with and without special needs. In isolated cases, teachers drew closer to learners with special needs and repeated questions to them. Regarding pacing lessons or time for answering questions, all learners were given the same time to answer questions orally during lessons.

On the other hand, the pull-out strategy was used in one case school as a complementary approach to support individual learners based on their distinctive needs. The pupils identified with special needs were taken from their general education classrooms at appointed times within the day to receive lessons prepared by the resource teacher. The resource teacher designed an individualised education plan for the complementary lessons. While the class teacher was in charge of the lesson delivery in the regular classroom and made accommodations for the learner with special needs, the resource teacher provided independent extra tuition in a separate resource room. These two approaches ran parallel to each other. Lessons received by learners in the resource room were meant to resolve some challenges in writing, reading, drawing and simple Mathematics. However, these lessons were conducted independently without the input of other teachers. The class teacher admitted that the planning and delivery of the lessons were done separately:

> Hmm, in the lesson planning and delivery, to be frank, he (the resource teacher) doesn't get involved. But sometimes, he comes for the child to their end, and then they will give them individual tuition, find out their problem, and refer them to the necessary centres for assistance. They don't engage us in planning for them. However, they look at what we are doing and give them special assistance. (Cecilia)

Although the teacher believed the approach benefitted the learner with special needs, a potential challenge was identified. They observed that:

> Normally, those learners that he (the resource teacher) withdraws during our main lessons might miss the lessons because I don't normally go back to teach them what we have learnt, but we have noticed from them that sometimes they go there for special lessons, which might sometimes have a link with what we will be doing in class. (Cecilia)

Additionally, the enormity of the resource teacher's work raised questions about their support for learners with special needs. On this, Cecilia commented: "For resource teachers, putting the learners in the mainstream, I think they need more attention from the resource teachers because it is once a while that they come. So, maybe it should be frequent."

5.3.1.8 Developing lessons through songs

Lesson observations revealed that teachers used songs as starters to prepare learners for learning. Songs were also sung in the process of teaching and learning to sustain the lessons and, in the end, to transition into other lessons. Songs were about counting numbers and activities, while others sought to find out about children's welfare. For example, the teacher's call: "Children, how are you?" Pupils' response: "We are fine, thank you" (Sarfoa). The use of songs as starters was stated in 'Phase 1' of all teachers' lesson plans: "Engage learners to sing and recite rhymes." However, the specific song to be sung was not stated, and the use of songs in other aspects of the lesson was not reflected in teachers' lesson plans.

One of the motives for using songs and rhymes during lessons, as expressed by the participants, was to draw learners' attention to the lessons. Teachers also engaged in singing and dancing in class to make classes active. For example,

> Initially, they will draw the attention and then their interest in whatever we are going to do. Maybe they have finished with the previous lesson; they are tired; they have sat for too long. So, when you bring in songs, they get up to sing, and they become active. (Victoria)

> I use the song to make them active. (Oforiwaa)

> Yes, because the rain was distracting the lesson. So, I heard one boy sing: 'The rain is falling'. So, I decided that they sing the song... Oh, they become happy. That is what I have observed. Whatever we sing, because they know how to sing the songs. (Mariam)

Mariam noted the benefits of singing for all learners, including those with special needs. They believe that singing, especially songs about the subject matter, helps promote content assimilation:

> If you observed something, the boy (The learner with special needs) was dancing. So, you know we are at the lower level. Our lesson is based on songs. Even as we centre our reading and stuff on songs, it sticks much better than memorising. So, we just introduce our lessons with songs to engage them. At times, they will have a playful mode, but if you start with songs, it brings their mind to whatever we are going to do. (Mariam)

Songs were sometimes sung because they had been predetermined in lesson plans. A teacher mentioned, *"*Yes, from the start to the end, 10 minutes has been allotted to the song aspect" (Mariam). This implies that the structure of some lessons had been prescribed.

The music caught the attention of some of the learners with special needs, while others showed no interest. Lesson observations revealed that while learners with special needs in the lower primary classes (1, 2, 3) joined their colleagues to sing and dance, their counterparts in the upper primary classes (4, 5 and 6) were not actively involved in this activity. This was common except in the upper primary classes and lessons observed. While the songs seemed to gain the attention of learners with special needs in the lower classes, they did not work well for their colleagues in the upper primary. These learners did not show much interest in the music. Specifically, Kofi and John (learners identified with intellectual and behavioural challenges in class Six [6] and five [5], respectively) participated neither in the musical activities nor any other event that made the classroom lively. The same was true for learners with visual impairment in two case schools. This finding about the non-participation of learners with special needs (of the upper primary classes) in such activities raises questions about whether they were uninterested in singing or other issues precipitated their actions.

5.3.1.9 Developing lessons using prescribed pedagogical approaches

Outlining prescribed instructional strategies for teaching specific subjects ensured uniformity in content delivered to learners at the same level. Lessons, especially at the lower primary level, were structured similarly. They started with songs or rhymes. In one lesson, content was taught through dialogues, vocabulary learning, and some creative work. This created excitement in class, where learners could practice and learn different skills in one subject. For instance, in a Mathematics lesson, learners practised the pronunciation and spelling of words. They were also guided to produce some drawings. Some lower primary teachers maintained that:

> It's a trend we are following. With the literacy, it's different from the rest. We always start our lesson with dialogue. It helps pupils to improve their speech. If someone happens to be shy, it also helps... I followed that trend. We started it last week. Every day, we take 2 lines… It's a trend, The learning programme. (Mariam)

> This is the structure we have to follow." (Victoria)

However, especially in Mariam's class, the child with special needs did not participate in most of the class activities. Teachers emphasised the learners' inability to engage in class activities such as dialogues and spelling. They expressed fear of the delay that engaging the learners with special needs in the activities may cause them. Hence, the learners were assigned writing exercises during these times.

5.3.1.10 Promoting cooperative learning through grouping

Two case teachers made use of groups in their lessons. These occurred in an English and Mathematics class. Firstly, in lessons that involved reading, learners were organised into groups. For example, during English class (in primary 6) (such as Agnes'), learners sat in groups of 4 and 5 during the reading exercise. Pupils in each of the groups shared a textbook because these were inadequate. In this instance, the groups were formed to allow each learner access to the text during reading. The groups were, therefore, not pre-planned for. Learners joined groups of their choice. The teacher adopted this strategy because of textbook inadequacy: "I ask them to join their colleagues who have the textbooks" (Banahene). Learners, therefore, found themselves in groups due to where they sat. The participation of learners with special needs in this class was limited. Those with partial or total blindness (who sat in the

same class section) were inactive during the reading exercise because textbooks were unavailable. When asked how this challenge affected their lesson, the teacher responded,

> I don't see it affecting the lesson much because I make sure they follow whatever we do. It got to a time that if it's reading, we will read the passage for them, and they will braille themselves. So, as we are reading, they will be following with what they braille. For example, if next week, we will do something on adolescence, a week or a day before, they will braille that passage. So, if it's grammar when it's examples that they are to bring, I would take some from them, or they will also bring their examples… If it's reading time, they can't read the book we are having, so I would call them to bring what they heard from what we did, so that's how I do it when I am teaching. (Cecilia)

Despite the teacher's approach of bypassing the challenge and claiming that it did not affect their lesson, observation proved otherwise. During the reading exercise, two of the learners with visual impairments were dosing and, hence, could not provide answers to questions posed by the teacher.

Secondly, lesson observations in a Mathematics lesson revealed that learners belonged to pre-existing groups. The class teacher formed these permanent groups for teaching and learning. While solving a question on the board, learners belonging to diverse groups were invited to participate in the activity. For instance, they invited "Anyone from group 4 to assist her" (Ocquaye). Lesson observations revealed that groups were employed often in group exercises.

In most primary classrooms, it was observed that learners were seated in small groups of mixed sexes. Classrooms were organised, with learners sitting in pairs throughout lessons. While the pairing of learners occurred naturally in the classes, one of the participants used it as a pedagogical strategy to facilitate learning. For example, the teacher guided the learners to place requests to their colleagues who sat by them and expected responses. The following are examples of activities that teachers engaged in with learners:

> Teacher: Are you asking your friend? Pupils: Yes, madam...Teacher: Then ask him or her: Can I use your crayon, please? Pupils: Can I use your crayon, please? Teacher: Which one, please? Pupils: Which one, please? Teacher: The blue crayon, please. Pupils: The blue crayon, please. (Sarfoa)

This class appeared interesting as lessons were activity-based and were done in pairs. This created a free and engaging learning environment with all learners, including those with special needs, actively participating in the lesson. However, the teacher noted that although the learners with special needs were considered in enacting this approach, this instructional strategy was used because of its positive impact on all the learners, not only those with special needs. The teacher mentioned that,

> Yes, I had that in mind, but in general, the lower primary pupils learn more with activities when you involve them in activities. And when you do that, the children remember what they did. So, at the end of the day when you are asking them questions because they involved themselves in the activities, they will be able to remember what they did. But, in a way, it was also to help them (Learners with special needs) … So, they will remember that at least you have also involved them in the activities. That is why I used most of the activities. (Sarfoa)

Here, the teacher considered all learners as members of the same class entitled to the same learning opportunities as their typically developing peers. Some of the participants shared this view: “We do group work. They are part of the class; we don't isolate them. We put them in the group." (James) They were also seen as people who could participate in and benefit from class activities. Teachers acknowledged the importance of group learning or pair learning to inclusive learning. A teacher noted:

> When we are doing group work, for instance, I won’t let them have their group alone. I will share them among the sighted kids so each one of them will be in a group and contribute to whatever is being done (Agnes).

Similarly, learners with visual impairments were paired with the sighted to ensure they received appropriate help from other learners. For example, "I have good students who sit by them [the learners with special needs] to assist them very well. The clever ones, they are always with them to help." Therefore, learners were grouped and paired based on their strengths and weaknesses.

5.3.1.11 Developing and maintaining connections in lessons

Teachers built their lessons by referring learners to things found within their immediate environment. For example, learners discussed the body's functions and the importance of trees by referring to their body parts and trees on the school compound.

> Teacher: Who does not have a neck? Do you have a neck? Pupil: Yes. What do you use your neck for? Pupils: It helps to turn the head…Teacher: The neck also supports the head. It supports the head so that we can turn the head…. (Victoria)

> Teacher: Now, learners, I want you to look around the compound and tell me some of the things you see around, or when you were coming to school, what are some of the things you saw this morning? Pupils: Trees, buildings, cars…Teacher: Now, look at the JHS. You could see that some of the teachers are sitting under the tree. Why are they there? Because of the sun. So, the tree saves us from sun rays. (Oquaye)

During the lesson, (Agnes) used a real-life scenario of a 'Big Four (4)' to explain a history lesson about the 'Big Six (6) in the story of Ghana's independence. Gradually, the teachers drew learners' attention to the topic of interest and helped learners grasp what was being learnt. Not only were learners' interests and attention drawn, but this approach generated curiosity and excitement among them, creating opportunities for teachers to connect new knowledge to previously acquired ones and things around them. The teachers thought that this approach helped students to relate to learning and recall what had been learned quickly:

> It will help him to recognise it when he sees it. We talked about the importance of trees, so when he sees trees, he will know that this is what we can get from it. That is how I could include him in this lesson. It will help them to know the actual benefits of trees. (Ocquaye)

> I use personal experience and things that I have observed when I am teaching. Like telling them stories … I give them personal experiences and what I have observed on the ground to teach so that they can recall whenever they are answering questions. (Agnes)

Observation revealed that this approach promoted the participation of learners with special needs, particularly those in the lower primary classes. They were seen raising their hands and

attempting to give answers. However, those in the upper classes did not seem interested in the activities.

5.3.2 Promoting lesson accessibility through multiple communication techniques

This section presents the results regarding the strategies employed by classroom teachers to ensure the availability of content and materials to all students and the measures taken to prevent any learners from being deprived of the material being taught. Data was presented under three sub-themes. They include using speech, text, concrete materials, adapting teaching and learning materials, and learners' local language.

5.3.2.1 Using speech, text and concrete materials

Providing options for communication in class enhances access to content. Classroom instruction was carried out through speech, text, teaching, and learning materials. However, speech and written work dominated the subjects and the content under determining the usage level. Mathematics lessons employed much writing compared to other subjects such as English, Science, History and Our World Our People. Teachers engaged learners in working on several examples on the board and in their books while teachers engaged the class in discussions in the other subjects. The teachers asked questions mainly, and learners were expected to provide answers or contribute to discussions. English Language lessons involved reading comprehension. Individual pupils led the reading of portions of the written texts while the teachers guided the discussion with questions.

Additionally, teachers presented lessons with pictures, sketches and real objects such as plants. For example, Sarfoa (Primary three teacher) used pictures of a marketplace, community centre, chapel and mosque to deliver a lesson about "Important places in the community.” While discussing “Water Cycle” in primary five, (Banahene) presented a diagram illustrating evaporation, condensation and precipitation. Further, Ocquaye used a plant to present his lesson on the importance of trees in the environment. Oforiwaa, a primary three teacher, and Agnes, in primary six, who taught Mathematics and History lessons, used the money to deliver their lessons. James guided the learners to perform addition using counters (sticks and bottle covers).

Observation revealed that learners with special needs were continually active in lessons that used pictures and other real objects, as opposed to those that used only speech and texts.

However, the use of technology was absent in all classrooms. Learners with visual impairment did not have access to assistive devices. Visual aids such as spectacles were not available to learners with special needs who needed them to enhance their vision. This challenge was attributed to the parents' economic difficulties and poverty. Learners who were blind had only the slate, stylus and braille sheets. No recorders were available to them. They, therefore, relied solely on what they heard teachers and others read or say. However, the learners with special needs were expected to follow the discussions.

5.3.2.2 Adapting learning materials

While teachers used concrete materials in some lessons, others engaged in discussions without using any learning materials. Teaching and learning materials (TLMs) used during their lessons included money (Cedi currency), plants, and counters. Others included textbooks and sketches on manila cards. These were employed to aid the development of the lesson.

5.3.2.2.1 The use of real-life materials to promote practical learning

First, money was used in mathematics and history lessons to facilitate discussions on payments and receipt of change, and important individuals in the history of Ghana's independence. For example, a class teacher – Victoria - used money (Cedi notes and coins) to help learners conduct addition and subtraction. Specifically, learners were helped to identify how much change would be left when 30 pesewas is spent on goods. Learners were allowed to hold and have a feel of them during discussions. An example is captured in the following observation transcript: "Teacher: If we had one cedi and bought something for 30 pesewas, would you get change? Pupils: Yes, Madam. Teacher: How much will you receive? Pupils: Seventy pesewas. Teacher: 70 pesewas…" (Victoria).

Learners who had Ghana Cedi notes were asked to take them out. They were asked to identify the pictures of the Big Six. The teacher led them to point at the Big Six to guide the discussion.

> Teacher: Dr Kwame Nkrumah. Do you see his picture on the 1 cedi or 5 cedis notes? Pupils: Yes, madam...Teacher: So, when you look at the picture, compare it to Nana Addo's father, and you will see him. What is his position? Pupils: 6. (Agnes)

Teachers used the money to link what was being studied and real-life situations. For Victoria, using money supported the learners to appreciate money and how it is used:

> This morning, when doing Math, I gave her the money so that she would know that when you buy this, you have that, but the others know that when you have one cedi and buy something at 30 pesewas, this is what you get back. But she didn't understand. So, with this, we had to give her the money so that she would do it herself for better understanding.

Second, Ocquaye (primary 6) utilised plants to facilitate discussions on the significance of plants and strategies for tree conservation. The plant was used to help learners identify parts of a tree, their functions, and how to ensure their survival. For example,

> Teacher: Then, let's go to how to care for transplanted plants or seedlings. Let's take this as our seed. I took this one from the compound, and I am going to plant it. After planting, how to make sure that this plant does not die but survives. So, we are going to look at how to care for it. How to care for transplanted seedlings…Now, when we say transplanted seedlings, what does it mean? Pupil: Taking care of trees. Teacher: What is the essence of the trees storing water? ...So, it stores water and distributes it to the other parts of the tree. Now, let's look at this tree. These are the root of the tree, the stem and the leaves (pointing at the parts of the tree). We are saying that one of the importance of the tree is that it stores water. When it stores water, what does it use it for?... We are looking at the benefits or importance of trees in our environment… (Ocquaye)

The teacher noted that real objects such as plants enabled learners with special needs to understand content and easily recognise the worth of knowledge. This was expressed by one of the participants in the following sentences:

> When you use real objects in your lesson, it makes the lesson easy for them to understand. For example, the plants I brought to class, most of them have not seen it before. They have heard about it. They don't know the parts so when I brought them to the class, they were able to see and can recognise it when they see it. Okay, it will help him to recognise it when he sees it. We talked about the importance of trees, so when he sees trees, he will know that this is what we can get from it. That is how I could include him in this lesson. Yes, for

example, I was teaching environment, and under it, we should learn the importance. So, when you bring the real object to the class, it helps them. (Ocquaye)

Additionally, pieces of sticks and bottle covers were used in a Mathematics class to perform additions and subtractions. For instance, "So, with the sticks, 4 x 7 is equal to. So, with this, it means 4 groups of 7. So, you are going to use the sticks or the counters to group 4, 7groups. So, group them…" (James). Unlike other TLMs, the counters were properties of individual learners. All five children with special educational needs did not have their materials. They, therefore, had to rely on others to participate in the use of the TLMs. The teacher managed to source counters from other learners for their colleagues with special needs. However, three of them relied on others due to limited supply. Because the materials were used throughout the lesson to count, learners with special needs who did not have these materials were deprived of active involvement in the lesson. After the teacher had provided examples, the TLMs were used to add and count numbers. However, the class teacher's efforts to patiently support the learners with special needs, particularly participating in the counting and examples, were commendable.

5.3.2.2.2 Enhancing understanding and reinforcing learning using visual TLMs

Pictures and sketches were the two main visual teaching and learning materials used by teachers to convey information and support comprehension. Pictures identified in textbooks were used in most lessons to stimulate learning and capture learners' attention. The teachers achieved this by showing the pictures to learners and requesting them to talk about them. The learners showed interest in the pictures as they flipped through the books and identified and mentioned the items in the pictures.

Extracts:

Teacher: Look at this picture here (the teacher shows a picture to the class). Teacher: What are they doing here? Pupil: They are pushing boat. Pupil: They are pushing ship…Teacher: Good, now, let's look at this picture (the teacher showed pictures of a marketplace and mosque to pupils. So, now, I will show the picture to you … (Oforiwaa)

The teacher showed pictures of items such as cola and gold to learners. This was done in groups of 4 (Mariam).

The major challenge here was the inadequacy of textbooks. Therefore, about four learners shared one textbook, reducing participation to only the few who directly possessed it. This disadvantaged other learners, such as those with special needs.

Furthermore, Banahene presented a lesson on water cycle using a sketch on a manila card. Whereas other TLMs were introduced at the beginning of the lesson, the sketch was displayed towards the end to explain the process discussed further.

> Extract:
> Teacher: Good, now, let's look at this picture (the teacher showed a picture to pupils and described how the various processes take place) … Teacher: Condensation is the cooling of water vapour back as rain (the teacher invited pupils individually to read the definition of condensation) … okay, sit down. Then it's left with the last one. (a pupil was called to read) …Pupil: Precipitation is the falling of water in the form of rain…. (Banahene)

The teacher used the TLM to reaffirm what had been discussed and present pictorial evidence to the class. He pointed this out in his justification for using the learning material:

> I want them to know that what we have discussed is how it happens. So, we draw it on the card. Water vapour going up, getting into the atmosphere, and falling as rain also will help them to understand the topic more. (Banahene)

5.3.2.2.3 Textbooks as structured resources for knowledge delivery

Textbooks were used to aid lessons in two ways. Firstly, the textbook was the primary reading material during comprehension lessons. Stories were read out by learners and discussed by the entire class. The class teacher led the discussion. The class teacher invited individual learners to read portions of the passage aloud to the class. Intermittently, the teacher asked readers to pause and led the class to discuss questions she had identified. For example,

> Teacher: Okay, listen. We are going to read a passage, and the title is ‘A Dog and a Hen… (Pupils were called on, at random, to read portions of the passage in turns) … Pupil: Dog and hen. A dog (Bodome) and a hen (Akukobaa) were once friends. They served the same master (Nimpa). One day, Bodome and Akukobaa found each other in a sad mood. Why are

you so sad today, Akukobaa? Dome asked. Hmm, my dear friend, I am sad because God has been very unfair to me. I scratch all day for my good… Teacher: Pause. What is wrong? What has made Akukobaa sad from what he just read? Pupil: God was unfair to the hen. (Agnes)

Additionally, textbooks were referred to while working on activities such as drawing and describing places. For example,

Teacher: Let's go for our books. We are coming to draw and name only two parts.
Write the correct names for what you draw. (Victoria)

I will show you the picture. Open to page 141 (at this time, class was quite noisy) If it's not in page 141, open 137. Have you seen the community centre? (Agnes)

The major challenge with using the textbook is related to its inadequacy. Teachers confirmed this observation in the following statements:

I ask them to join their colleagues who have the textbooks (Banahene).

The textbooks were inadequate; therefore, learners had to sit in groups to be able to participate in the reading. (Sarfoa)

I told them: If you don't have the book, join your friends because the textbooks were not enough. It got to a time that if it's reading, we will read the passage for them, and they will braille themselves. So, as we are reading, they will be following with what they braille. (Agnes)

Although opportunities were created for all the members of the classes to engage with teaching and learning materials, the observation showed that only lower primary learners with special needs participated in those lessons. Participants such as James described how they created opportunities for learners to participate in activities in the following sentences:

I attend to them and then make them feel the TLRs (teaching and learning resources); if there are shapes, I let them feel the edges, the flat surfaces, if there are surfaces. It depends on the material, cuboid, sphere and those things. (James)

However, others held the view that learners with special needs required specially made learning materials. This was expressed in the following remarks:

> I think learners with special needs, as their names depict, are special and might need some special things to aid their involvement in the mainstream. So, if we are to mainstream them as inclusive education, once they have special needs, then schools that are having such children must also be given special TLMs that we can use to assist them to get on board. (Cecilia)

However, in some classes, such as Agnes', special needs children only paid attention to what was read out because no embossed textbooks were available. When teachers were asked if they prepared any special materials to be used purposely for the children with special needs, most responded negatively. Some of the responses recorded include:

> Oh no, in fact, I have not done that before. Because I keep asking the resource teacher- how will I go about it? They said if I wanted to teach, I should call them, and they would come and help me in teaching them. That was the main thing they said. There was this PLC we went to, and I asked. My head told me there is a resource teacher, so if I need anything, he or she is the one I should contact. So, that is what I do. If I need anything, I call them to assist me. (Agnes)

It was observed in some of the lessons that teachers did not use any concrete teaching and learning materials. Apart from (James) who used counters in their lessons, other mathematics lessons saw teachers mainly providing illustrations on the writing board. Solving several examples characterised mathematics classes. For example, the mathematics lesson conducted by Cecilia and Ocquaye took the form described above. No concrete TLMs were used in these lessons. While the teachers seemed uncertain about the TLMs they could use to teach these lessons, they considered using illustrations enough. For example, "I use the learners and the board. That is why I drew the number line. But this one, it is just the number line, so that's why I did not bring anything." (Oforiwaa) However, upon reflection during the interview process, participants remarked: “No, you know if you had come yesterday, I would have used flash cards.” (Mariam). This raises questions about the efforts teachers put into the lesson preparation process.

Although teachers used TLMs in their lessons, most lesson notes did not reflect it. Only three teachers mentioned "pictures, money and use of plants" in their lesson notes. None of these teachers described how the TLMs would be used in their lessons. Two issues about the TLMs were noticed during the lesson observations. One of them was the inadequacy of some learning materials. It was observed that textbooks and counters were limited in supply; hence, some learners did not get access to these during learning. Secondly, it appeared that TLMs did not meet the needs of some learners with special needs. Learners in two upper primary classes (Banahene's class- primary 5; Ocquaye's- primary 6) did not show interest and were inactive throughout the lessons. Also, in Agnes' English class, learners with visual impairments did not participate in reading the passage because textbooks were only available in text form. Embossed versions of the textbooks were non-existent in the school. The lack of materials impacted teachers' choice of TLMs for their lessons and their ability to provide adequate support for learners with special needs. One of the participants noted, "I found some pictures because I was not having any poster with such pictures. That's why I used the textbook. The textbook has pictures of the community centres… that's why I used it" (Oforiwaa).

5.3.2.3 Using learners' local language

Language use was crucial in the lesson delivery. This research was conducted in an Akan-speaking region. Specifically, Fanti is predominantly spoken by indigenes. The English language and the Fanti were used as the medium of communication. The level of each language usage depended on the class. It was noted in the lesson observations that while the Fanti dominated in lower primary classes (Primary 1, 2, 3), the English Language was used the most in the upper primary (primary 4, 5, 6) classes.

The English Language was used mainly to provide information about objectives and topics for discussion. For example,

> So, this afternoon, we are going to look at how the British adopted the Indirect Rule system." (Cecilia)
>
> Okay, today, we are moving on to LCM, which means what? (James)
>
> Now, I want someone to tell me the topic I have written on the board. Yes, water cycle. (Banahene)

> Now, we are going to look at where these items originated from, or they come from. (Mariam)

> We are going to use another method in multiplying. We have used the number line, repeated addition, expanded, and box method. Today, we are going to use something called the Lactic method. (Dickson)

While in the lower primary classes, the English language was used occasionally to give further explanations, the Fanti was the primary medium of communication. The English language was also taught as a subject in lower primary classes. Additionally, observation revealed that teachers used “Asante Twi” rather than the “Fanti” language depending on their background. However, the Fanti language was most commonly used by teachers during instructional hours. Teachers used the local or heritage language to enhance their understanding of the subject under study. Teachers argued that most learners would not benefit from the lesson when only English Language was used. The following responses of teachers reflected the points above:

> For them to understand better... Not all can understand the English language well. Some are coming from villages so if you don't mix it up, they won't understand what you are teaching. So, when you mix, they will understand a little, and I think it is good for them. (Victoria)

> Not really. They really understand their mother tongue better than the English. So, when I use the English, I try to explain it well to them in the local language. And also to the benefit of them. When you say it in English, they will be looking at you, but when you try to say it in Twi, you see that they respond and are able to participate in the lesson. (Sarfoa)

> Yes, most of the people here are Akan speaking people, and then using the L2 (English) alone sometimes does not aid understanding. So, you rattle and rattle and go, and they wouldn't understand anything. So, you just use that aid understanding and then bring those who are bored because they don't understand the language on board. (Agnes)

The decision to use the mother tongue for instructions was made considering the learners' language background, which has consequences for learning. Additionally, teachers' responses show that what best meets the learners' needs relating to classroom communication was

considered to arrive at what medium to adopt. Teachers believed that the mother tongue provided a better means of facilitating understanding of content.

5.3.3 Encouraging learners' action using a variety of assessment techniques

Pupils' expression of what they had learned was a significant part of teachers' lessons. Learners expressed their learning through two main ways: oral and written exercises. First, children were allowed to verbally communicate what they had learned to the class or resource teacher. This was done mainly through questions and answers. For example:

> Teacher: What else do we use our legs for? Pupils: Play ball. Teacher: Jump higher (Pupils jumped) So, what do we use our legs for? Pupils: Jump. Teacher: We jump with our legs. Teacher: Last one, our tongue, what do we use it for? Pupil: To taste. Teacher: How do we call the head? Pupils: Head…Teacher: How is the eye called? Pupils: Eye... (Victoria)

Second, learners were asked to provide answers to some teacher-identified questions. Answers to such questions were written in learners' exercise books to be presented to the teacher for marking and feedback. Examples include:

> Teacher: So, we will do some small work. Everybody will draw an activity that requires the use of energy. Can we draw? When we finish, we shall colour it nicely…. (Sarfoa)

> Teacher: For your exercise, you are going to summarise the passage we have read, not more than a page. Do you understand what summarising is? (Agnes)

> Teacher: So, you can write the LCM of 2 and 3 is 6. Okay, in your jotter, find the LCM of 5 and 4. I am giving you 1 minute. Use your counters… (James)

> Teacher: So, you are going to subtract 8 two times from 48 to get the correct answer. You can subtract -8, -8, and the answer is what? 32. So, you can try this. If 4 x 9 =36, find 3 x 9…. (Banahene)

Regarding written assessment, teachers engaged in individual, peer, and group assessments. Additionally, learners had the opportunity to give oral and written responses. Regarding pacing in-class exercises, teachers adopted various strategies.

5.3.3.1 Individual versus group assessment

Teachers mainly employed individual assessments to evaluate learning. At the end of lessons, learners were given individual written exercises. For example, the teacher (Oforiwaa) drew three number lines on the board and asked learners to fill the spaces. Other extracts include the following:

> Teacher: So, you are going to subtract 8 two times from 48 to get the correct answer. You can subtract -8, -8, and the answer is what? 32. So, you can try this. If 4 x 9 =36, find 3 x 9. (Banahene)

> Okay, that is all. You are going to draw one important place in your community. If you want a community centre or marketplace, draw it for me. Draw and colour. Make your work colourful. (Oforiwaa)

> Write dictation on top. Number 1 to 5. When you write 1, leave 2 lines and come to number 2. Are you ready? Teacher: Each word will be mentioned twice. 1. Below, 2. Hard, 3. Between, 4. Own, 5. Add, 6. Keep … (Mariam)

Only one participant conducted a group assessment during their lessons. Learners were required to do a presentation of their work, and the group that was adjudged the best would be motivated with marks:

> Teacher: Please, I am giving you group work to draw the Big Six. The best group will come and do your presentation. So, those who will draw to my satisfaction will get the best mark. It is over 20. It is a group work. (Agnes).

Learners were required to gather their materials for this exercise. However, learners with special needs were given different exercises due to the teacher's perception that they could not draw. The teacher remarked that:

> A separate assignment: they will do it, but this one is a group work so they will involve them. When it comes to drawing, I have not seen them drawing before, and they should also do something for me to mark. That is the question I gave them because they can't draw, so

> I gave them a question form so that they will also give me something to show that they have learnt, and they understood my lesson very well. (Agnes)

5.3.3.2 Peer assessment

Like group assessment, one participant at the lower primary level carried out the peer assessment strategy. The exercise involved the teacher dictating words for learners to spell. The learners then exchanged their books with their colleagues sitting close to them for marking. The class was actively involved in this assessment process. After performing the tasks assigned by the teacher, they instructed:

> Now you know what to do. Give the books back to the owners. Write the correct words below what you have written. 6 out of 6 Drop all your pencils. 5, okay, you have also done well. 4, 3, 2, 1, be on your feet. All right. Now, write the correct word below what you wrote. Don't erase anything. (Mariam)

The teacher's remarks imply that the peer assessment process was frequently used in class, so learners were familiar with it. Furthermore, it appeared this approach was well structured with clear guidelines about the teacher's expectations of learners. The class appeared excited as marks were mentioned, and learners who had such marks stood for recognition. The teacher encouraged pupils who had low marks to work hard. Teachers cautioned other learners about mocking low achievers.

5.3.3.3 Differentiating assessment

Learners with special needs were involved in verbal assessment, although this was not the case in classes where they were mostly quiet. On written assignments, as mentioned earlier, learners with special needs were given separate exercises that were either closely related to the content discussed or completely different because teachers perceived that they could not do the same work as their typically developing peers. The exercises given to the learners with special needs depended on their ability levels as determined by the class teacher. Learners with special needs whose teachers considered them incapable of performing given tasks were engaged in different exercises. For example, learners with special needs answered objective questions, whereas the typically developing peers were assigned drawing assignments. For instance, in a history class, the teacher mentioned that “The learners with visual impairment will not participate in the

drawing. They will list the names of the Big Six" (Agnes). The following questions were written on the board: 1. Write the names of the Big Six. 2. In which year was the UGCC formed. The teacher dictated these questions. Similarly, while the typically developing learners were asked to summarise the passage read, the learners with visual impairment had to answer four recall questions. This was due to perceptions that learners with special needs could not do such assignments. The teacher noted that:

> When it comes to drawing, I have not seen them drawing before, and they should also do something for me to mark. That is the question I gave them because they can't draw, so I gave them a question form so that they will also give me something to show that they have learnt, and they understood my lesson very well. (Agnes)

Additionally, learners with special needs were assigned different exercises in the case of the English lesson "…because they cannot see the book, or they don't have a material." (Agnes) The lack of teaching-learning materials, such as embossed textbooks, was a reason for differentiating exercises for learners with special needs. On the other hand, learners with special needs completed a reduced number of exercises compared to what was initially meant to be completed by all class members. Specifically, the child with special needs answered two or three questions out of five. It was argued that,

> Sometimes, the activity you give to them, they can't do it and finish on time. So, maybe if the whole class is to do an activity of about 4 or 5 questions, we can give them about 2 so that they will also manage with it (Cecilia).

5.3.4 Building support for learners with special needs through creative collaboration

One important aspect of this research was to examine how classroom teachers collaborated with other professionals and players in the learning space. This section presented how classroom teachers worked with resource teachers, typically developing peers, children with special needs, and other teachers.

5.3.4.1 Working with resource teachers

Both lesson observations and participant responses revealed a certain level of collaboration between class teachers and other actors within the learning space. There was evidence of teachers working together with some resource teachers to support learners with special needs in their classes. This section examines how resource teachers contributed specifically to developing class teachers' inclusive pedagogical practices.

Whereas class teachers appreciated the role of resource teachers in the teaching and learning process. For example,

> It rather helps me. I also feel that whatever I'm doing, I am being monitored by him, so if something doesn't go on well, he comes in and then tell me … and at the end, we achieve one goal (Victoria).

Only one of the ten teachers mentioned that the resource teacher was involved in lesson preparation. James remarked, "Apart from planning with them, when I am teaching, sometimes they will be there helping them." Most class teachers admitted not involving resource teachers in the planning process. Some teachers considered themselves the owners of their classes, solely responsible for determining content and how to teach it.

> I plan my lesson alone. It is maybe during my teaching that she may come in, but I plan my lesson alone. In my lesson planning, they are not involved. (Agnes)

> The planning of the lesson, that one, it is done by me. So, for that one, I plan the lesson. (Sarfoa)

> In the lesson planning and delivery, to be frank, he doesn't get involved. But sometimes he comes for the child to their end and then they will give them individual tuition; find out their problem and refer them to the necessary centres for assistance. (Cecelia)

> Not in my lesson planning. Sometimes, after teaching, he comes around to observe their work or something like that, to know what they do. They don't come to my class, but I

> inform them about those learners that they have special needs, so if they have time, they should come to my class and check them for me. (Oforiwaa)
>
> He doesn't get involved, and I have not involved him in the lesson. Oh yes. He comes. But, for me, involving or calling him, no. He comes around to see what we are doing (Banahene).
>
> He has not been very active in lesson planning and teaching. (Dickson)

Teachers seemed uncertain about involving resource teachers in their lesson preparation. This was expressed in the following comments:

> Hm, how do I put it? As I said earlier, this is my first time. It's not like I have been with special needs children. No, this is my first time. At times, I ask her questions concerning that, and she says that is how he is. This is my first time, so I am now learning. I wouldn't know him better, so if you interview the other class, they have been with them for years. This is my first class. (Mariam)

The responses above indicate that resource teachers were not or were minimally consulted regarding the involvement of learners with special needs in lessons. Thus, teachers preferred to do things individually without consulting with the resource teachers.

The resource teachers were present in most lessons during the lesson observations. They performed different responsibilities such as monitoring and drawing the attention of the learners with special needs to the lessons, marking exercises of learners with special needs and other members of the classes.

First, according to the class teachers, the resource teachers monitored the work and progress of the learners with special needs and ensured the welfare of learners with special needs in their respective classes. They noted that,

> The resource teacher normally comes and monitors how things are going in the classroom because when they came, I made him know that this is the problem in the class. So, he also accepted it, called her and then also tried to know one or two things about it to verify what I was saying. So, after that, at times, when he comes in, he takes a look at the handwriting

> and then asks some questions: 'Did you eat this morning? When coming to school, did your grandma give you money? I see him doing that on Mondays and on Fridays when he comes here. I think he is her friend too. Even yesterday, when he came, the girl rushed to the teacher and gave him her book to look at – Sir, see. So, I think he is helping a lot. (Victoria)
>
> Sometimes, after teaching, he comes around to observe their work or something like that, to know what they do., they don't come to my class often. it's only when I invite them because they are always busy because they have their classes too. (Oforiwaa)
>
> With the delivery, when I have a class, they will come and sit. Sometimes, I ask questions personally for them to answer. Sometimes, if they find it difficult, that is where the resource persons come in. (Agnes)

Second, the resource teacher provided in-class support by correcting errors learners committed during writing. For example,

> But during delivery, he comes in so that if there are any lapses, he can correct them. Sometimes, he helps these children. He gives them exercises on how their writing should be done. Because their writing is not good, he tries to use strategies that will develop their writing. (Sarfoa)
>
> You see, with this Valerie (learner with special needs) girl, at times, when they are writing, she'll also be writing, but she needs more attention. So, when the resource teacher is also in, he attends to her while I also attend to the other children. At times, when he finishes early, he will come and help me with the other children. (Victoria)
>
> He has been coming around. Sometimes when you are teaching, you see him moving round, correcting some of the things they write. So, he has been helping. (Ocquaye)

Additionally, resource teachers gave learners with special needs individual remedial lessons during or after normal lessons.

> …sometimes, he comes for the child to their end, and then they will give them individual tuition, find out their problem, and refer them to the necessary centres for assistance. (Cecilia)

> Normally, after teaching, aha, so they go to her, she (whichever resource teacher is in the class) would have to attend to the pupil for the extra time that they need. Let us say when it is break time, and they had a lesson, and they didn't understand, she is the best person that should explain to them because I may be teaching another subject. So, they are there for the extra tuition that they need. (Agnes)

Resource teachers provided direct support to class teachers. They supported the class teachers by highlighting some errors or issues during teaching and learning. Teachers noted that:

> Okay, sometimes he draws my attention – if you could write a bit boldly, it will help the children. Then, I get that concept in mind. Sometimes, if it is a reading lesson, he will tell me to speak a bit loudly so that the children can hear me. He will draw my attention to all that. When the children are also doing work, he sees to that. If something is not going well, he prompts me… They were doing exercise, and he prompted me about something I did not see. (Sarfoa)

> Sometimes, there are certain signs in mathematics that I don't know, and I have to confront them if they will be able to write it in braille. Yesterday, for instance, the Math that we did: Prime factorization- so to me I felt that they can't do it. So, the resource teacher will have to come in, and instead of them drawing it, they do a different thing but will end up with the same result. So certain signs and even certain materials that they need as comparison for calculation. (James)

> Other supports for class teachers included marking exercises: "He has been helping me in marking; controlling the class. He has been helping me in marking all the exercises. Sometimes, he moves around and checks those who have eye and ear problem; consults parents for special assistance." (Dickson)

Resource teachers' contributions went beyond supporting only learners with special needs. They collaborated with teachers to support other learners as well.

> I will say the resource teacher has been coming to my class but doesn't attend to the girl alone like what he (the RT) did this morning. He, at times, comes and marks all the children's works. He also goes around to see those who are writing. He assists, but through that, he draws near to this girl. If he sees any problem, that is where he lets Vanessa come to him, sit beside him and then starts writing something for her. (Victoria)

A probe into how the activities of resource teachers affected lesson delivery revealed mixed reactions from class teachers. On one hand, the resource teachers' activities were considered beneficial to the learners with special needs and the learning process. For example,

> It doesn't affect me. It rather helps me. I also feel that whatever I'm doing, I am being monitored by him, so if something doesn't go on well, he comes in and then tells me – 'Oh, let's do it this way, or let's do it that way and at the end, we achieve one goal. (Victoria)

> It helps my class positively. In fact, he has been helping me. When I finish the first lesson, he will be marking for me so that I can move on to the next lesson. Then, he has been motivating children to speak English. Controlling the class, in fact, is very difficult for me to control the class, but he helps me to do that. Sometimes, he teaches the class when I am not around. (Dickson)

On the other hand, the practice of providing remedial classes to learners with special needs outside the regular class was considered to have a negative impact on their learning. Children with special needs missed some learning opportunities while receiving remedial lessons. This is evident in the following comments:

> Normally, those ones that he withdraws during our main lessons, he might miss those lessons because I don't normally go back to teach them what we have learnt, but we have noticed from them that sometimes they go there for special lessons, which might sometimes have a link with what we will be doing in class. They don't engage us in planning for them, but they look at what we are doing and give them special assistance. (Cecilia)

Additionally, only two participants involved the resource teachers in lesson evaluation. Resource teachers helped to transcribe brailed assignments for teachers and marked them in some instances. For instance,

> After they have done it, the resource teacher transcribes their work and gives it to me, and I will mark it because they have learnt it and they know what each dot means. So, after they write it, the resource teacher will transcribe it, then they bring it to me, then I mark it. (James)

> And then, when we give them any assignment, the teacher will transcribe to whatever I can read, and then I will mark for them. (Agnes)

5.3.4.2 Working with other teachers

Teachers expressed their views about working with other teachers. On very rare occasions, class teachers consulted with their colleague teachers. Other teachers supported the classroom teachers in two ways. In the first place, they provided information about learners with special needs. A participant mentioned that,

> Especially the KG madam. That was where I got the information from. She told me – This is how she is. That is why I also called her grandma. She told me that she is a special girl. So, I also have to notice one or two things: know how she behaves and that. Ok, if I don't understand anything, I go to class 2. If I have any problem concerning this girl, I go to class 2. We share ideas and see which will help. (Victoria)

Additionally, classroom teachers consulted colleague teachers to serve as resource teachers in lessons and invited them to contribute to teaching some topics.

Sometimes, I give them work that they are to present in class, and then they are graded. So, in presentation, I use about 2 or 3 teachers to come and sit down and then assess. So that it won't be biased; everything will be fair. (James)

> Okay, what I do is that maybe, as I am teaching, I find out that I come across something I don't understand. I go to a teacher to find out or ask them for help. If that person comes, fine. If not, I move on to the next teacher. So, that is what I normally do. If I see that it is something I can't do, I approach the next teacher. (Sarfoa)

> Oh, that one, we do. At times, you want to teach a certain topic but are not abreast with it. So, I fall on a teacher who is good with that. (Banahene)

> Yes, I involve them when I am finding it difficult to teach an aspect of the lesson. If I don't understand a part, I have to fall on them for explanation. Maybe the headmaster gives me an assignment, I invite someone to take care of my class. These are the two ways I fall on other teachers. (Dickson)

> A participant responded that they did not necessarily involve other teachers in their lessons: "They don't. They, themselves, will be teaching in their classrooms so they can come and support me. Unless I need help, I go to them. (Oforiwaa)

5.3.4.3 Working with special needs learners and typically developing peers

It was evident from lesson plans and interview responses that neither learners with special needs nor the typically developing peers were involved in setting goals or lesson objectives. However, the typically developing peers contributed to different ways of supporting learners with special needs. The typically developing peers were either paired with learners with special needs or assigned to help them. This was evident during lesson observations where the former helped the latter to read, write or provide answers in class. However, these supports were out of the learners' will and not a pre-arranged design by class teachers. The typically developing peers provided help for learners with special needs who sat by them as a personal decision. This is because, in most cases, there was no direct interference from class teachers or communication with typically developing peers to suggest a collaboration.

While the participants expressed the involvement of other teachers in their lessons in the ways identified, these were not directly witnessed throughout the data collection. No teacher was seen participating in any of the lessons while I conducted the observations. This, however, does not imply that the practice was not enacted. These may have happened in other lessons that were not observed. Class teachers ' responses were negative regarding collaboration with other professionals outside the school. None of the class teachers had direct working relationships with other professionals who were not teachers regarding support for learners with special needs in their classrooms. It was, however, noted that resource teachers usually referred learners to psychological assessment centres for formal assessment to determine their abilities.

5.4 The rationale for teachers' inclusive pedagogical practice

An important part of this research sought to justify class teachers' inclusive pedagogical practices and approaches. This section, therefore, answers the 'why' question about these approaches. This section summarises teachers' justification for their inclusive pedagogical practices. In addition, barriers to teachers' inclusive pedagogy identified by teachers have been outlined here. The findings in this section have been summarised in Figure 7.

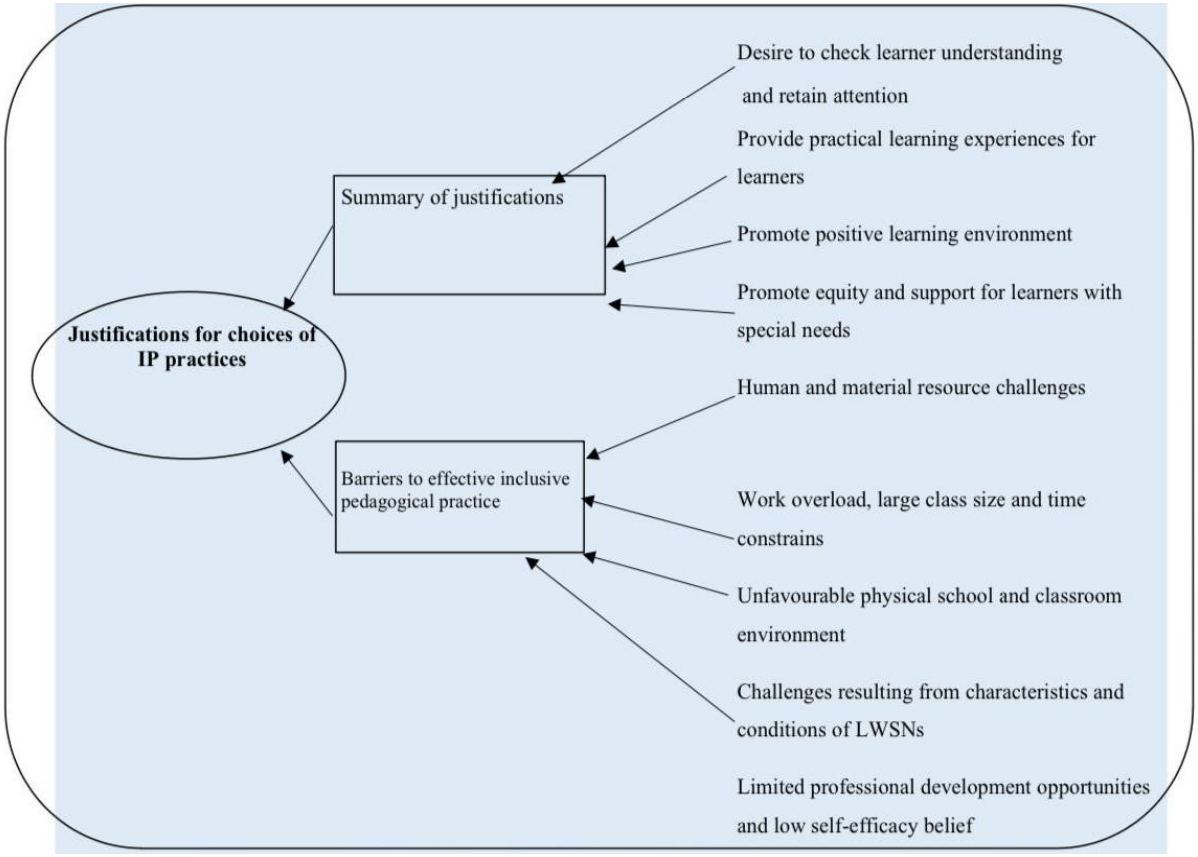

Figure 8: Summary of teachers' reason for their choices of inclusive pedagogical practices (research question 3)

5.4.1 Summary of justifications for pedagogical approaches

As noted earlier, aspects of teachers' rationale for their practices were captured under the second research question. However, the first aspect presented here summarises teachers' justifications. This is followed by some issues identified during observation and by the participants as factors that impacted teachers' inclusive pedagogical practices.

5.4.1.1 Desire to check learner understanding and retain attention

Teachers adopted some pedagogical approaches to determine if learners understood or were attentive to the lesson. To achieve this, they asked several questions and expected learners to answer them both verbally and in writing. The questions were posed to individuals and the whole class to ensure all learners followed the discussions. Participants also guided the class in citing or working on several examples, particularly in mathematics.

5.4.1.2 Provide practical learning experiences for learners

To provide practical learning experiences and exemplars for children, teachers used field trips and concrete learning materials such as pictures, money and plants; they connected learning to real-life experiences, including referring to familiar things in their environment, everyday events and personal stories. They believed these strategies help learners to relate to contents easily, improve retention of concepts and motivate them to engage in lessons.

5.4.1.3 Promote positive learning environments

Teachers adopted role-play, grouping, peer support, and songs to promote activity, stimulate interest, and encourage mutual support and interaction among learners. The teachers believed that these strategies led to cooperation and the sharing of ideas. Learners have the opportunity to support others during teaching and learning. Additionally, these approaches create positive interactions among learners.

As noted in earlier presentations, some class teachers observed that learners with special needs in their classes could not perform the tasks as their peers in the same class. Others noted that the learners need extra support to accomplish exercises. Hence, differentiated learning and pull-out approaches were used to ensure that the learners with special needs were provided with similar learning opportunities. Tasks given to the learners with special needs were either different or reduced to ensure that learners performed exercises that were within their abilities. On the other hand, the resource teacher drew the learner from the class to provide them with remedial or additional support.

5.4.2 Barriers to effective inclusive pedagogical practice

Five main issues were identified as barriers to teachers' pedagogical practices. They included inadequate resources, large class size, limited professional development opportunities, inadequate support for teachers, condition and behaviour of learners with special needs and an unfavourable physical school environment. Others included workload, stigmatization, lack of parental cooperation, standardised examination and inadequate advocacy.

5.4.2.1 Human and material resource challenges

Resource limitations are the biggest challenge to teachers' inclusive pedagogical practices. Agnes stated bluntly, "The lack of resource teachers is my main problem, and the TLMs (teaching, learning materials)." Class teachers identified human and material resources as a significant challenge to their inclusive pedagogical practices.

While classroom teachers acknowledged the positive roles of resource teachers in the lesson delivery, the latter's inadequacy was a matter of concern. Some teachers expressed that the enormous work the resource teacher was required to do despite their limited number had a negative impact on their ability to support them efficiently. They noted the following:

> Monday to Wednesday, he (resource teacher) has to be here, and Thursday to Friday, he needs to go to other schools. He goes round all the classrooms from KG to JHS observing all children with special needs. One teacher handling about 16 classes. We have two streams. He is the only person doing that when you come to this school and other schools. So, if we can get more teachers to assist him, it will be good. (Ocquaye)

> I don't know the number of specially trained teachers we have in the country, but I don't think there are many that can fill all schools in Ghana. (Banahene)

The study found that in all the case schools, except one, only one resource teacher was responsible for supporting all the learners with special needs in at least four basic schools, including all primary and junior high-level classes. One school had two resource teachers because they admitted children who were blind. The resource teachers assigned to this school were trained in brailling and responsible for the learners with visual impairment in the classes. In fact, during informal discussions with some class teachers, it was mentioned that the school

had assigned many more resource teachers before then. Resource teachers in charge of the other case schools had their specialities in other fields (hearing and intellectual).

Again, teachers expressed worry about the inadequacy of material resources such as textbooks and teaching-learning TLMs, which negatively affected teachers' ability to conduct effective teaching and learning. For example, some teachers observed that:

> The books were not enough to reach table by table. That is why I do it that way so that they would all have a copy of the book. …We don't have the exact provision that will really help them to grasp what they need to know. Last time, the resource teacher told me there was something he can do for them, and I told him to do it so I can pay him. I know that the child needs this, but the provision is not there so I ignore it. When we come to writing, writing aids that will help them are not available. (Sarfoa)

> Because they cannot see the book or they don't have a material to read from, I would have to be calling them for me in person to know that they are with us. With the textbooks, they should have theirs. If they will bring some for the sighted, at least they should do the same for the visually impaired. No. I have seen books that they have, but not textbooks in line with the ones we use in class. (Agnes)

> They used to have this machine – the purchasing braille- now they have all spoilt. They have all broken down so now most of them are using this. The only thing is certain things that they lack that is making the work very difficult. (James)

> TLMs to be used to teach so they will understand simple things are not available. Books for parents to buy and some of the basic things the children need that will help them are unavailable. They don't have books. They are given homework, and they come back not doing it. They sit down, sometimes the whole day without books. They don't have textbooks. They sometimes do all the exercises in one book. (Banahene)

Although such materials impacted all learners, it is evident from teachers' responses that the children with special needs suffered most from the lack of resources. This claim supports an observation made earlier under the use of TLMs. While teachers were not resourced enough regarding what and how to create teaching and learning materials, learners with special needs

lacked simple items such as writing materials. As a result, either the learner in question was excluded from aspects of the lesson, or the teacher was responsible for personally funding the resources.

5.4.2.2 Work overload, large class size and time constrains

Class teachers complained that the volume of work they were required to do due to large class sizes was exacerbated by the presence of learners with special needs. Lesson observations revealed that the class with the smallest size comprised 36 members. Classes have between 46 and 62 children, with sometimes only one class teacher in charge of these classes. These numbers had implications for teaching and learning. Class teachers noted that the presence of children with special needs increased their workload as they had to take care of the needs of both the typically developing peers and learners with special needs. Because of this, learners with special needs were regarded as a burden to the class. For example,

> You will do more work when you have children with disabilities in your class. (Banahene)

> When you come to class, considering the nature of the work, you have planned the lesson notes; you have to do this: give this exercise. teaching children together with others is good, but considering them with the other people in class, you may realise that it is like you are doing two things at a time. (Sarfoa)

> I don't have specific time for one person who is having problem. I have to move fast because they are many. I have to give three exercises; you have to mark the work of 60 pupils before you move on to the next lesson. So, it makes us rush. Otherwise, you cannot finish teaching the topics within the term. (Dickson)

Although teachers expressed the willingness to provide extra tuition for learners identified with special needs, they were unable to achieve this due to time constraints. This was expressed in their statement:

> …sometimes, you wish to have extra time for these children, but due to some of the activities, you don’t get enough time with them. So, your attention is divided. So, you have to choose the many over them. That is the truth. (Sarfoa)

> I can have one or two minutes to help them, but others may also be disturbing. (Dickson)

> Due to the classroom activities, I am not able to get that sufficient time for them. Because they really need time. Sometimes, you say break, but that is the time I am also taking my lunch." (Oforiwaa)

To teachers such as Cecilia and Mariam, involving learners with special needs in activities such as answering questions verbally, in writing, or drawing could be time-consuming due to their slowness. Teachers, therefore, managed this situation by giving learners with special needs either different exercises or those with reduced difficulty levels. Cecilia commented that,

> When a question is put and you direct the questions to them before they get prepared, come to the board and even get up to speak, it will take time. I asked them to do 2 out of each of the currencies because they work very slow. So maybe by the time other colleagues will complete it, he is on the second one. Maybe the time frame for a particular lesson. Instead of giving them special attention, you might not finish what you are supposed to do for the day. Because sometimes, when you move too fast, they wouldn't grasp the content you are supposed to teach.

Dickson confessed: I don't have much time for them, not that I don't want to pay attention to them." Similarly, Mariam remarked, "Not really time wasting, but if we are looking at it from the general way, I think in a way it is.

5.4.2.3 Unfavourable physical school and classroom environment

Teachers mentioned that school environments challenge their inclusive pedagogical practices. While teachers encouraged learners with visual impairment to live independently, the unfriendly physical environments of the school directly affected their attempts to achieve this. For example,

> It's the environment. I will say that of our school because this is where I am. The environment is not conducive for them. As I said earlier, we try encouraging them to walk alone to know where they are, but here is the case: our school environment is not flat… they have been falling all the time. When it rains too, it's bad.... (Agnes)

> Our place is not conducive for them at all. Moving from ‘N’ school to here, you know they have to climb a hill too. There is serious erosion there which sometimes they fall in that. (James)

Observations revealed that classrooms were overcrowded. In some cases, dual desks meant for two learners were occupied by three. Furthermore, classrooms were sometimes small and were uncomfortable during afternoon classes because of high temperatures.

5.4.2.4 Challenges resulting from characteristics and conditions of children

Another challenge that class teachers had to deal with was managing the conditions and attitudes of children with special needs. Classroom teachers were concerned about the disruptions caused by special needs learners during lessons. A participant commented, "When you are teaching, they just jump in to say something. It can be either good or bad” (Victoria). Similarly, Sarfoa observed that,

> What I will say is that in class, what disturbs me a lot is that sometimes you will be teaching the class, but they are doing something different. If it is by them alone, I don’t worry, but when they are trying to interact with other people also, to draw their attention from what I am doing, you will see that it is causing misunderstanding between me and them. He is also drawing someone’s attention to what he is doing. So, you see that those sitting close to him are not listening to what the teacher is doing. So, you have to stop, get back to them to do this and that, before you get back and continue with what you are doing. So, I would say it causes delay. But because of these two people, you have to come back again, then you see that the others are murmuring. So, sometimes you have to come in and make sure that they stop what they are doing, as it happened in the class today. It distracts the attention of others and through that, it delays your delivery also. (Sarfoa)

The major challenge to teachers was how the behaviour of special needs learners affects other learners in class. In addition to that, children with special needs were inattentive most of the time, and it was a major concern to both teachers and the typically developing peers. For example,

> Sometimes they don’t pay attention. They don’t concentrate on what the whole class is doing unless you give them special attention. You call her, you ask her question, and she won't even be willing to answer question when you ask her. Like what I did to the kids yesterday, sometimes they won't raise their hand then I call them. But for her (a learner with special needs), it was as if we were forcing her. So, for somebody like her, I even told the resource teacher that when I come to class and teach, I would involve her, but I won’t pay much attention on her. So, that’s what happens sometimes. (Cecilia)

In this case, the responsibility for their inclusion or exclusion was placed on the special needs learners rather than considering possible motivation for learning. Also, learners' supposed unwillingness to open up to teachers, as alleged in the statement: "We tried finding out, but she never opened up" (Agnes), suggesting that the child was not motivated to participate in lessons.

Teachers identified financial difficulties as an issue that negatively impacts learners' welfare. This indirectly affected their learning. Learners with special needs faced financial challenges, which affected their ability to acquire learning materials and attend schools. When asked why learners could not have basic learning materials or assistive devices, teachers responded: "I will say poverty." (James). Similarly, Agnes said, "She said my parents were not having enough for me to come to school." Hence, Banahene insisted: "That is why I told you that even common exercise books they did not have!" Such economic challenges cause absenteeism among learners with special needs. For example, "Others too have problems with finances, and it leads to truancy and absenteeism." (Cecilia) Additionally, “Sometimes too they don’t come at all. Some come 3 weeks, 4 weeks after reopening; some even in the ninth week. With such a person, how are we going to help?” (James)

5.4.2.5 Limited professional development opportunities and low self-efficacy belief

The participants saw inadequate training as another barrier to enacting effective inclusive pedagogical practices. Data revealed that all class teachers were trained in inclusive education and how to promote inclusive teaching during their pre-service training. Three of the participants reported that they had received in-service training. However, they noted that the training exercises (most delivered by resource teachers) were organised occasionally: "Yes, sometimes, the resource teacher takes us through in-service training, about once” (Victoria).

Cecilia and Agnes respectively said: “Sometimes; Not too often” (Cecilia); “Once in a while…the last one we had had been over a year or two” (Agnes).

Only one classroom teacher mentioned that they had received inclusive education training outside the school: "Yes, it happens. Either we will go for a workshop outside, or the resource teachers will do an 'in-set' (in-service training) for us in the school" (Agnes). However, it was gathered that the educational offices usually trained resource teachers, and they, in turn, trained teachers.

Others were emphatic that they had not received any form of in-service training since they assumed their various responsibilities. For example, “No, I can’t remember being trained” (Banahene). “No, ever since I came here” (Mariam). “No (No training on including learners with special educational needs)” (Ocquaye). One of the teachers did not receive any orientation about the characteristics of the pupils assigned to them or what they were expected to do. She mentioned that,

> No orientation. I just went to the class and so, my first time, I think I did my best. But later, the late 'Mr. B' (Resource teacher) gave me orientation on them." Teachers, therefore, rely mostly on resource teachers for directions and guidance to negotiate this path. (Agnes)

Regarding teachers' self-efficacy, two participants expressed optimism about their ability to teach learners with SEN and their typically developing peers. They responded positively that:

> Yes, because it's not all teachers who can handle her. So, I also feel that I am doing my best, and I have done it too. (Victoria)

> Yeah, but once they are new innovations coming up every day, it will be good, once a while, we have workshops and in-service training that will abreast us with new pedagogies that we are supposed to use in teaching them. (Cecilia)

The situation differed from Agnes and Mariam, who expressed uncertainty about their abilities to provide adequate learning for all. They stated that:

> It’s 50 percent. I didn’t specialise in special education, or I didn’t specialise in what the resource teachers are doing, but the little I know is what I am doing. And the little experience I have gained from the schools is what I am using. (Agnes)

> When it comes to these children (children with special needs), they may need strategies which I may not have… I have, but wouldn’t say is enough. (Sarfoa)

> What do I think? For me, I am doing my best as a teacher to help them with the other students. So, as I said earlier, I can’t know much. (Mariam)

Other teachers expressed negative self-efficacy beliefs in their responses, including, "No, I don't have all the skills. I have not been well trained" (James) and "No, I don't, so I need training for us to position ourselves better to handle such situations" (Dickson). This justifies the participants' call for more enhanced professional development opportunities.

5.5 Chapter summary

The results were organised into themes and subthemes under the three sub-research questions. In summary, class teachers held different conceptualisations of inclusive pedagogy. Teachers' understanding of inclusive education and their beliefs about learners with special needs impacted their construction of inclusive pedagogy. Additionally, the participants adopted various strategies and enacted different practices to promote the inclusion of learners with special needs in their lessons. The participants justified these strategies based on their orientations and other contextual issues. Further, some factors were identified as barriers to teachers' inclusive pedagogical practices. Finally, the heterogeneity of participants presents various dynamics to the data collected, which provides good insights at the interpretation stage.

CHAPTER 6: DISCUSSION OF KEY RESEARCH FINDINGS

6.1 Introduction

This chapter presents a detailed discussion of the key findings of the study. It highlights key issues that evolved from teachers' conceptualisation of inclusive pedagogy, their actual inclusive pedagogical practices and how these were justified. Section 6.2 addresses research question one, focusing on how teachers conceptualise inclusive pedagogy. 6.3 responds to research question two about the nature of teachers' enactment of inclusive pedagogy. This section also incorporates justifications for teachers' use of specific practices to enhance discussion. Section 6.4 provides further details and discussions about what informed class teachers' choices and enactment of their pedagogical practices. Additionally, this chapter identifies new ideas and contributions of the study to the understanding of inclusive pedagogy in general and in resource-constrained contexts. These ideas and practices were discussed in relation to the sociocultural theory and inclusive pedagogical approaches identified in the literature. Additionally, the implications and limitations of the study were discussed here.

6.2 Non-universal and multidimensional conceptualisations of inclusive pedagogy

Analysis of the interview responses reveals that participants held non-universal and multidimensional perspectives about inclusive pedagogy. These are identified under 5.3 as teaching all children together and in the same way, promoting participation of learners with special needs in lessons and classroom activities, separating them and making inclusive pedagogical practices responsive and flexible. The key arguments in this section are built around teachers' conceptualisations of inclusive pedagogy identified in the findings.

6.2.1 Focusing on all learners, integrating some

Teaching children with special educational needs (SEN) and their typically developing peers together indicates teachers' agreement in encouraging inclusive teaching. Teachers' definitions discourage discrimination in what and how children are taught in classes and promote equitable access to learning for all children. This agrees with perspectives shared by Sanger (2020), Florian and Spratt (2013*)*, and Florian and Beaton (2018) that inclusive pedagogy is a learning approach that responds to the needs of all and promotes equitable education for every learner regardless of their learning needs. Ghana’s inclusive education policy supports this view by encouraging the adoption of child-friendly learning environments and approaches in lessons to

promote equitable, inclusive learning (Ministry of Education, 2015). Further, this ideology emphasises the social justice aspect of inclusive education, where learners have the right to be taught by their colleagues and in schools within their localities.

On the other hand, some teachers' responses suggest merely adding or placing children identified with special educational needs (SEN) in the mainstream classroom. This view advances the idea of an integrated approach to teaching rather than full inclusion. According to Hegarty and Alur (2002), integration involves placing children with special educational needs in ordinary or mainstream schools. Although this approach echoes the right for SEN children to education in their local schools (Vislie, 2003), it suggests incorporating special education into the general education system (Hausstätter & JahnukaInen, 2014). Thus, SEN children may not be considered full members of the mainstream class when teachers adopt the integrated teaching and learning approach. This, however, contrasts with the position of the inclusive education policy of Ghana, which advocates for the full inclusion of SEN learners in lessons rather than merely placing or integrating them in classes and teaching them in different ways. Further, inclusive pedagogy is viewed as a process of teaching that focuses on including special needs children. This idea is consistent with the classification of inclusive education definitions, identified by Ainscow et al. (2006) and Göransson and Nilholm (2014), that were limited to the education or placement of disability or SEN learners in the regular classroom. As noted in earlier paragraphs, this perspective of inclusion is attributable to the nature of education available for SEN children within the Ghanaian education context. The existence of special education for some SEN children and mainstream learning for others appears to deepen the dilemma around inclusive practices. Further, teachers link inclusive pedagogy to different concepts and ideas to better express their views on the subject. Accordingly, inclusive pedagogy has been connected to cultural relevance, responsiveness and sustainability (Mensah & Larson, 2017; Paris, 2012). The benefit is that such ideas reveal the importance of contextual influences on perceptions. However, this increases uncertainties about practices necessary to promote effective inclusive learning.

6.2.2 Active involvement of special education needs learners

Inclusive pedagogy is seen as an approach that facilitates the participation and involvement of children with special educational needs (SEN). Participants' views here advance towards adopting teaching and learning approaches that are responsive to the interests of children with

SEN and motivating them to participate in lessons. Thus, choosing or designing practices requires careful consideration of their identities and preferences. CAST (2024) emphasises this point by noting that children's participation or engagement in a learning process can be boosted by identifying their personal interests, unique identities and the variability of their preferences over time. Thus, when teachers adopt varying pedagogical methods in lessons, they are likely to account for these individual elements, which consequently encourage meaningful participation of learners in class activities. Similarly, it has been found that when teachers vary their pedagogies, they boost learners' participation in lessons (UNICEF, 2022). Thus, meaningful participation in class activities can support learners in creating real-life meanings rather than an abstract understanding of contents (Espinoza et al., 2020).

6.2.3 Differing philosophical perspectives

The findings reveal that special education and partial inclusion ideologies influenced teachers' conceptualisations of inclusive pedagogy. These two philosophical ideas were born from teachers' thoughts about which strategy presented the most learning benefits for SEN children. Thus, teachers perceived inclusive pedagogy as a different approach to inclusion. Similarly, Makoelle (2014) reported that teachers' responses showed that they understood inclusive pedagogy as more than one process of inclusion. Further, Makoelle (2014) noted that teachers viewed inclusive pedagogy in the light of special needs education and full inclusion. In this study, however, perceptions of teachers about inclusive pedagogy relate to special needs education and partial inclusion. Although the inclusive education policy of Ghana advocates for full inclusion, the continued practice of the parallel system of education (special and inclusive schools) appears to influence teachers' perspectives and decisions.

6.2.4 Placing learners' needs at the core of teaching and learning

Findings indicate that inclusive pedagogy involves flexibility in making instructional decisions and pedagogical practices. References were made to engaging in reflective thinking about learners and practices that effectively respond to their needs. Teachers' views were also directed towards adopting practices that encourage the feeling of acceptance and full membership in class among SEN learners. This perspective of inclusive pedagogy encourages a child-centred approach to teaching and learning. Accordingly, the Salamanca Statement identifies child-centred pedagogy as an approach capable of meeting the learning needs of children with SEN in regular schools (UNESCO, 1994). Further, participants'

conceptualisation of inclusive pedagogy acknowledges the engagement of both learners and teachers in the lesson in promoting inclusive learning. The role of teachers involves regulating the teaching and learning process and developing practices that create a culture of acceptance for all learners. It implies that learning must be centred on the needs of the learner. This approach is consistent with learning within a constructivist environment (Nugroho & Wulandari, 2017). Makoelle (2024) found that teachers understanding of inclusive pedagogy emphasised the participation of both the learners and teachers in the learning process.

Learner-centred learning requires a reflective pedagogical approach and flexibility among teachers. Findings reveal that classroom teachers consider inclusive pedagogy as a reflective process. It reflects professional attitudes that promote critical introspection and evaluation of oneself (ideologies) and practice, showing commitment towards responsibility and autonomy (Ferreira, 2022). Adopting an inclusive pedagogical approach demands that teachers intentionally examine their values and principles of inclusive education and the responsiveness of their teaching and learning methods. These are possible when teachers are free to operate in less restrictive environments.

6.2.5 Developing a sense of responsibility

Teachers' views about inclusive pedagogy showed a sense of responsibility for all children within their classrooms, including those with special needs. In both their responses and practices, they displayed their professional and moral duties towards ensuring the participation of special needs children, depicting views of social justice (Arora, 2011). For example, teachers emphasised that "… I know they (special needs learners) are also my responsibility. We have to include them" (Victoria). "They are supposed to learn together. That is what we have been told." These statements express teachers' perceptions of special needs learners' rights to participate in lessons fully, thus strengthening the position of social justice as fundamental to inclusive education (Guðjónsdóttir & Óskarsdóttir, 2016).

6.2.6 Conceptual disparities and improving perceptions of inclusive learning

The findings show that female teachers, who were in the majority, were more optimistic about the benefits of inclusive teaching for children with special needs. Studies such as Mantey (2014), Avramidis and Norwich (2002), and Mushoriwa (2001) presented similar findings where female teachers were reported to be more favourable towards inclusive education than

their male colleagues. Female teachers, therefore, appeared to hold more welcoming views as compared to male teachers. While not implying that the male teachers were negative towards the learners with special needs, female teachers' views leaned towards a more empathetic approach concerning learners with special needs. However, teachers did not differ in their views about the abilities of learners with special needs. Responses of both female and male class teachers concerning academic work reflect limited or fixed ability beliefs about children with special needs (Florian, 2015; Florian & Spratt, 2013). However, acknowledging that some special needs children possess other admirable skills (including abilities to perform well in drawing, presentation and athletics) dispels ideas that they cannot do anything. It also affirms that diversity can enrich learning (Vygotsky, 1993; Florian & Spratt, 2013). Thus, exploring the belief that learners with special needs have some skills provides teachers with a starting point for developing more inclusive practices.

In summary, the findings show that teachers possess different perspectives on the concept of inclusive pedagogy. Some consider it from a unidimensional perspective, while others take a multidimensional view of the concept. Thus, the research results suggest that the participants had varying understandings of inclusive pedagogy. Further, teachers' conceptualisation of inclusive pedagogy is shaped by their understanding of inclusion or inclusive education, how they approach teaching inclusively and other contextual factors that influence their views of the concept (Makoelle, 2014; Guðjónsdóttir & Óskarsdóttir, 2016). These usually result in operationalising teachers' definitions to suit their contexts (Makoelle, 2014). Although they perceived inclusive pedagogy as a reflective process, teachers saw it as their individual responsibility. These inform general views and approaches towards supporting some children (special needs) in their classes. This study, therefore, reemphasises the lack of clarity in defining inclusive pedagogy and practices. This is revealed in how teachers briefly defined the concept of inclusive pedagogy and their use of inclusion and inclusive education in their definitions.

6.3 Embracing diversity through multiple instructional approaches

This aspect of the discussion addresses the second research question, which looks at the nature of teachers' inclusive pedagogical practices. Overall, the research findings show that primary teachers in mainstream schools adopt and adapt various pedagogical practices to enhance the learning process. These practices present critical learning opportunities for children with

special educational needs (SEN) and their typically developing peers. These are shown in approaches to accommodations, communication styles, assessment strategies and support systems adopted by teachers to create opportunities for children with SEN to participate in lessons. Discussions were organised around the use of generic and specialised teaching pedagogical approaches, developing responsive pedagogical using concrete learning materials, collaborative teaching and support for children with SEN and effective communication through the local language. Discussions were done in the context of the sociocultural theoretical perspectives and some ideas found within inclusive pedagogical approaches – The Universal Design for Learning, The Three-Block Model, Differentiated Instruction and the Inclusive Pedagogical Approach frameworks. Finally, I propose the Introspective Inclusive Pedagogical Approach framework as a tool for studying and improving the inclusive pedagogical practices of primary classroom teachers (especially those in resource-constrained countries).

6.3.1 Responding to differences using generic and specialised teaching methods

Generally, approaches such as providing multiple examples, questioning, field trips and cooperative and group learning adopted by class teachers are considered more generic. Teachers see these strategies as ways of facilitating the involvement of all learners in their lessons. Such pedagogies do not focus only on vulnerable learners. Rather, they tend to treat children with special educational needs(SEN) first as members of the class who have equal rights and deserve the same opportunities to engage in class activities as their typically developing peers (United Nations, 2013). It is argued that constructing inclusive pedagogical practices begins with providing experiences that promote children's right to full participation in learning (Vrășmaș, 2018). In this study, teachers using different questioning styles and guiding children through solving various examples ensured that children with SEN participated in learning activities. The discursive nature of these practices generates fun and creates a safe space for classroom interactions and a welcoming learning environment for all learners. This contradicts findings that teachers' pedagogies were prescriptive, resulting in children becoming *colonised bodies* in inclusive classrooms (Agbenyega & Klibthong, 2011). Thus, common classroom practices were designed to ensure the inclusion of vulnerable learners. This is consistent with the idea that inclusive pedagogy requires teachers to make what is ordinarily available (including practices) to every learner in the class and not provide a set of differentiated options for some (SEN learners) (Florian & Spratt, 2013; Florian & Black-Hawkins, 2011).

The practicality of this view of inclusive pedagogy relies, to some extent, on teachers' beliefs about the capacity of SEN learners to learn given contents or skills. This is based on the fundamental concept of transformability in inclusive pedagogy, which acknowledges the ability of all children to learn and change (Podlucká, 2020; Florian & Spratt, 2013; Hart et al., 2004). This argument is extended by Stetsenko's (2014) Transformative Activist Stance (TAS), which foregrounds the idea of transformability in inclusive pedagogy. The TAS suggests all humans have equal and unlimited abilities to change (Podlucká, 2020). Based on the arguments above, the idea that regular classroom teachers must possess basic knowledge of special pedagogies (Sandri, 2014) to effectively teach inclusively is contested. Accordingly, literature on inclusive pedagogy does not provide distinct instructional strategies akin only to inclusive teaching. Rather, the common models demonstrate that elements of good teaching, including *goal-directed learning, collaborative learning, effective communication,* and *formative assessment* strategies *advocated by the* social constructivist ideological views, underlie the principles of inclusive teaching and pedagogy (Loreman, 2017, p. 13). Thus, the dilemma about special pedagogies for inclusion remains a critical, inclusive pedagogical issue (Rix et al., 2013). However, some teachers in this study acknowledge the challenge of developing common pedagogical practices to teach all learners together, given the wide range of diversities that could exist. Similar findings were reported by Norwich (2010), where practitioners expressed the tensions about difficulties in teaching children with SEN and their peers the same things and in the same ways. However, they acknowledge that learners must learn together as a community. Although most teachers might believe in SEN children's ability to learn, the evidence suggests that contextual issues could negatively impact their choice of ordinary approaches to support them effectively.

6.3.2 Role-play as a learner-centred approach

The findings reveal a flexible and learner-centred approach to the use of role-play in teaching and learning. Although the teacher moderated role-play activities, learners could interact with peers and explore ideas. Learners remained active participants in the learning process, where they could contribute to the knowledge construction. This suggests adopting a learner-centred pedagogical approach, central to achieving successful inclusive education (UNESCO, 1994). Such learner-centred approaches form critical components of the social constructivist theory, which promotes the active participation of children in the construction of knowledge (Rouse & Florian, 2012). Using role-play by the participant allowed teachers to set learners in pairs and

groups (Bhatti, 2021), promoting free interaction and expression among them and positive relationships. This supported children in learning naturally, making meaning of things independently, and developing abstract ideas (Vygotsky, 1978). Baruch (2006) maintained that role play can enhance the teaching and learning process. Bhatti's (2021) finding that role-play activities enhanced students' speaking skills supports this claim. This study, however, reported limited involvement of the special needs child in the role-play activities due to their condition and the idea that they would delay the progress of the lesson. It implies that an issue such as the nature of a child's disability is a major contributing factor to their full participation in various classroom activities. The teacher, however, capitalised on pairing and group discussions to actively include children with SEN in discussions about subjects raised during the role play. Although adopting this strategy appeared to compensate for the SEN child's exclusion in the practical role play, they could have been involved in aspects requiring less physical and verbal activity as these were the pupil's challenging areas.

6.3.3 Maximising SEN participation through field trip

The findings reveal the use of field trips as an inclusive pedagogical strategy to promote maximum participation of all learners in class. Teachers' approach, including spelling out instructions before learners undertook the observation and the reason for the trip, appeared to create excitement and anticipation among learners. Activities carried out were clearly spelt out before the activities and these were effectively connected to the curriculum content or lesson objectives on the importance of the sun. This enhanced class discussions. Similarly, Coughlin (2010) found that the effective connection of the field trip activities supports students' learning and thinking. All learners, including those with SEN, got the opportunity to engage and interact with their peers, both in and on the field. This led to the active involvement of all learners in the class. Thus, field trips enhance interaction and relationships among all learners. According to Martin and Sewers (2003), field trips “should offer opportunities for all children in an inclusion class to engage in interactive learning" (p. 178). Further, observations showed that the field trip promoted more activities and stimulated learners' interest because the activities were conducted in the natural environment. Lessons are, therefore, made more practical.

Although the SEN children in this study participated in all aspects of the lessons, findings revealed that their visual impairment negatively affected their observations on the field. While the children relied on their peers to participate in the observation, this barrier was missed by

the classroom teacher. Martin and Sewers (2003) suggest that field trips should be adequately planned to eliminate all possible barriers and ensure the full inclusion of special needs children in activities. Accordingly, much planning must be done to ensure that children benefit from practical learning experiences from field-based learning (Metz, 2005).

6.3.4 Differentiation: A widely used teaching and learning approach

The research findings reveal that classroom teachers predominantly adopted differentiation. The majority of classroom teachers considered this approach as the most effective pedagogy for the inclusion of children with SEN in lessons. Studies have reported a positive impact of differentiated instruction (DI) on learners' comprehension, literacy (Valiandes, 2015), mathematics, reading (Goddard, Goddard & Minjung, 2015; Little, McCoach & Reis, 2014) and socioemotional success of learners (Roy, Guay & Valois, 2015). Within the context of Ghana, many studies have investigated differentiated instruction, with almost all reporting that teachers differentiate lessons for SEN learners (Bobi & Ahiavi, 2023; Bingan et al., 2022; Owusu-Ansah & Apawu, 2022). Like findings elsewhere, studies in Ghana have noted that DI strategies positively impact children's motivation and learning methods (Bobi & Ahiavi, 2023). Unlike the findings of this study, Amoakwah and Donkoh (2023) reported that teachers did not use differentiated strategies because they had limited knowledge about their use. Uniquely, the general observation in this study shows that all learners were taught the same things during the lessons, while differentiation occurred during end-of-class assignments and assessments. Thus, regarding curriculum content delivery, the disability or special needs of the child were not the prime focus. This tends to coincide with findings that no special preparations were made for children with SEN at the lesson preparation stage.

The use of the differentiated instruction approach appears inconsistent with Ghana's Inclusive education policy, which proposes using the Universal Design for Learning (UDL) as the pedagogical approach for inclusive teaching (Ministry of Education, 2015). However, this may be debated because the use of differentiation is neither upheld nor explicitly opposed by the inclusive education policy. Besides, the UDL involves some form of differentiation. Further, participants acknowledged receiving no pre-service training or continued professional development about the UDL. Differentiation is, therefore, adopted by teachers as they consider it the most effective way of ensuring that children with learning challenges are provided for in their lessons. This reveals the gap between policy and practice. It is, however, noteworthy that

the efforts of teachers in this study to adopt and adapt simple pedagogical practices to include learners with special educational needs show their zeal towards promoting inclusion in their classes. Further, discussion on how these impact teachers' pedagogical practices is presented under 'opportunities and barriers to teachers' inclusive pedagogies.'

6.3.5 The dynamics of the pull-out approach

Teachers used the pull-out approach, in particular, to effectively provide individualised learning opportunities for children with special educational needs (SEN). Children with SEN are removed from the regular classrooms to be provided lessons tailored to small groups or individual needs (Hurt, 2012). There is consensus among teachers that a blend of pull-out practices and others, such as in-class support for special needs learners, constitutes more effective teaching approaches for supporting vulnerable students. Studies such as Karin et al. (2012) and Hurt (2012) reported that the pull-out strategy has valuable educational benefits for SEN students. It also provides a blended means of teaching SEN learners specific skills (Fernandez & Hynes, 2016). Further, BeMiller (2019) noted that pupils benefit from small group learning in resource rooms when pulled out of the general classroom. However, similar to the findings of this study, concerns have been raised about this strategy. For example, Karin et al. (2012) noted that SEN children expressed concerns that being pulled could lead to some social disadvantages, including stigmatisation. Others include challenges regarding collaboration and coordination between classroom and specialist or resource teachers (Fernandez & Hynes, 2016). Further, Fernandez and Hynes (2016) reported that although teachers adopted a blended approach effectively to meet the needs of children with SEN, inadequate resources and logistics hampered the achievement fully. Observations revealed that a child with SEN in the case school was supported through both regular classroom support by the class teachers in addition to the pull-out strategy provided by the resource teacher. Teachers, however, saw this approach as challenging because of concerns regarding coordination and SEN children missing some vital lessons in the regular class. This indicates an implicit problem in the blended strategy. Thus, to effectively adopt the pull-out or blended approach, there is the need for adequate provision of resources and collaboration between classroom and resource teachers. However, a comparison of inclusive and pull-out approaches conducted by Richmond et al. (2009) showed no significant difference between learners in Mathematics and reading scores. Despite these inconsistencies, the findings of this study indicate that the two models may be useful for achieving positive outcomes in a given context.

Participants express that harmony regarding curriculum and timing is needed for an effective pull-out approach. Indeed, a successful inclusive education programme requires teamwork between classroom and resource teachers and adjustment in the school system or learning environment (Karin et al., 2012). The pull-out approach could be considered a differentiated strategy because it leads to differentiating learning for SEN children.

6.3.6 A deficit mindset and approach to inclusive learning

The basis of differentiation appears strengthened by conducting psychological assessments for children with special education needs to direct their education. This is a standard practice supported by Ghana's inclusive education policy. The policy aims to establish and resource assessment centres in all the districts and regions across the country and train the relevant professionals to ensure these services are made available to children who require them (Ministry of Education, 2015). Although not all children undergo this process (especially those whose condition were identified after admission into schools), support for children, in and out of classes, is based on the outcome of this process. Observations show that teachers differentiated activities, assignments or assessments for SEN children, focusing specifically on what they "can't do." They acknowledged that by identifying what learners cannot accomplish, teachers are able to design activities and exercises to meet their needs. This is synonymous with the deficit approach to teaching and learning, which defines children's learning challenges in ways that tend to blame the child (Davis & Deponio, 2014). This approach has been problematised because it tends to increase incidences of identification, categorising and discrimination (Norwich, 2014) that are counter-inclusive. It, however, remains widespread within classrooms in the current research context. This could result from its deep-rootedness in daily life and education systems (Yang, 2020). Consequently, although teachers' belief in the ability of children with SEN to learn like others is important towards developing inclusive of their inclusive pedagogy (Florian & Spratt, 2013), achieving this within the research and similar contexts remains challenging. The policy and practice of conducting psychological assessments of SEN children and basing their learning on the outcome further establishes the deficit approach to teaching in the research context.

These issues have implications for adequate inclusion of special needs children in lessons. While teachers adapted their practices to accommodate children with special needs in their lessons, lesson notes did not evidence this. It is at the lesson planning stage that teachers get

the opportunity to make active decisions about learning objectives, contents, activities, learning resources, teaching and assessment approaches and learning outcomes (Schön, 1983; Savage, 2015). Thus, lesson planning may be meaningful to teachers and learners (Uhrmacher, Conrad & Moroye, 2013). Indeed, lesson planning constitutes one of the three-tier processes in effective teaching and learning (Savage, 2015). Hence, children with special needs will likely be excluded from in-class activities if the necessary plans are not for them. Lack of proper planning for children with special needs can lead to the adoption of inflexible pedagogical practices, which could cause the exclusion of children with special needs in lessons (Agbenyega & Deku, 2011).

6.3.7 Building inclusive classroom communities using songs

Findings reveal that songs could be used as effective resources for developing lessons, in general, and fostering a positive classroom environment. Songs had a positive impact on children's relationships and their motivation to participate in classroom activities. Aguirre, Bustinza and Garvich (2016) reported similar findings by noting that songs positively influenced learners. They observed positive differences in classes that used songs compared to those that did not. (Aguirre, Bustinza & Garvich, 2016). Songs were commonly used by class teachers in this study as starters to draw learners' attention, during lessons to sustain learners' interest, and, at the end, as a way of transitioning to another lesson. These approaches help to prepare children for lessons, stimulate interests, promote relaxation and encourage activity in class. These could help learners develop critical skills such as listening and speaking. Similarly, Saricoban and Metin (2000) found that using songs helps develop reading, writing, speaking and listening skills. Further, studies identified the benefits of songs, including promoting harmony and diversity in classes (Murphy, 1992; Vinyets, 2013). Others have emphasised songs or music as a motivational tool (Murphy, 1992), providing learners with challenges and the opportunity to feel free to engage in singing activities (Utíkalová, 2012). More importantly, songs were used to present lessons on products, artefacts, and ethnic groups known to produce them. This emphasises the cultural relevance of songs. Notably, it was while singing that limitations with disabilities or special needs were observed as less relevant. Children with SEN played and interacted with their peers freely. It implies that if adequately organised, songs can be an effective pedagogical tool for motivating all learners to engage in lessons and promote inclusive learning.

6.3.8 Structured pedagogy for inclusive learning

Findings show that some lessons, particularly in lower primary, were structured and followed a specific pattern. Teachers followed a particular defined trend in delivering their lessons. For example, lower primary lessons observed started with songs or rhymes about the content and involved numeracy, literacy and social issues (in a similar order), although teachers were dealing with specific subjects. While teachers considered this approach simply as helpful, the use of a structured approach to deliver lessons was based on predetermined learning programmes. Adopting a structured approach to learning could ensure uniformity and the delivery of similar content across different learning environments. However, this approach has been considered counter-inclusive (Makoelle, 2014). It is argued that inclusive pedagogy demands the development of reflective, flexible and new ways of teaching and learning (Loreman, 2017).

6.3.9 Adopting concrete inclusive pedagogical practices

The research findings reveal that teachers sought various teaching-learning materials to develop their lessons. Teachers adopted TLMs such as money, counters (sticks), pictures and sketches on manila cards. The TLMs were adapted in various ways to encourage the engagement of learners in lessons and the inclusion of all children. Choosing appropriate learning materials is key to enhancing children's development and learning (Papadakis, Kalogiannakis & Zaranis, 2018; Frimpong, 2021). It supports teachers to teach effectively. TLMs used by teachers were concrete and visual and developed from ordinary materials that were easily accessible in the immediate environment. The availability of the TLMs used by participants contributed to teachers' ability to adapt lessons in meaningful and understandable ways for all learners. It implies that although constrained by their availability, teachers in this study demonstrated their resourcefulness by creating captivating learning experiences for all learners using simple, concrete materials. Thus, if made available and used appropriately, TLMs provide learners with the opportunity to develop practical learning experiences (Frimpong, 2021; Yavuz & Güzel, 2020). This is because learners can see, touch and manipulate the learning resources.

On the other hand, findings show that the presentation of learning materials in lessons predominantly employed visual routes. This approach to teaching and learning is considered more effective in helping learners retain knowledge as compared to those transmitted through

other means. However, using the TLMs this way did not benefit some learners with visual impairments in classes. While verbal explanations help the visually impaired children to follow discussions, concrete TLMs were not accompanied by audio or video recordings, which restricted their participation in lessons. This situation was exacerbated by the absence of appropriate textbooks for learners with visual impairments. Further, while the visual aids supported lessons in various positive ways, the use of these appeared to make lessons monotonous and not fully benefit some children with special needs. Teaching and learning materials can stimulate children's engagement and help visualise content. Thus, learners develop the ability to access and manipulate the TLMs, improving content retention (Papadakis, Kalogiannakis & Zaranis, 2018). Thus, class teachers are advised to use the best resources available to them and ensure diversity in their choices in developing their inclusive pedagogical practices. However, resource challenges contributed to teachers' inability to vary their TLMs. They used what was available to them and could create from the environment.

6.3.10 Leveraging on the strength of the local language to enact inclusive pedagogy

The study's findings indicate that all the class teachers support using the local language in teaching and learning. However, it was noticed that teachers used both the local language (Fanti- L1) and English in their lessons. However, children's first language (Fanti) was predominantly used in the lower primary level lessons, while the reverse was true for upper primary lessons. Participants stress the role of the local language in helping convey content, making lessons more meaningful to learners, and promoting understanding and participation of all learners, including those with diverse learning needs. Considered a symbol of cultural learning, teachers use the local language to stimulate thinking in learners and support reading and learning, which are seen as major components of cultural activities (Vygotsky, 1978). It follows that learning can be made more meaningful to learners when teachers develop their class discussions using children's first language that all class members can easily understand.
Additionally, teachers capitalise on the strength of learners' local language to create a link between the home and what is learned in the classroom. For example, teachers used language to convey knowledge about important places in the community, lessons about historical antecedents relating to the foreign rule of the Gold Coast and the use of money in children's daily lives. Accordingly, the local language as a medium of instruction or communication learning is considered a crucial social practice (Agbenyega & Davis, 2015) which supports the development of inclusive pedagogy and the delivery of some concepts (Munro, 2015;

Agbenyega & Davis, 2015; Pagliano, & Gillies, 2015; UNESCO, 2007). Similar to observations and the views of participants of this study, children's understanding of lessons and building of competencies have been associated with their familiarity with the instructional language (UNESCO, 2007). Thus, for all learners to effectively participate in learning and master content, emphasis must be placed on adopting familiar instructional language. The dominant use of the local language by the lower primary class teachers in this study appears consistent with policy demands. The language policy of Ghana demands that learners' first language should be adopted as the medium of instruction from early childhood (KG) to the lower primary school levels (Ministry of Education, Ghana, 2012). Similarly, the National Syllabus for Ghanaian languages and culture states that "In the five years of bilingual education (KG-P3), instruction in all subjects should be carried out in the Ghanaian language: Mathematics, Natural Science and all other subjects studied from KG to Primary 3 should be taught using the Ghanaian language, the L1 of the pupil, using textbooks already written in English" (Ministry of Education, Ghana, 2012, p. xi).

Despite this, observations reveal that some teachers lacked fluency in the Fante language, hence resorting to using Twi (another Ghanaian language) at some points in their lessons. This affirms calls to focus on bridging gaps between policy demands and actual classroom practices (Davis & Agbenyega, 2012; Adika, 2012) and human resource challenges with effective policy implementation (Owu-Ewie, 2017). There is, therefore, the need to develop teachers' competencies in the local languages understood and spoken in the communities to which they are posted. Local language was used as a tool for inclusion, particularly to help children with special educational needs better understand lessons. However, the purpose of using the local language may not be fully achieved when the teacher uses a language quite different from what the learners are familiar with (for example, using Twi rather than Fanti).

6.3.11 Promoting an inclusive classroom assessment

The findings indicate that teachers' assessment strategies, including individual and peer assessments, took different forms. Although individual written assessments helped to evaluate children's learning, peer assessments directly impacted learners' ability to engage in lessons. Senousy (2020) found that peer assessment helped to develop individual and collaborative skills and learners' performance. In particular, peer assessment encouraged interaction between SEN children and their typically developing peers. It was, however, noticed that differentiated

assessment was adopted and considered by teachers as essential to ensuring that children with SEN had opportunities to express what they learn. Accordingly, differentiated assessment, an individualised approach, is central to supporting all children's learning (Kaur, Noman & Awang-Hashim, 2015; Lin & Lin, 2019). McMillan and Moore (2020) posit that assessment primarily helps learners learn (formative) rather than merely identifying their performance (summative). By implication, assessment should account for all learners' needs, including those with special educational needs. This is because effective assessment requires the involvement of learners (Boles, 1999).

Further, adopting oral assessment provided special needs learners and their peers the opportunity to express what they learned easily. It also provided teachers with real-time information about learners' understanding. Theobold (2021) justifies the above by stating that flexibility in oral assessment gives learners a chance to explain their thinking. It also allows teachers to scrutinise children's responses to fully understand their understanding (Theobold, 2021). Studies have reported that learners have preferred oral assessments to written ones, although students show nervousness in the former (Huxham, Campbell & Westwood, 2012). Thus, an oral assessment is suggested as more inclusive (Huxham, Campbell & Westwood, 2012). However, as found in this study, combining the two strategies encourages variety and appears more accommodating and inclusive. However, observations reveal that some learners (with severe visual impairment) were excluded from participating in some activities, such as drawing, because of the perception that they had not been seen engaging in such exercises. Therefore, this study suggests that other assessment forms should be extended to special needs learners. Indeed, we can only test learners' abilities by providing them with opportunities to do practice activities.

6.3.12 Adopting a collaborative, inclusive pedagogy

The findings show that class teachers adopted collaborative approaches to support children identified with special educational needs in their lessons. Teachers adopted practices such as pairing children with SEN with typically developing peers who sat near them. Others assigned colleagues to vulnerable learners to help them perform tasks. These were seen as an effective way to promote positive relationships among learners and engage those with SEN. These practices also helped to reinforce participation in activities and develop collective support for all learners, especially those with special needs. Succeeding in inclusive learning is thus seen

as a collaborative effort. These findings have been corroborated by studies that demonstrated the impacts of teamwork on children's psychological, socioemotional and academic well-being (Andrews & Rapp, 2015; Gaudet et al., 2010). Collaboration creates a platform for group work that promotes improved learners' participation, co-construction of knowledge (Gillies, 2004), cognitive abilities (Rajaram & Pereira-Pasarin, 2010) and relationships among learners. The cooperative opportunities created by collaboration in class can enhance creative learning, which is engendered by the sharing of ideas among learners and teachers.

Further, the findings reveal that the contributions of resource teachers were key to supporting the education of children with special educational needs. Class teachers and resource teachers collaborated to identify learner needs and provide in-class learning and socio-emotional support for children with SEN. Additionally, they collaborated to assess learners' assignments. Thus, collaboration could be used as a means of helping children with SEN to participate in class activities and learning in general (Roseth, Garfield & Ben-Zvi, 2008). Teachers who adopt collaborative practices understand that inclusive learning requires the willingness to work as team members rather than individuals. This practice aids teachers in identifying a more holistic way of supporting learners with special needs and resolving their problems from multidisciplinary perspectives (Fabela-Cárdenas & Robles-Treviño, 2012). It also helps teachers to provide students from diverse backgrounds with a platform to support each other by identifying and improving their strengths and weaknesses (Fabela-Cárdenas & Robles-Treviño, 2012). Collaboration in classes, therefore, promotes tolerance among both students and teachers.

On the other hand, data indicate that class teachers usually adopted the 'culture of individualism' and 'class ownership' in their approach to inclusive learning. Thus, teachers consider the process of instructional planning and lesson delivery as their sole responsibility. This is opposed to the 'principle of everybody' posited by Hart, Drumond and Mclntyr (2007) as an element of successful inclusion. The 'principle of everybody' reemphasises the collaborative position that teachers should assume towards educating all learners in an inclusive environment (Hart, Drumond & Mclntyr, 2007). Perceptions about children with SEN being the responsibility of resource teachers, identified in participants' responses, could negate the benefits of collaboration. It promotes the concept of individualism, limits the idea of shared responsibility and reduces the teamwork among actors such as class teachers and resource teachers (as observed in some classes). This contradicts research findings in which participants

considered promoting education for the marginalised as a shared responsibility (Mfum-Mensah, 2011). It further hinders comprehensive planning for learners, as noted in the research findings. This consequently has implications for inclusive learning. Despite the positive impact of collaboration on inclusive pedagogy (Loreman, 2017), its potential may not be fully maximised due to role conflict and individualism. Thus, although it is demonstrated in studies that working together enhances inclusive learning (Danquah & Tabiri, 2019), the uncertainty about responsibility narrows the chances of collaboration among teachers. Decisions about the design of appropriate instructional approaches and learning materials can be negatively affected, widening the participation gap of learners with SEN.

Further, although well intended, pairing typically developing peers with special needs learners to support the latter suggests a one-way benefit. Learners with special needs appear to be the only direct beneficiaries, contrary to the sense of mutual gains that goes with teamwork (Mfum-Mensah, 2011).

Mediation (Vygotsky, 1978), as a tool for internalising learning (Shabani & Khatib, 2010), requires mutual understanding (Dixon-Krauss, 1996) or a good level of collaboration between both learners and teachers. Mediation is also linked to views about learners' Zone of Proximal Development, where more capable individuals support learners to reach their full potential through mutual interaction (Bronfenbrenner, 2005; Shabani, Khatib & Ebadi, 2010). In this study, the class and resource teachers mediated learning for children with special needs. Teachers were the primary source of guidance for children with SEN throughout teaching and learning. Teachers used simple questions to guide children towards identifying correct answers. Further, tasks were broken down, and difficulty levels were reduced to encourage SEN children to answer questions and learn new things. Additionally, teachers served as facilitators and promoted reciprocal learning through grouping and pairing of learners. However, the unstructured nature of these mediated activities may reduce their effectiveness or expose the children to categorisation and stigmatisation, negating the very essence of inclusion.

6.4 Developing inclusive pedagogical practices: opportunities and barriers

This section discusses responses to research question three, considering the rationale behind teachers' inclusive pedagogical practices. However, it was noted that part of this section was included under the second section of the discussions. The findings about teachers' practices and

perceptions were shaped by their beliefs and attitudes, knowledge and training, learning environment and class accessibility issues, workload and stress, and resource availability.

6.4.1 The role of beliefs and attitudes

The research found that teachers generally had beliefs about learning learners with special needs. This indicates positive roadmaps towards developing teachers' inclusive pedagogical practices. Although teachers in this study were divided about where children with special needs should learn, most believed that including them in the mainstream has both academic and social benefits. Earlier studies (such as (Vanderpuye, Obosu and Nishimuko, 2020; Gyimah, Sugden & Pearson, 2009) reported that teachers were positive towards special needs learners in mainstream schools, while others noted negative beliefs and attitudes (Mprah et al., 2016; Opoku et al., 2015; Mantey, 2014; Alhassan, 2014).

In this study, teachers exhibited diverse opinions regarding the appropriate educational setting for children with special needs, with some advocating for specialised settings and others favouring mainstream classrooms. However, most teachers strongly support including students with special needs in mainstream educational environments, highlighting the academic and social benefits such inclusion offers. Teachers believed that integrating students with special needs into regular classrooms fosters a sense of belonging, promotes social interaction, and helps build important life skills, such as communication and empathy, among all students. This divide in opinion suggests the complexity of decisions surrounding inclusive education, where the benefits of integration must be balanced with the recognition of the need for individualised support to ensure the success of all students.

Teachers' negative beliefs about inclusive education were mainly associated with perceptions about the nature of children's disabilities. For example, Agbenyega (2007) revealed that teachers felt that including children with sensory impairments hindered learners' academic progress. Similarly, Hogbe et al. (2009) found that some teachers believed the inclusion of children with disabilities negatively impacted the academic progress of those without disabilities. These concerns stem from the assumption that the learning needs of children with disabilities may demand additional resources and time, potentially distracting the educational experience of other students. Such beliefs highlight the ongoing challenges in shifting attitudes

towards inclusion, emphasising the need for targeted professional development to address misconceptions and promote more positive attitudes toward inclusive practices.

These concerns were, however, not prevalent in one of the case schools where learners with profound visual impairments were included. This finding is not surprising, partly because the case school is designed to admit and support children with such disabilities. This implies that teachers' positive beliefs and receptive attitudes towards including children with special needs can be improved with adequate preparation and design for regular school systems. Consequently, this may influence teachers' pedagogical practices in the planning and delivery of lessons. Restructuring regular schools is not limited to physical structure (although critical). It also involves adopting a multi-agency approach to support delivery. Although this approach is outlined in Ghana's inclusive education policy to achieve inclusive learning (Ministry of Education, 2015), the research findings suggest that its benefits were not maximised in most schools.

6.4.2 Knowledge and training in inclusive pedagogy

Conceptually, inclusive pedagogy encompasses teacher knowledge and skills. Areas suggested for teachers to familiarise themselves include instructional strategies, how children learn, learners' needs, disabilities, and special needs, identifying and assessing learner challenges, monitoring and evaluating learning, and where to get support (Rouse, 2008). As reported in the results section, this study revealed that teachers lacked the extensive knowledge and skills required to design their lessons and teach inclusively. First, there are challenges with clearly defining or describing inclusive pedagogy; teachers used terms interchangeably. This is consistent with earlier reports that teachers had a limited understanding of the entrails of inclusivity (Agbenyega, 2007; Opoku et al., 2017).

Additionally, most participants lacked adequate training in inclusive pedagogical practices, negatively affecting their ability to provide equitable, inclusive education. Participants did not only express dissatisfaction with their pre-service training on inclusive pedagogy; they were also concerned about the inadequacy of continuous professional development opportunities available to them (Opoku et al. 2015, 2019). Although class teachers in this study appeared to be in support of inclusive education, as other studies found (Butakor, Ampadu, & Suleiman 2020; Vanderpuye, Obosu, & Nishimuko 2020; Ntuli & Traore, 2013), issues about inadequate training usually have a negative effect on teachers' self-efficacy in delivering effective

inclusive education. Indeed, in other studies (such as (Deku & Vanderpuye, 2017; Alhassan & Abosi, 2014; Kuyini & Desai, 2008; Kuyini, Desai & Sharma, 2018), teachers' confidence in their abilities to teach learners with special needs and typically developing peers together were low. Unlike reports of teachers receiving no training in inclusion (Mprah et al., 2016), participants in this study complained about the inadequacy of professional learning opportunities. Whereas objective three (3) of the inclusive education policy of Ghana states clearly the government's intention to promote "the development of a well-informed and trained human resource cadre for the quality delivery of IE throughout Ghana" (Ministry of Education, 2015, p. 7), limited professional development opportunities, mentioned by teachers, reflect the gap in policy and practice.

The importance of knowledge and understanding of Inclusive education policies in their successful implementation has been emphasised by different authors (Teixeira et al., 2018). Therefore, it is expected that all classroom teachers get familiar with issues surrounding such policies and approaches required for effective inclusive teaching (Opoku et al., 2021). However, this research revealed that some teachers were only aware of the existence of the inclusive education policy of Ghana but lacked in-depth knowledge and understanding of its content. Similar findings were reported in other studies, such as those by Mantey (2017), Subbey (2019) and Ntuli & Traore (2013), although Obeng (2012) noted that teachers knew the policy. While some teachers had heard of the UDL, an important means of achieving the policy's aim, they lacked knowledge of its guidance and how to use it to design lessons. For others, the concept of UDL appeared unknown. Additionally, some teachers had limited knowledge of other inclusive pedagogical approaches discussed in this research. The argument is that a poor understanding of key policy issues and pedagogical strategies can significantly hinder teachers' ability to prepare for and support all learners. Such gaps in knowledge can hinder teachers' confidence and ability to implement inclusive education effectively, ultimately affecting the success of inclusive practices in the classroom. Therefore, more focused professional training programmes are crucial for enhancing teachers' self-efficacy. These equip teachers with the skills and knowledge to promote inclusive classroom practices.

This situation requires urgent attention to professional development programmes focused on equipping classroom teachers with the practical details of the inclusive education policy and enriching them with inclusive pedagogical skills necessary for inclusive lesson delivery.

Accepting inclusive education among teachers in Ghana (Butakor et al., 2020; Vanderpuye et al., 2019) alone does not guarantee its successful implementation.

6.4.3 Learning environment and class accessibility issues

Classes were generally activity-based in mainly lower primary classes. This promoted more significant participation of learners with special needs in lower primary classrooms than in upper primary classes. Engaging learners in activities such as moving objects to demonstrate energy, pronouncing words, reading, and answering questions aloud enhanced the classroom atmosphere. Due to the participatory approach to learning, these also promoted positive interactions between learners with special needs and their typically developing peers. The same could not be said of the upper primary classes, where activity levels were relatively low. This explains why some learners with special needs in upper primary classes showed little interest in some of the observed lessons.

Further, findings revealed that some learners with special needs were expected to behave in a certain way, including opening up to their teachers, 'for their own sake' and per their age, influenced teachers' design of their class activities. The argument is that such expectations of children with special needs can negatively impact a teacher's willingness to create a welcoming learning environment for children with behavioural or emotional challenges. Thus, a proactive attempt must be made to enlighten teachers about emotional and behavioural issues associated with various disabilities and special educational needs.

This study recorded seemingly unfriendly physical classrooms and inaccessible school environments. Issues such as overcrowding and rough school compounds limit the movement of learners with physical disabilities and visual impairment. Similarly, studies in Ghana (Ackah-Jnr & Danso, 2019; Danso, Owusu-Ansah & Alorwu, 2012; Mantey, 2017; Opoku et al., 2017) have found that the nature of school environments limited access for learners with special needs. For example, Danso, Owusu-Ansah and Alorwu (2012) observed the absence of ramps to learning spaces on storey buildings. This implies that students with visual and other physical impairments will have challenges attending classes. Particularly, the movements of students who were blind in this study were restricted as they had to remain seated in one location even when learners were being grouped or paired to engage in activities. It also means extreme difficulties in designing practices that involve moving within and outside the

classroom. Accordingly, a critical step towards promoting inclusive education is ensuring accessible learning environments (Opoku et al., 2021).

6.4.4 Teachers' workload and stress

In this study, case classes generally had large class sizes. This issue threatened teachers' ability to support all learners in the class adequately. A similar finding was reported in a study by Kuyini and Desai (2008), who noted that classes had huge numbers, which was exacerbated by the lack of teaching assistants and limited support rendered by peripatetic teachers (resource teachers). The authors argued that the situation made it difficult for teachers to undertake instructional adaptation and individualised teaching (Kuyini & Desai, 2008). The large class size and inadequate student sitting places and learning materials observed in this study limited teachers' adaptive ability of their practices to support individual learners. For example, large student numbers limit the teachers' classroom movements and supervision of individual work. Further, this increases workload, including marking exercises and providing students timely feedback. Thus, teachers are faced with the option of reducing the time they spend guiding learners with special needs to answer questions, write exercises, and participate in activities to contain stress. These have a direct bearing on teachers' classroom practices. Increased workload and teacher stress are among the major challenges that negatively impact the application of some inclusive pedagogical strategies (Loreman, 2017; Brackenreed, 2008).

6.4.5 Limited resources and instructional support for teachers

A major finding in this study was the lack of material resources, such as embossed textbooks for the visually impaired and inadequate TLMs, which impacted teachers' pedagogies. The negative impact of the lack of resources on teachers' inclusive classroom practices has been widely reported in studies such as Nketsia (2017), Ackah-Jnr and Fluckinger (2023), Deku and Vanderpuye (2017). Class teachers, however, manage to surmount these challenges by developing learning materials from locally made items such as bottle tops and sticks. They also adopt simple materials found in the immediate environments while they fund others from their pockets. The problem here is that this approach is not sustainable. Further, because materials needed to design teaching and learning to support children with special needs effectively are unavailable., they are left out of some aspects of learning.

Unlike Deku (2013), who noted that teachers were supported by professionals such as special education school heads, school counsellors and psychologists, teachers in this study indicated that support was only gained from resource teachers and, sometimes, their colleagues and headteachers. This indicates the limited level of contributions of other personnel towards implementing inclusive education in schools. Additionally, the seemingly overwhelming responsibilities of resource teachers who oversaw at least four (4) basic schools pose a serious threat to their ability to render adequate support to class teachers and children with special needs. Apart from referrals for psychological and other forms of assessments, teachers or schools do not receive support from other professionals such as psychologists or counsellors. This results in reduced opportunities for teachers to receive technical support and collaborate with other professionals, which could enhance their ability to adapt practices in ways that meet the diverse needs of learners in their classrooms.

6.4.6 The impact of participants' characteristics on their practices

A major dilemma of inclusive education concerns designing practices to promote inclusive learning for all learners in the same space. Findings suggest that differences in teachers' experiences working with learners with special needs affect how they adapt their pedagogies. Class teachers with more experience (regarding the number of years) teaching in the inclusive setting appeared more familiar and expressed greater confidence in handling issues involving children with special needs. This is evident in how they directed questions to learners and encouraged and created opportunities for learners with special needs to suggest answers, write, and correct mistakes. The more experienced the teachers in this study were, the more versatile they were in their approaches to involving learners with special needs in lessons. This finding is consistent with what Kuyini and Desai (2008) reported: teachers with experience teaching children with disabilities employed more adaptive skills in their practices.

6.5 The Introspective Inclusive Pedagogical Approach (IIPeA)

In this study's context, introspective pedagogy refers to a pedagogy that encourages reflection and places the learner at the centre of practice. Adopting an introspective pedagogical approach implies that teachers constantly reflect and evaluate their classroom practices against agreed instructional goals and the needs of learners. They also judge their values and self-concepts against generally determined ones. The assumption is that engaging in such reflective judgement and practices will create opportunities for teachers to draw strong connections

between the content, the learners and their immediate learning environment. Such constructive practices are needed to make learning meaningful to learners and promote their active participation in every aspect of the learning process. In all these, the class teacher is given an appreciable level of autonomy to decide on basic learning objectives and how to carry out lessons. The IIPeA, thus, draws from the idea of connective pedagogy (Corbett, 2001). Thus, through introspection, teachers get the opportunity to reflect on their practices, the needs of learners, their immediate society, the content to be taught, and classroom activities, and how to connect these elements to create practical learning experiences for all students.

6.5.1 Developing the approach

The Introspective Inclusive Pedagogy (IIPeA) is based on insight from the study to understand teachers' inclusive practices. Although the IIPeA draws ideas from other frameworks, such as the Universal Design for Learning, Differentiated Instructions, the Three Block Model and the Inclusive Pedagogical Approach, its pillars are principally from the outcome of the current research. It, therefore, focuses on the practical experiences of classroom teachers and reflects circumstances in societies other than developed or Western ones. Thus, the IIPeA sits well within the education systems of resource-constrained countries such as Ghana and other Sub-Saharan African societies.

The IIPeA adopts the sociocultural theoretical (Vygotsky, 1878) lens to examine and support teachers' ability to develop their inclusive pedagogical practices employing elements within learners' social environment. I acknowledge that beliefs, personal values, teamwork, and language are central to human development within a social or cultural setting. Thus, quality social life (Wertsch & Tulviste, 1992) significantly contributes to effective learning for children with special educational needs. Further, this approach adopts the position of the sociocultural theoretical framework, which encourages teachers to view special needs or disability not as a defect or weakness but instead as a source of strength (Vygotsky, 1993). This is because recognising differences among learners helps class teachers develop inclusive approaches and enrich the learning environment (Florian & Spratt, 2013).

The framework anchors on four key assumptions about inclusive classroom practices. The first three assumptions relate to direct classroom issues, and the fourth assumption concerns issues external to the classroom. Key thematic issues and questions raised under each assumption

could guide discussions under the framework. Table 8 presents a summary of the Introspective Inclusive Pedagogical Approach.

Table 8: Summary of the Introspective Inclusive Pedagogical Approach (IIPeA)

Assumption	Key questions	Thematic areas
Teachers hold various values and beliefs that can impact their practices. The impacts of such beliefs on learning are exacerbated by community beliefs and norms.	• What beliefs or value systems do teachers hold about inclusion? • What belief systems are prevalent in the school or immediate environment of learners? • How can these practices influence teachers' perception of supporting all learners?	• Personal ability beliefs about children with special educational needs. • Teachers' inclusive values • Teachers' self-efficacy belief. • School's inclusive values. • Remove barriers to inclusion. • Programmes to improve personal and school values about including children with special needs.
Inclusive learning can be achieved through a variety of different pedagogical approaches and practices developed to suit specific contexts.	• What instructional approaches recruit, sustain learning and promote the complete development of all learners? • What inclusive pedagogical approaches are available or commonly used by teachers? • How could these be designed to promote inclusive learning and, at the same time, reduce the marginalisation of some learners?	• Strategies that adopt the principles of the UDL- multiple ways of engaging learners, use of a variety of pedagogical approaches and multiple assessment strategies • Make practices and activities learner-centred • Develop ways of differentiating learning (through common practices) that minimise/avoid identification and exclusion of some learners. • Promote socioemotional learning by developing classroom communities • Adopt connective pedagogical practices • Simplify communications by using the local language in explanations • Explore ways songs could be used to transmit information and reduce boredom
Teachers' inclusive pedagogical practices can be improved through	• In what ways can planning be effectively implemented	• Develop effective professional learning community programmes

commitments to effective planning and collaborative practices.	to impact inclusive learning? • How can teachers be encouraged to collaborate with others- professionals and learners? •	• Encourage the feeling of collective responsibility for educating children with diverse needs and learners • Create opportunities for multidisciplinary learning and factor this into school schedules • Provide clarity about responsibilities
Policies, whether school or national, can impact teachers' inclusive practices and children's learning.	• In which ways do school or policy provisions affect teachers' practices? • How can the involvement of teachers in school policies and programme design promote inclusion practices?	• Fulfil policy promises that directly affect inclusive practices, for example, provide resources and training/professional development opportunities • Promote open school policy, bridging gaps between teachers and administration • Use a bottom-top approach rather than a top-down approach

The first assumption is that teachers hold various values and beliefs that can impact their practices, and the impacts of such beliefs on learning are heightened by community beliefs and norms. The argument is that teachers' practices are not independent of their beliefs and values. This is demonstrated in studies such as Agbenyega (2007), which predicted positive relationships between teachers' beliefs and their behaviour towards implementing inclusive education. It is acknowledged that one's ability to contribute effectively to the lives of people in their care can be influenced by their personality and values. Such issues can have consequences for inclusive learning. This applies to both the learner and the teacher. Although teachers are encouraged to believe that all learners are capable of learning and achieving (Florian & Spratt, 2013; Florian, 2014), intrinsically, their personal values and ability beliefs continue to impact their attitudes. The values and norms of the immediate school or classroom environment could heighten this situation. In such situations, teachers could profess positive beliefs and yet act contradictorily. Indeed, findings from the current study show that while some teachers consider including special needs children in the general education classroom as beneficial, they hold different views about the latter's ability to learn in similar ways as others. Hence, they thought exclusion or separate units would be best. In other cases, barriers to their

practices influenced teachers' beliefs. It is, therefore, imperative to identify and deal with beliefs and value systems to ensure the enactment of effective inclusive pedagogy.

Second, inclusive learning can be achieved through different pedagogical approaches and practices developed to suit specific contexts. Under this assumption, effective inclusion is achieved by first contextualising it. As demonstrated in the literature review and discussions, teachers tend to adopt more differentiated instruction, although the policy names the UDL as a means of achieving inclusion. Most of the participants in this study noted that they had inadequate knowledge about using the UDL as an inclusive pedagogy. Therefore, while using the UDL principles (CAST, 2018) and ideas from Katz's (2012) Three-Block Model regarding encouraging socioemotional learning are useful, teachers should be encouraged to identify and develop common approaches to promote inclusive learning. Thus, teachers must look for ways of differentiating learning that reduce the incidence of labelling or exclusion in classes.

The third assumption is that teachers' inclusive pedagogical practices can be improved through collaborative practices and learning commitments. One of the findings of this study relates to most teachers' inability to explore the benefits of engaging in collaborative practices. This was a result of time constraints and ineffective PLC programmes. The argument under this assumption is that strengthening professional development programmes could provide teachers with opportunities to learn about new ways of promoting inclusive learning from others. This is because effective inclusion is an active process (Corbett, 2001) which requires co-agency and effective collaboration. The research findings indicate that clarity about the roles of the class and resource teachers is vital for promoting teamwork among them. Per the practices and inclusive education policy contexts, resource teachers (in particular) play crucial roles in promoting inclusive learning. However, coordination is needed in their activities to strengthen collaboration with classroom teachers.

Finally, policies, whether school or national, can impact teachers' inclusive practices and children's learning. This principle considers how school and national policies could be designed to promote inclusive pedagogical practices in class. Corbett and Slee's (2000, p. 134) concept of inclusive education as "… a public and political declaration and celebration of differences" which "requires proactive responsiveness to foster an inclusive education culture" suggests that inclusion must be intentional.

Improvement in teachers' inclusive pedagogical practices could be observed in the school administration, programmes and policies, and political commitment towards achieving its goal. Where the bottom-up approach is employed in designing programmes and policies, there is the likelihood of increased teacher commitment towards achieving their objectives. On the other hand, resource allocation problems, lack of coordination (Mitchell, 1999; Opoku et al., 2017) and a top-down approach to educational management are likely to have a negative impact on practices. Although the Introspective Inclusive Pedagogy does not provide extensive guidelines about teaching and learning like the UDL, it provides a relevant yardstick for examining and developing teachers' inclusive pedagogical practices. The IIPA could also promote reflective practices among teachers. It can also help teachers to optimise learning opportunities for all learners while reducing incidences of stigmatisation.

6.6 Research implications for policy and practice

The study's findings emphasise the need to bridge the gap between policy and practice, reconciling what teachers are expected to know or do with what they know or are doing in class. This section highlights the findings of this research and their implications for policy and practice.

First, one of the research findings shows that teachers hold different conceptualisations of inclusive pedagogy. These perspectives about the nature of inclusive pedagogy are shaped by their understanding of inclusive education, perception of how and where to educate children with special educational needs and factors such as barriers to inclusive practices. The research demonstrates that these perspectives could inform class teachers' inclusive pedagogical practices. Further, although the inclusive education policy of Ghana identifies the Universal Design for Learning as the approach that should be adopted to foster inclusive learning, the findings suggest that teachers do not have adequate knowledge about its use. Pre-service teacher education provides limited information about inclusive pedagogical approaches and practices. Emphasis should, therefore, be placed on developing modules that improve teachers' understanding of inclusive education and their knowledge about the UDL and other inclusive pedagogical approaches and practices. Professional development opportunities should also be designed to improve in-service teachers' knowledge about practical, inclusive pedagogical practices. This will also equip teachers with the skills to design lessons supporting all learners.

The result would be the development of well-rounded and knowledgeable human resources capable of addressing the diverse needs in inclusive classrooms.

Second, the findings indicate that teachers are positive about including special needs children in the mainstream classroom. They also demonstrate a willingness to adapt their pedagogical practices to support learners at risk of exclusion from learning. This reveals positive roadmaps towards achieving the goal of inclusive education. However, instances of some participants suggesting separate provisions imply that the issue of inclusive or exclusive educational provision for SEN children requires significant attention in both professional development programmes and policy. Professional development programmes should be designed to challenge misunderstandings about exclusion and encourage teachers to create truly inclusive classrooms. Policies must also have clear guidelines for curriculum and instructional adaptation to meet the needs of all learners.

Third, effective inclusive pedagogical practices require that teachers engage in reflective practices and ensure flexibility in their work. These are possible only when teachers have autonomy and are allowed to contribute to decision-making about curriculum development. Thus, the bottom-up approach to decision-making regarding teaching and learning may be preferred to enhance the development of teachers' inclusive pedagogy.

Fourth, proactive and deliberate attempts must be made to address the barriers to inclusive pedagogical practices identified by teachers. Teachers should have access to appropriate learning resources, and class sizes should be reduced to reduce their workload and stress. These will help teachers create opportunities for all learners, including those with special educational needs, to participate effectively in lessons.

Fifth, there is a need to clarify the roles of resource teachers within regular education schools. Class teachers acknowledged resource teachers' importance in supporting children with special needs, other learners and the teachers themselves. Nevertheless, findings in this study about uncertainties among the class teachers regarding the role of resource teachers (some looking at them as supervisors) may encourage the exclusion and possible display of apprehension towards the latter in major decisions relating to lesson planning and delivery. Thus, there is a need to clarify the roles of resource teachers to reduce the confusion surrounding it and enhance coordination in discharging their duties. Moreover, the workload of resource teachers due to

their limited number (each assigned to at least four schools) severely undermines their ability to perform effectively in the role. Thus, it is imperative to take immediate action to train and enhance the presence of resource teachers in individual schools.

Sixth, structural challenges, including unfriendly learning environments, inadequate sitting places for learners and large class sizes, appeared common in schools. This situation was exacerbated by limited or lack of material resources. The negative impact of such circumstances on their ability to adapt their practices to support all learners was commonly expressed by all the teachers. Therefore, the participants reckoned that a quick response to providing teaching learning resources, posting more teaching assistants, and reducing class sizes would help increase their willingness and ability to create inclusive learning opportunities for all learners.

In addition to increasing knowledge and skills, teacher training institutions should expand efforts to provide hands-on experiences for pre-service teachers before posting. This recommendation was given by teachers who considered the approach critical to boosting their confidence in teaching classes with pupils with different learning needs. The suggestion here involves making the discourse of diversity a part of every course from the first year of pre-service teachers' admission until completion. Also, the extended placement periods could involve teaching in classes with both typically developing and special needs learners. Further, more practical training workshops should be designed by professionals in institutions and researchers (possibly sponsored by the government) to keep pre-service and in-service teachers abreast with modern, inclusive pedagogies that meet the needs of different learners.

Finally, although class teachers seem to believe that inclusive learning benefits children with special needs, they continue to hold ideas that such pupils cannot learn like their typically developing peers. Continuous nurturing of the fixed ability belief would reduce the extent to which teachers design their approaches to support all learners. Thus, there must be a concerted effort between teacher training institutions and policymakers to nurture positive beliefs and attitudes among teachers at the pre-service and in-service stages of their careers.

6.7 Chapter Summary

Discussions were centred on the study's main findings, which are highlighted in this paragraph. The findings show that teachers possess non-universal views regarding the conceptualisation of inclusive pedagogy. Teachers continued to develop their practices to support all learners within the learning space. However, these approaches appeared not to adequately respond to the needs of some learners. Additionally, teachers are making more efforts to develop their lessons by appropriately using teaching-learning materials. However, insufficient material resources and the necessary skills to design more appropriate TLMs for learners with special needs often hinder these efforts. This chapter critically examined issues such as collaborative work between teachers and other stakeholders, language use as a tool for inclusion, and what opportunities and barriers were present in lessons. Further, the research findings were discussed in relation to sociocultural theoretical ideas and inclusive pedagogical frameworks suggested in the literature. Finally, policy and practical implications of the research findings were presented.

CHAPTER 7: SUMMARY AND RECOMMENDATIONS

7.1 Introduction

The concluding chapter reemphasises this study's contributions and the extent to which the findings provide insight into the research questions. It begins with a summary of the leading research findings. This is followed by the study's contributions to the literature and the body of knowledge in inclusive pedagogy. The limitations of the study and recommendations follow, respectively.

7.2 Summary of findings

This section summarises the study's key findings. Issues presented in the following paragraphs reflect teachers' conceptualisations of inclusive pedagogy, how they enacted their inclusive pedagogies and practices, and the justifications for their choices.

First, teachers in different contexts differ in their conceptualisations of inclusive pedagogy. While some hold single views, others have multiple perceptions about the concept. The views of teachers about inclusive pedagogy reflect their understanding of inclusive education. The concept was also perceived in the light of where to educate learners with special needs and the form teaching approaches should take. Teachers also believe that a reflective approach to inclusive pedagogical practices effectively supports the engagement of children with special educational needs in-class lessons and activities. Further, inclusive pedagogy is mainly considered as a process of promoting the education of children with special needs rather than all children. Considering teachers' different perspectives about the concept, inclusive pedagogy is usually operationalised to suit individual learning contexts. Hence, careful consideration should be given to learning contexts to study or enhance teachers' inclusive pedagogical practices effectively.

Second, although there is division regarding teachers' views about the placement of children with special needs, most teachers view inclusion as positive because of its benefits for the learners. Some teachers, on the other hand, hold beliefs that suggest that children with special needs are different and should be given different support. These divided views affect class teachers' views about some learners and their commitments towards lesson planning and delivery. Thus, a drive towards encouraging positive belief among teachers (especially males)

for all learners will facilitate the implementation of inclusive education in schools. Further, opportunities should be created to expose pre-service and in-service teachers to inclusive settings.

Third, teachers continue exploring ways to improve their practices to support learners with special needs in general education classrooms. Most approaches teachers use are generic, while others are tailored towards supporting children with special educational needs. Generally, the pedagogical practices of teachers leaned towards differentiated instruction. Specifically, class assignments and assessments were differentiated. Teachers often provide special needs learners with different exercises or those of reduced levels of difficulty. Children are sometimes pulled out of the class and provided with extra or remedial lessons. Although the learners benefit from such extra lessons, they miss out on others due to the uncoordinated nature of this approach. Further, the deficit approach to teaching children with special needs is seen as an effective way of supporting them in coping with complex tasks. However, such instructional approaches promote identification and marginalisation.

Fourth, teachers collaborate with others at different levels to promote inclusive learning. The findings suggest that this exists primarily between class teachers and resource teachers. On a few occasions, typically developing peers are encouraged to support special needs learners through pairing or during grouping. Teamwork between classroom teachers and resource teachers was limited to the lesson delivery stage. Class teachers claim sole responsibility for their classes and adopt a culture of individualism in most aspects of their lessons. This means that critical decisions at the lesson preparation and delivery stages are made mainly by class teachers. While it allows teachers to take charge of their classes, this position limits the contributions of other professionals towards developing inclusive practices. Consequently, it reduces opportunities for teachers to benefit from the technical support they would receive from their colleagues. However, teachers acknowledge the important role of resource teachers in supporting children with special needs and other learners in their classes.

Fifth, several opportunities were created for children with special needs to engage in lessons. Through questions and answers, the work of multiple examples, the invitation of learners with special needs to provide answers, and task analysing exercises, children with special needs participated in class activities similar to what their peers did. However, some learners with special needs were passive and did not show interest in lessons. This suggests that the

instructional approach adopted by some teachers was not responsive to the needs of some children identified with special educational needs. Therefore, the voices and needs of learners (with special needs) must be considered carefully to ensure their full participation in all aspects of the lessons. To achieve this, learner-centred pedagogical approaches must be adopted in teaching and learning.

Sixth, teachers display an interesting level of resourcefulness in selecting teaching and learning materials to support all learners in class. Despite the challenges of limited resources, teachers in this study adopted simple learning resources from materials available in their immediate environment. The challenge regards adapting these materials to ensure that special needs learners get the maximum benefits from them. As noted by the teachers, the lack of skills and resources influences their ability to adequately design and adapt these materials to support children with special needs in their lessons. Thus, provided with the appropriate skills and resources, teachers can develop and tailor their TLMs to aid learning for all children.

Seventh, the belief about including children with special needs, the acceptance of their role in mediating learning, and the use of peer support approaches to aid learners with special needs fall within the assumptions of the sociocultural theory. This indicates that teachers consider the regular education classroom as a place of learning for all. However, the unstructured nature of support provided by the resource teachers and typically developing peers may negatively impact the effectiveness of the approach and how others see learners with special needs.

Finally, teachers' deterministic beliefs, limited knowledge and skills about inclusive practices, unfriendly learning environments, workload, and limited human and material resources influence teachers' inclusive pedagogical practices. These challenges directly impact teachers' self-efficacy and, consequently, their practices.

7.3 Contribution to knowledge

This study presents significant contributions to the field of inclusive education. Given the limited literature about inclusive classroom practices, the research findings provide practical examples of how teachers enact and adapt their inclusive pedagogies to meet various learning needs. The study's contributions, therefore, relate to the insights derived from answers to the research questions.

First, this study aimed to fill a major literature gap about teachers' views and understanding of inclusive pedagogy and pedagogical practices. The findings revealed that teachers held multiple conceptualisations of inclusive pedagogy. These were based on their understanding of inclusive education and views on how children should be educated. Further, in most cases, these and other contextual factors (individual convictions and other barriers to inclusive practices) significantly impacted their conceptualisation of inclusive pedagogy. The findings also show that developing teachers' knowledge of inclusive pedagogy is key to improving teachers' perceptions of inclusive learning. Practically, there is a gap between policy expectations and teachers' knowledge about inclusive pedagogical practices. This could be bridged through proactive steps towards improving teachers' awareness of inclusive pedagogical practices.

Second, this research sought to provide insight into what classroom teachers are actually doing in their inclusive classes. It provides practical examples of how classroom activities, learning materials and teaching strategies can be adapted and used to support the inclusion of special needs children. Teachers adopted both generic pedagogies and those tailored for children with special educational needs to ensure their inclusion in lessons. Therefore, teachers' inclusive pedagogical practices depended on issues prevailing in their contexts. The study findings showed that given the appropriate support, teachers in resource-constrained environments can develop their pedagogies to provide learning opportunities for all learners. Further, when teachers engage in reflective practices, they tend to show more flexibility in lesson adaptation to support all learners.

Third, a significant contribution of this study regards the use of concrete teaching and learning materials and its positive impact on the participation of children with special educational needs in lessons. This study found that teachers resolved resource challenges by creating learning materials using simple and readily available resources from their learners' immediate surroundings. It allows teachers to bring learning closer to the child. Thus, both what is learned and how, or the learning style, is familiar to the learner. This facilitates the understanding of the content being learned. Further, allowing children with visual impairments to touch and manipulate the materials increases the potential to stimulate their interest, which improves their participation in lessons.

Fourth, the study shows that effective mediation by teachers and members of the special educational needs (SEN) immediate classroom environment improves their engagement in lessons. Individuals such as class teachers, resource teachers and the typically developing peers played critical roles in developing lessons to support children with SEN. The contributions of these individuals who were members of the SEN children's immediate social (school/classroom) environment impacted their engagement in lessons (class assignments and assessments).

Another significant contribution of this research is that it proposes the Introspective Inclusive Pedagogical Approach as an empirical and practical approach for understanding inclusive pedagogy within the research context and other similar contexts. It is argued in this research that inclusive pedagogical approaches suggested in the literature are basically designed around structures of developed nations, hence tailored to meet needs in these contexts. Low-and-middle-income countries have quite different needs. Issues regarding cultural values or beliefs, language use, and other situations (challenges) that perpetually impact education and society should be factored into such frameworks. The nature of practices in which resource teachers appear 'external' and 'come in' to support, per schedules (which is an entrenched and accepted practice within the context), coupled with their inadequacy, present different dynamics from what is practised in other Western countries. This implies the design of models or frameworks tailored to reflect these elements that play significant roles in the settings. An approach based on the outcome of this research and drawing ideas of inclusive pedagogical approaches discussed in chapter three has been outlined to guide the development and study of teachers' inclusive pedagogies (See Table 8). This aims to begin conversations about making inclusive pedagogical approaches contextually relevant.

Further, this research has made methodological contributions regarding how observations and interviews are used in data collection. This concerns the use of a combination of observations and interviews. Qualitative studies mostly adopt observations and interviews either singularly or complementarily as tools for data collection. Studies about classroom practice often complement interviews with observation and focus on only one subject area. On the other hand, this research adopted lesson observations as its primary data source and followed each with an in-depth interview. Apart from this, the lesson observations and interviews were conducted in different subject areas, which appear different from most qualitative studies. This facilitated a thorough analysis and enhanced comprehension of how teachers implemented their

instructional practices. The follow-up lesson observations provided the opportunity to note and discuss the differences between practices in different subject areas. The follow-up interviews also gave teachers the chance to explain or provide clarifications on why specific approaches were employed in different subject areas. Thus, using the data collection tools in this way encourages reflection among participants while at the same time supporting a thorough examination of teachers' classroom practices.

In addition to the issues discussed above, this research reveals that teachers may have limited knowledge about inclusive pedagogical approaches necessary to implement inclusive education in their classes effectively. It exposed the gap between policy requirements regarding inclusive pedagogical approaches teachers are expected to adopt and what they actually do in class. The outcome of this research provides directions for improving teachers' inclusive pedagogy and addressing the dilemma around inclusive education and pedagogy (Göransson & Nilholm, 2014; Loreman, 2017). It also gives direction for bridging the gap between policy and practice.

7.4 Limitations of the study

Despite its contributions to the conceptualisation of inclusive pedagogy and classroom practices, this study has some limitations. This section outlines these limitations.

First, the study aimed to understand teachers' inclusive pedagogical practices. Hence, the participants were drawn from classroom teachers, leaving out other players in the teaching and learning space. This determination was made concerning the research aims, which reflected the reason this research was conducted and the limited time available to complete it. However, future research will consider capturing learners' voices, especially those with special needs and other stakeholders. This would help develop interesting findings about classroom practices.

Second, studies of this nature require a clear definition of which group of children with special educational needs are of interest. This was a dilemma due to differences in teachers' perceptions about which group of learners constitute special educational needs children. Although Ghana's inclusive education policy considers SEN to include all children who are at risk of marginalisation, teachers often focus on those with identifiable disabilities while defining the concept. Guided by the purpose of the study, the focus was placed on children with identifiable

and unidentifiable disabilities that may necessitate adjustments for their participation in lessons in the regular classroom. The position adopted could restrict insights that I would have gained if others, such as nomads, were included in the study. However, I maintained an open mind regarding information on children with other conditions captured in the inclusive education policy. Further, the data generated presents several lessons about teachers' inclusive pedagogies that teachers in similar learning contexts adopt to develop their practices.

Another limitation is found in the use of observations and qualitative interviews as the primary sources of data collection. Considering the nature of these tools, participants could present themselves and talk about their work in ways that may not reflect their true nature and practice. While these may be inevitable in such circumstances, steps were taken to minimise these biases. Observing lessons in person allowed for the recording of critical practices and behaviours. Each lesson observation was followed up with an interview, which helped scrutinise and probe important notices. Teachers' responses were matched against other materials, such as lesson notes collected from class teachers to identify pedagogical preparations made for children with SEN. Overall, these instruments provided the flexibility to collect all kinds of first-hand data and opportunities to study the phenomenon in its natural context.

Furthermore, two sampling issues were identified as potential limitations to the study. While efforts were put in place to draw samples of different characteristics, the possibility of selecting only teachers interested in the study was acknowledged. The experiences of teachers unwilling to participate in the study were not included. Additionally, the sample size of 10 classroom teachers may be considered smaller than those employed in some qualitative studies. However, the multiple interviews and lesson observations provided adequate data to understand the phenomenon. While a larger sample could offer more generalisable results, this study was not intended to generalise its findings. It focused on understanding teachers' conceptualisation of inclusive pedagogy and documenting examples of inclusive pedagogical practices in different contexts.

Despite these limitations, this research journey has positively influenced my personal and professional life as a researcher and teacher. As a researcher, the positive influence of this study on my professional growth underscored the importance of research in shaping lives and contributing to the advancement of the education sector within society. Further, values such as

effective time management, persistence and building positive relationships have played a key role in shaping my personal and professional development. Throughout my studies, I have developed critical thinking, analytical, communication, and information management skills. Furthermore, the decision-making processes, which involved defining and refining issues, incorporating feedback and presenting reports, have influenced my professional abilities.

This study provided the opportunity to reflect on my experiences as a teacher and how my actions or inactions in class would have positively or negatively impacted lives. During the process of lesson observation, I had the chance to relate the practices of teachers to my work in the classroom. The knowledge gained in the field of inclusive education throughout this study period continues to shape my thoughts and discussions on making learning participatory and beneficial for all persons.

7.5 Recommendations for future research

As noted earlier, information on practical, inclusive pedagogical practices of classroom teachers is limited in the research and similar contexts. Therefore, further research is needed to identify more examples of good practices in other learning environments. Such studies can help appreciate how class teachers negotiate challenges to promote inclusion in their classes. A longitudinal study for this kind of research could allow enough time to entangle all the complexities surrounding inclusive pedagogy. There is also the need for deliberate and concerted efforts to delve more into this area. Specifically, inquiry into the nature of teachers' lesson notes, preparation process and how these could be developed to facilitate inclusive learning will be a good resource for educators. Finally, studies addressing issues such as building collaborative relationships among teachers, other professionals and students to maximise learning for all could deepen understanding of how to support learners with special needs in the general education classroom without marginalising them.

7.6 Concluding remarks

This study explored teachers' varied perceptions of the concept of inclusive pedagogy, the evolving nature of their inclusive pedagogical practices, and the factors that impact these practices in regular primary classrooms. Various insightful findings were revealed regarding how inclusive practices are implemented within the mainstream classroom.

The findings of this study emphasise the need for continued discussion about the concept of inclusive pedagogy and its role in implementing inclusive education across different learning contexts. They also highlight the significance of strengthening support for teachers to develop their practices to meet the needs of all learners in the regular classroom, regardless of their challenges. Thus, accessible and sustained professional development opportunities are crucial to enhance teachers' experiences. These could provide policy directions towards improving inclusive learning in the country.

Further, research is needed to develop practical, inclusive pedagogical practices by improving approaches to ensure that they meet the specific educational needs of learners and the resource demands of teachers. Contextualising practices and enhanced resource and training provision will equip teachers to deliver more improved inclusive teaching and learning in regular classrooms.

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APPENDICES

Appendix A: Ethics application and approval form

Ethics Application Form
Please answer all questions

1. Title of the investigation
Inclusive Education in Ghana: Understanding inclusive pedagogical practice of primary and junior high school teachers in the general education classrooms.
Please state the title on the PIS and Consent Form, if different:

2. Chief Investigator (must be at least a Grade 7 member of staff or equivalent)		
Name:	Edward	Sosu
☐		Professor
☒		Reader
☐	Senior	Lecturer
☐		Lecturer
☐	Senior Teaching	Fellow
☐	Teaching	Fellow
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3. Other Strathclyde investigator(s)		
Name:	Paul	Adams
Status (e.g. lecturer, post-/undergraduate):		Senior Lecturer
Department:	School of	Education
Telephone:		+441414448078
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Name:	Nicholas	Novignon
Status (e.g. lecturer, post-/undergraduate):		Postgraduate
Department:	School of	Education
Telephone:		+447871822908
E-mail:	nicholas.novignon@strath.ac.uk	

4. Non-Strathclyde collaborating investigator(s) (where applicable)
Name:
Status (e.g. lecturer, post-/undergraduate):
Department/Institution:
If student(s), name of supervisor:
Telephone:
E-mail:
Please provide details for all investigators involved in the study:

5. Overseas Supervisor(s) (where applicable)
Name(s):
Status:
Department/Institution:

Telephone:
Email:
I can confirm that the local supervisor has obtained a copy of the Code of Practice: Yes ☐
No. ☐
Please provide details for all supervisors involved in the study:

6. Location of the investigation

At what place(s) will the investigation be conducted
Primary and Junior High Schools in Ghana.

If this is not on University of Strathclyde premises, how have you satisfied yourself that adequate Health and Safety arrangements are in place to prevent injury or harm?

Schools and classrooms are generally safe environments where teachers are regularly present and other school supervisors visit. Schools in Ghana are guided by clear Health and Safety measures defined by the Ministry of Education and Ghana Education Service. Hence, the study will be conducted within these guidelines to ensure the safety of participants. The study will take place only within the schools and district education offices (as agreed with participants) to ensure that we are guided by the education guidelines.

7. Duration of the investigation

Duration(years/months): 4 months

Start date (expected): 27 / 01 / 2022 Completion date (expected): 27/ 05 / 2022

8. Sponsor

Please note that this is not the funder; refer to Section C and Annexes 1 and 3 of the Code of Practice for a definition and the key responsibilities of the sponsor.

Will the sponsor be the University of Strathclyde: Yes ☒ No ☐
If not, please specify who is the sponsor:

9. Funding body or proposed funding body (if applicable)

Name of funding body:
Status of proposal – if seeking funding (please click appropriate box):
☐ In preparation
☐ Submitted
☐ Accepted
Date of submission of proposal: / / Date of start of funding: / /

10. Ethical issues

Describe the main ethical issues and how you propose to address them:

This research will be conducted in line with the ethical guidelines for educational research laid down by the British Educational Research Association (BERA), 2018. The study focuses on exploring the nature and rationale behind the inclusive pedagogical practices of teachers while they seek to support all learners in their classrooms. To study teachers' inclusive pedagogical practice, classroom lessons will be observed; interviews will be

conducted with classroom and resource teachers. Data will also involve collection of teachers' lesson notes and other materials such as flashcards, sketches and pictures, used by teachers to facilitate used by classroom and resource teachers to facilitate inclusive teaching and learning. The key ethical issues border on confidentiality of data collected, anonymity and consent of the participants.

Participants will be given the assurance that the data they provide (captured in observation notes, audio recording and pictures of specific documents used by teachers to teach) and thoughts they share will be treated with high confidentiality. Additionally, the anonymity of data collected will be ensured. During analysis, any aspect of the data that discloses the identity of participants will be removed. Participants' names will not be included. Instead, pseudonyms will be assigned to names and the data will be coded. Pictures of documents taken will not show the identity of both participants and members of the classroom community.

Prior to data collection, letters requesting access will be sent to the regional offices of the Ghana Education Service within which selected schools are located. This will be followed by consent of district offices and schools. Once permission is given by the heads of schools, participants' consent will be sought. The consent of headteachers will be sought for on behalf of learners in the selected classrooms.

During this time, the staff and pupils will be made aware of my presence. Participating teachers will be informed about the purpose of the study, their roles, possible risks involved and how the risks will be controlled. The teachers will be informed that they are not bound by any obligation to participate and may opt out before or during the course of the project. Participants can also withdraw their consent to participation in the project at any point in the data collection.

One criterion for inclusion of teachers or classes in the case study will be to identify those who have learners with special needs in their classrooms. Efforts will, therefore, be made to ensure that the identification of these teachers and classes is done in ways that avoid labelling or focusing too much attention on the child. The district special education coordinator and the heads of schools, who have information about children with special needs within their jurisdictions, will be consulted to help in the identification of classes with pupils that have special needs. This will be done without giving any information to the class about which learner is of importance in the study. Additionally, efforts will be made to ensure I do not engage in practices that draw attention to learners with special needs in the classroom.

On one hand, my previous roles as classroom teacher, resource teacher and municipal special education coordinator in Ghana, might influence participants' decisions to participate in the study. Specifically, participants may feel intimidated when they become aware of my formal role, Municipal Special Education Coordinator, because it involves the exercise of some authority. Therefore, teachers might be forced to participate in the study for fear of being victimised. To prevent this situation, my status as a student at the University of Strathclyde and the purpose of the study will be clearly defined to the teachers. All participants will be informed that no one stands the chance of being victimised if they decide not to participate in the study. On the other hand, my previous positions can serve as an asset that could help address potential ethical challenges. The network ties created during my work will help in identifying teachers for the study and promote positive relationships with participants. The experiences gained during my work will guide my interactions with participants. I am able to tell what does or does not work for some teachers and how they react to certain situations, which will help ensure that the research is undertaken ethically.

All COVID-19 protocols will be strictly adhered to during the study. Frequent hand washing and sanitising will be practiced. Nose mask will be worn at all times during the study.

11. Objectives of investigation (including the academic rationale and justification for the investigation) Please use plain English.

Achieving quality education and equal learning opportunities for all children continue to feature in several international policies. Although countries have been encouraged to enact policies and remove barriers to the smooth implementation of inclusive education, teachers' contributions to achieve this goal have been considered critical (UNESCO, 2020; Kuyini & Dasei, 2008). Teachers' inclusive pedagogical practices are seen as important ways to ensure the provision of equal learning opportunities for all learners in schools and classrooms (UNESCO, 2021; Florian & Spratt, 2013; Agbenyega & Deku, 2011). A UNICEF/Ghana country report indicates that challenges of limited opportunity for participation in classroom, poor learning support and poor achievement of children with special needs are attributable to limited pedagogical skills of teachers (UNICEF, 2017). Similarly, it has been reported that teachers' pedagogical approaches are not responsive to a variety of learning needs (Agbenyega & Deku, 2011). Hence, most children with special needs are being excluded from learning in classrooms (Agbenyega & Davis 2015). To address the challenges of exclusion of children with special needs, provide quality education and equal learning opportunities for children in classrooms, it has been suggested that attention must be drawn to teachers' inclusive pedagogies (UNESCO, 2021; Ministry of Education, 2018). Therefore, various issues that may impact teachers' pedagogical practices and their ability to teach all learners have been widely explored.

Studies have focused on examining how teachers' attitudes, beliefs and self-efficacy influence the implementation of inclusive education. While some researchers have reported positive teachers' attitudes and self-efficacy (Vanderpuye, Obosu & Nishimuko, 2020; Gyimah, Sugden & Pearson, 2009), others indicate that teachers expressed negative belief and disapproval for including pupils with disabilities (Adgenyega, 2007; Kuyini, Desai & Sharma, 2018; Mprah et al. 2016). Also, some teachers have been identified to lack the confidence and skills needed to teach learners with different needs in the same classroom (Nketsia, 2017; Mprah et al., 2016). Other researchers have indicated that infrastructural inadequacies and high teacher-learner ratio in classrooms have negative implications for the implementation of inclusive education (Kuyini et al., 2016; Opoku et al., 2017). However, there is limited knowledge about teachers' classroom practice in Ghana. Studies that explore teachers' inclusive pedagogical practices in inclusive classrooms are lacking. Thus, this study seeks to fill the gap about what teachers actually do in the classroom by exploring the nature of inclusive pedagogical practices enacted by teachers in mainstream classrooms in Ghana and why they employ those practices. In this study, the inclusive pedagogical approaches that teachers adopt in teaching, practices they enact and the rationale behind these will be explored. The current study is particularly relevant as it contributes to achieving equity and equality in education as enshrined in the sustainable development goals.

Reference

Agbenyega, J. (2007). Examining Teachers' Concerns and Attitudes to Inclusive Education in Ghana. *International Journal of Whole Schooling*, *3*(1), 41.

Agbenyega, J. S., & Davis, E. (2015). Exploring the intersection of the English Language as the medium of instruction and inclusive pedagogy in primary Mathematics classrooms in Ghana. *International Journal of Whole Schooling,* 11 (2): 45–64.

Agbenyega, J. S., & Deku, A. (2011). Building new Identities in teacher preparation for inclusive education in Ghana. *Current Issues in Education,* 14 (1): 1–37.

Florian, L. & Spratt, J. (2013). Enacting inclusion: A framework for interrogating inclusive practice. *European Journal of Special Needs Education, 28*(2), 119-135. https://doi.org/10.1080/08856257.2013.778111.

Gyimah, E. K., Sugden, D., & Pearson, S. (2009). Inclusion of children with special educational needs in mainstream schools in Ghana: Influence of teachers and children's characteristics. *International Journal of Inclusive Education, 13*(8), 787-804.

Kuyini, A. B., & Desai, I. (2008). Providing instruction to students with special needs in inclusive classrooms in Ghana: Issues and challenges. *International journal of whole schooling. 4*(1), 27- 39.

Kuyini, A. B., Desai, I., & Sharma, U. (2018). Teachers' self-efficacy beliefs, attitudes and concerns about implementing inclusive education in Ghana. *International journal of inclusive education*, *24*(14), 1509-1526. https://doi.org/10.1080/13603116.2018.1544298

Ministry of Education. (2018). Education strategic plan of Ghana, 2018-2030. Accra: Sandrine Bohan-Jacquot.

Mprah, K. W., Dwomoh, A. J., Opoku, M. P., Owusu, I., & Ampratwum, J. (2016). Knowledge, attitude and preparedness of teachers towards inclusive education in Ejisu-Juaben municipality in Ashanti region of Ghana. *Journal of Disability Management and Special Education, 6*(2), 1–15.

Nketsia, W. (2017). A cross-sectional study of pre-service teachers' views about disability and Attitudes towards Inclusive Education. *International Journal of Research Studies in Education 6* (3): 53–68.

Opoku, M. P., Mprah, W. K., Badu, E., Mckenzie, J., & Agbenyega, J. (2017). Decade of inclusive education in Ghana: perspectives of special educators. *Journal of Social Inclusion*, *8*(1), 4-20.

UNESCO. (2017). A Guide for ensuring inclusion and equity in education. Paris: UNESCO. Paris: UNESCO. Retrieved 15th May, 2021, from http://unesdoc.unesco.org/images/0024/002482/248254e.pdf.

UNESCO (2021). Education for All Global Monitoring Report. Paris: UNESCO. Retrieve 15th May, 2021, from https://en.unesco.org/gem-report/2020teachers

UNESCO (2020). Global Education Monitoring Report 2020: Inclusions and Education – All Means All, Paris: UNESCO.

Vanderpuye, I., Obosu, G. K., & Nishimuko, M. (2020). Sustainability of inclusive education in Ghana: teachers' attitude, perception of resources needed and perception of possible impact on pupils. *International Journal of Inclusive Education*, *24*(14), 1527-1539. https://doi.org/10.1080/13603116.2018.1544299

12. Participants

Please detail the nature of the participants:
The participants for this study will include primary and junior high school teachers, and resource teachers in regular schools with special needs children in Ghana.

Summarise the number and age (range) of each group of participants:

- Classroom teachers: 10 teachers from case schools in Ghana. Age range: 20-59
- Resource teachers: Five resource teachers from the case schools. Age range: 20-59

Please detail any inclusion/exclusion criteria and any further screening procedures to be used:
Inclusion Criteria:
The participants should be primary and or junior high department high school teachers. The teachers will be selected from the general education public and private schools in Ghana. Participating teachers should have at least one child with special educational needs in their classroom. Resource teachers should be affiliated with the case school.
Exclusion Criteria:
Teachers in selected schools who do not have learners with special needs in their classrooms will not be selected. Resource teachers who do not work in the case schools will not be selected.

13. Nature of the participants

Please note that investigations governed by the Code of Practice that involve any of the types of participants listed in B1(b) must be submitted to the University Ethics Committee (UEC) rather than DEC/SEC for approval.

Do any of the participants fall into a category listed in Section B1(b) (participant considerations) applicable in this investigation?: Yes ☐ No ☒

If yes, please detail which category (and submit this application to the UEC): N/A

14. Method of recruitment

Describe the method of recruitment (see section B4 of the Code of Practice), providing information on any payments, expenses or other incentives.

Participants of the study will be purposively sampled. Because this is a case study, schools will be initially identified with the help of colleague teachers and special education coordinators in Ghana. The regional and municipal, or district education directorates within which the case schools will be contacted to seek their approval for the research. Following this, the consent of the headteachers of the schools will be sought. With the help of headteachers and special education coordinators, classes that have learners with special needs will be identified. Thereafter, the teacher of the identified classes will be contacted for their consents. With the help of the district or municipal special education coordinator, resource teachers who work with the sampled schools will be recruited. The participants will be required to complete an informed consent form. While engaging in the selection process, I will be guided by the sample size of 15 and limited resources available. No payments will be involved.

15. Participant consent

Please state the groups from whom consent/assent will be sought (please refer to the Guidance Document). The PIS and Consent Form(s) to be used should be attached to this application form.

Consent will be sought from the following groups: Regional and district directorates of the Ghana Education Service, Head of Schools, Teachers and Resource teachers. Participant information sheet will be provided to each participant to give them a highlight of the study. The consent form and participant information sheet are attached to this form.

An aspect of the lesson that will be observed is classroom interaction. In this regard, consent will be sought for learners in the selected classes from headteachers who stand in loco parentis. Additionally, I will ensure at all times that my presence does not disrupt the learning process. A consent form has been designed for the headteachers to this effect.

16. Methodology

Investigations governed by the Code of Practice which involve any of the types of projects listed in B1(a) must be submitted to the University Ethics Committee rather than DEC/SEC for approval.

Are any of the categories mentioned in the Code of Practice Section B1(a) (project considerations) applicable in this investigation? ☒ Yes ☐ No

If 'yes' please detail: Work outside the United Kingdom

The study will be done in Ghana.

Describe the research methodology and procedure, providing a timeline of activities where possible. Please use plain English.

The Qualitative research methodology will be adopted in this study. The Instrumental Case Study design will be used to generate in-depth understanding of how and why teachers enact and develop their inclusive pedagogical practice in inclusive classrooms in Ghana. The Semi-structured non-participant observation, Semi-structured interview and Document collection will be used to collect data about the nature of teachers' inclusive pedagogy. Two lesson observations will be undertaken with each participating teacher. Different subject areas will be observed at different times of the day. Each of the observations will be followed by an interview session. Lesson observations will last one hour. Also, the interviews will be a maximum of one hour. Lesson observations will be followed immediately with interviews. This will grant teachers the opportunity to reflect upon the lessons. Thus, lessons that are followed by a break will be chosen. Teachers' lesson plans and learning artefacts will be collected. Lesson observations and interviews will be audio recorded. Observation notes will be taken. Data will be analysed through the thematic analysis approach. The use of the thematic approach will help provide a detailed description of individual teachers' inclusive pedagogical practices within their respective contexts, analyse and develop meanings of the teachers' practices through identified themes.

What specific techniques will be employed and what exactly is asked of the participants? Please identify any non-validated scale or measure, and include any scale and measures charts as an Appendix to this application. Please include questionnaires, interview schedules or any other non-standardised method of data collection as appendices to this application.

Lesson observations will be conducted with each classroom teacher. The non-participant semi-structured observation will be adopted. Classroom teachers and resource teachers will be interviewed. The semi-structured interview approach will be used in the study. An audio recorder and a digital camera will be used to collect data. The digital camera will be used only to take specific pictures of documents used by teachers to teach and learners. Observation and interview guide and draft have been attached to this form.

Where an independent reviewer is not used, then the UEC, DEC or SEC reserves the right to scrutinise the methodology. Has this methodology been subject to independent scrutiny?

Yes ☐ No ☒

If yes, please provide the name and contact details of the independent reviewer: N/A

17. Previous experience of the investigator(s) with the procedures involved. Experience should demonstrate an ability to carry out the proposed research in accordance with the written methodology.

Both Dr. Edward Sosu, the lead investigator, and Dr. Paul Adams will provide oversight and guidance to this study. Dr. Sosu has rich experiences in different research. They also have expertise in different methodological approaches for conducting studies. Edward Sosu and Paul Adams have collaborated with various individuals and groups to conduct studies that adopted the qualitative methodology in the field of education.

Nicholas Novignon gained both his Bachelor's and Master's degrees in Education. During his Master's degree, he researched the impact of the curriculum on the education of children with intellectual disabilities. As part of his Master's degree programme, Nicholas undertook practical work that required interviewing teachers, both learners with and without special educational needs and parents. Further, at both the Bachelor's and Master's level, I was

required to observe lessons and draft an Individualized Educational Programme for children identified with disabilities.
Nicholas has rich experience in working with teachers in the primary and junior high settings. Additionally, while he worked as a teacher, resource teacher and municipal special education coordinator in Ghana, Nicholas had several engagements, including observing and interviewing teachers' work.
With the support of his supervisor, He has undertaken workshops on Ethnographic and Observation methods and Interviewing. These experiences have enriched me with skills that will help me undertake the research. Nicholas will continue to engage in workshops and seek avenues that will strengthen my skills in the use of the proposed methodology.
The following are selected examples of publications of Edward Sosu and Paul Adams

Sosu, E. M., McWilliam, A., & Gray, D. S. (2008). The Complexities of Teachers' Commitment to Environmental Education: A Mixed Methods Approach. *Journal of Mixed Methods Research*, *2*(2), 169–189. http://doi.org/10.1177/1558689807313163

Sosu, E. S., Mtika, P., & Colucci-Gray, L. (2010). Does initial teacher education make a difference? The impact of teacher preparation on student teachers' attitudes towards educational inclusion, *Journal of Education for Teaching, 36*(4), 389-405, https://doi.org/10.1080/02607476.2010.513847.

Sosu, E. M., & Ewelina Rydzewska, E. (2017). "Are all beliefs equal?" investigating the nature and determinants of parental attitudinal beliefs towards educational inclusion. *Educational Studies, 43*(5), 516-532,

Adams, P., & Anderson, J. (2019). Moderation and the Primary School Context. *Education 3-13, 47* (1), 1–17. https://doi.org/10.1080/03004279.2017.1382547.

Adams, P. (2016.) Education policy: explaining, framing and forming. Journal of Education Policy, 31:3, 290-307. https://doi.org/10.1080/02680939.2015.1084387.

18. Data collection, storage and security

How and where are data handled? Please specify whether it will be fully anonymous (i.e. the identity unknown even to the researchers) or pseudo-anonymised (i.e. the raw data is anonymised and given a code name, with the key for code names being stored in a separate location from the raw data) - if neither please justify.

Observation and interviews will be audio recorded. Observation notes and pictures of teachers' lesson plan and materials such as flashcards, sketches and pictures, taken will be scanned and digitally stored on the University's storage system (OneDrive). Data will be transcribed and pseudonyms will be assigned to names of participants and schools. Also, the data generated will be anonymised. Data will be coded and stored separately from the initially generated one.

Explain how and where it will be stored, who has access to it, how long it will be stored and whether it will be securely destroyed after use:

Transcribed data and others in the form of pictures will be stored on the University of Strathclyde's secure server, such as Strathcloud. The documents will be password protected. The University's systems are protected by a password, which will allow the data to be accessible only to Nicholas Novignon, Dr. Sosu and Dr. Adams. The data will be kept for a period of five years during which the research papers will be generated from it. The data will then be securely destroyed.

Will anyone other than the named investigators have access to the data? Yes ☐ No ☒
If 'yes' please explain:

19. Potential risks or hazards

Briefly describe the potential Occupational Health and Safety (OHS) hazards and risks associated with the investigation:

This research presents low hazards and risks to participants. The data collection will be conducted in the participants' regular working environments. Some members of the school community may feel uncomfortable with our presence. This may cause some level of anxiety among learners, which could lead to the display of unwelcoming behaviours. Some teachers within the schools may feel intimidated because of possible misrepresentation of the purpose of my work. The presence of an unfamiliar face in some schools is likely to cause tension among teachers, especially when they perceive that the individuals have government consent to undertake some work there. In order to avoid the occurrence of such incidences, with the help of the head of schools, a proper introduction will be done to all members of the school community. Participants will be assured that the study is only for academic purposes. Also, the purpose of the study is not to assess or evaluate their work.
Although COVID-19 spread is currently under control due to ongoing vaccination in Ghana, there is also a possible risk of COVID-19 infections in some communities where the selected schools are located. All national and school/classroom protocols will be strictly adhered to.

Please attach a completed OHS Risk Assessment (S20) for the research. Further Guidance on Risk Assessment and Form can be obtained on Occupational Health, Safety and Wellbeing's webpages

20. What method will you use to communicate the outcomes and any additional relevant details of the study to the participants?

Research brief on the study output will be organised for teachers, resource teachers and head teachers in the participating schools. I will seek the opportunity to present the outcomes of my research with teachers and resource teachers at conferences and workshops.

21. How will the outcomes of the study be disseminated (e.g. will you seek to publish the results and, if relevant, how will you protect the identities of your participants in said dissemination)?

The study will be published as a thesis. The outcome of the study will be disseminated through journal articles, conferences and workshop presentations. To protect the identities of the participants, data that will disclose the identity of the participants will not be included in publications.

Checklist	Enclosed	N/A
Participant information sheets	☒	☐

Consent forms	☒	☐
Sample questionnaire(s)	☐	☒
Sample interview format(s)	☒	☐
Sample advertisement(s)	☐	☒
OHS risk assessment (S20)	☒	☐
Any other documents (please specify below)	☒	☐
Observation guide	☒	☐
Letters to the regional and district offices of Ghana Education Service	☒	☐
Letter to Schools	☒	☐

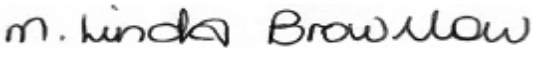
22. Chief Investigator and Head of Department Declaration
Please note that unsigned applications will not be accepted, and both signatures are required

I have read the University's Code of Practice on Investigations Involving Human Beings and have completed this application accordingly. By signing below, I acknowledge that I am aware of and accept my responsibilities as Chief Investigator under Clauses 3.11 – 3.13 of the Research Governance Framework and that this investigation cannot proceed before all approvals required have been obtained.

Signature of Chief Investigator 

Please also type name here: Edward Sosu

I confirm I have read this application, I am happy that the study is consistent with departmental strategy, that the staff and/or students involved have the appropriate expertise to undertake the study and that adequate arrangements are in place to supervise any students that might be acting as investigators, that the study has access to the resources needed to conduct the proposed research successfully, and that there are no other departmental-specific issues relating to the study of which I am aware.

Signature of Head of Department 

Please also type name here Linda Brownlow

Date: 24 / 01 / 2022

23. Only for University sponsored projects under the remit of the DEC/SEC, with no external funding and no NHS involvement

Head of Department statement on Sponsorship
This application requires the University to sponsor the investigation. This is done by the Head of Department for all DEC applications with exception of those that are externally funded and those which are connected to the NHS (those exceptions should be submitted to R&KES). I am aware of the implications of University sponsorship of the investigation and have assessed this investigation with respect to sponsorship and management risk. As this particular investigation is within the remit of the DEC and has no external funding and no NHS involvement, I agree on behalf of the University that the University is the appropriate sponsor of the investigation and there are no management risks posed by the investigation.
If not applicable, tick here ☐

Signature of Head of Department

Please also type name here

Date: / /

For applications to the University Ethics Committee, the completed form should be sent to ethics@strath.ac.uk with the relevant electronic signatures.

24. Insurance
The questionnaire below must be completed and included in your submission to the UEC/DEC/SEC:

Is the proposed research an investigation or series of investigations conducted on any person for a Medicinal Purpose? Medicinal Purpose means: ▪ treating or preventing disease or diagnosing disease or ▪ ascertaining the degree or extent of a physiological condition or ▪ assisting with or altering in any way the process of conception or ▪ investigating or participating in methods of contraception or ▪ inducing anaesthesia or ▪ otherwise preventing or interfering with the normal operation of a physiological function or ▪ altering the administration of prescribed medication.	Yes / <u>No</u>

If "Yes" please go to Section A (Clinical Trials) – all questions must be completed
If "No" please go to Section B (Public Liability) – all questions must be completed

Section A (Clinical Trials)

Does the proposed research involve subjects who are either: i. under the age of 5 years at the time of the trial; ii. known to be pregnant at the time of the trial	Yes / No

If "Yes" the UEC should refer to Finance

Is the proposed research limited to: iii. Questionnaires, interviews, psychological activity including CBT; iv. Venepuncture (withdrawal of blood); v. Muscle biopsy; vi. Measurements or monitoring of physiological processes including scanning; vii. Collections of body secretions by non-invasive methods; viii. Intake of foods or nutrients or variation of diet (excluding administration of drugs).	Yes / No

If "No" the UEC should refer to Finance

Will the proposed research take place within the UK?	Yes / No

If "No" the UEC should refer to Finance

Title of Research	
Chief Investigator	
Sponsoring Organisation	

Does the proposed research involve:	
a) investigating or participating in methods of contraception?	Yes / No
b) assisting with or altering the process of conception?	Yes / No
c) the use of drugs?	Yes / No
d) the use of surgery (other than biopsy)?	Yes / No
e) genetic engineering?	Yes / No
f) participants under 5 years of age (other than activities i-vi above)?	Yes / No
g) participants known to be pregnant (other than activities i-vi above)?	Yes / No
h) pharmaceutical product/appliance designed or manufactured by the institution?	Yes / No
i) work outside the United Kingdom?	Yes / No

If "YES" to any of the questions a-i please also complete the Employee Activity Form (attached).
If "YES" to any of the questions a-i, and this is a follow-on phase, please provide details of SUSARs on a separate sheet.
*If "Yes" to any of the questions a-i then the UEC/DEC/SEC should refer to Finance (*insurance-services@strath.ac.uk*).*

Section B (Public Liability)

Does the proposed research involve:	
a) aircraft or any aerial device	Yes / No
b) hovercraft or any water borne craft	Yes / No
c) ionising radiation	Yes / No
d) asbestos	Yes / No
e) participants under 5 years of age	Yes / No
f) participants known to be pregnant	Yes / No
g) pharmaceutical product/appliance designed or manufactured by the institution?	Yes / No
h) work outside the United Kingdom?	Yes / No

*If "YES" to any of the questions the UEC/DEC/SEC should refer to Finance (*insurance-services@strath.ac.uk*).*

For NHS applications only - Employee Activity Form

Has NHS Indemnity been provided?	Yes / No
Are Medical Practitioners involved in the project?	Yes / No
If YES, will Medical Practitioners be covered by the MDU or other body?	Yes / No

This section aims to identify the staff involved, their employment contract and the extent of their involvement in the research (in some cases it may be more appropriate to refer to a group of persons rather than individuals).

Chief Investigator		
Name	Employer	NHS Honorary Contract?
		Yes / No
Others		
Name	Employer	NHS Honorary Contract?
		Yes / No
		Yes / No
		Yes / No
		Yes / No

Ethics approval note:

Dear Nicholas,

I am delighted to inform you that your ethics application was approved by the ethics committee and is now signed by the Head of School.

Best wishes for your study,

Dr Sharon Hunter
Professor David Kirk

Ethics Co-Chairs | School of Education Ethics Committee
School of Education
University of Strathclyde | Faculty of Humanities and Social Sciences
Email: hass-edu-ethics@strath.ac.uk

Appendix B: Permission letter received from the Education office

GHANA EDUCATION SERVICE

In case of reply the number and date of this letter should be quoted

Republic of Ghana

Regional Education Office
P.O. Box 111
Cape Coast.

4th March, 2022.

Tel.: 03321-32333
Fax: 03321-32333
Email: CENTRAL@GES.GOV.GH
My Ref. No. **GES/CR/49/VOL.38/154**

Your Ref. No.....

RE: INTRODUCTORY LETTER

The Director, Special Education Division's letter referenced EP.93//VOL.3/222 dated 1st March, 2022 on the above subject matter refers:

Permission is granted **Mr. Nicholas Novignon, a PhD student** at the School of Education, University of Strathclyde, UK. He is currently working on the topic: "Inclusive Education in Ghana" Understanding inclusive pedagogical practice of primary school teachers in the general education classrooms.

The research seeks to understand how teachers in the general education classrooms enact and develop their inclusive pedagogical practices while they seek to provide equal learning opportunities for all learners in the inclusive classroom in the Cape Coast Metropolis, Agona West Municipal and Awutu Senya East Municipal Directorates of Education in the Central Region.

By a copy of this letter, the Metro and Municipal Directors of Education concerned are requested to link the student to the selected schools to collect the data.

It is the expectation of Management that, the research will be conducted based on ethical considerations as granted the student by the University and the study results documented and shared with Ghana Education Service.

Thank you.

MARTHA OWUSU AGYEMAN (MRS.)
REGIONAL DIRECTOR OF EDUCATION
CENTRAL

MR. NICHOLAS NOVIGNON
UNIVERSITY OF STRATHCLYDE, UK.

Cc: The Metro Director, GES, Cape Coast
The Municipal Director, GES, Agona West
The Municipal Director, GES, Awutu Senya East

Appendix C: Themes, sub-themes and illustrated quotes

THEME	SUB-THEME	SAMPLE QUOTES
Perspectives of inclusive pedagogy		
• Teach all children together and treat them in the same way		*I think it (inclusive pedagogy) is a way of teaching that involves all children, both the 'normal' and those with challenges. We put them together and teach them. (Oforiwaa)* *Inclusion means treating everyone the same, not some as special. It's inclusive education, so I am not concentrating on them only; all. It is not about them being special. (Mariam)*
• Promoting the participation of children with special needs through different strategies		*... Inclusion means involving the children with disabilities in the lesson. Use strategies that do not discriminate them. We need to promote their acceptance. It is also inclusion. the strategies that will promote their acceptance are inclusive. (Dickson)*
• Separate or inclusive teaching process		*What I will say first is that, when they are in their own school, to me, I think it will help them better because here (regular education classroom), we don't have the exact provision for them. That is my problem; we don't have the exact provision that will really help them to grasp what they need to know. (Sarfoa).*
• Reflective or reactive approach		*If you don't study them and just imagine that that is how they are, you will just teach, and they will not benefit from it. So, you need to know them. Know that these children are special so that you would know how to teach (Banahene).*
Enacting inclusive pedagogy within a regular classroom context		
• Providing accommodations by adapting teaching strategies	Developing confidence thorough and understanding through multiple examples	*Teacher: So, we are to find 3 x 8, so what you do is that 3 x 6 =18. 6 groups of 3 is equal to 18. So, 3 groups of 8 will be what? ... We are going to use another strategy. 3 x 6 =18. So, how many groups of 3 must we add to get this?... 3 x 6 =18+3. Now, they are asking what 3 x 8 will be…So, 5 x 7 = 20 + 5+5+5=35… How do we write it? 4 x 9 = … (James).* *What did I say is in our heads?... Pupils: Brain…Now, let us look at this one too. There is eye, or don't they have eye? We use our eyes to do what? Pupil: See... What do we use our ear for? Pupil: Hearing (Victoria)* *I wanted them to know that the things in their environment contain water, so when sun shines, it evaporates and then go to the atmosphere to form rain. So, I gave the examples that trees in their environment contain water... So, I wanted them to know that things in their environment like trees, animals,*

		etc, they all have water in them...That is why I telling them what evaporation, condensation, precipitation, transpiration mean. (Banahene)
	Using questioning to check understanding, retain attention and reinforce participation	*Teacher: Roman numeral from 'I' to 'C' is from one to what? Pupils: 100… Teacher: 'I' as what? Pupils: 1…Teacher: The second one is what? Pupils: 'II'…Teacher: 'II' for what? Pupils: 2… We mentioned some Roman numerals that you can use for 3 times. What are they?... Teacher: In our previous lesson, we learnt that if you see a sign like this (Teacher demonstrates the sign) on the board with your right hand facing this side, it is called what? Pupils: 'Greater than. Teacher: We mentioned some Roman numerals that you can use for 3 times. What are they? ... (Cecilia)* *Teacher: When you wash or deep your hands in water, but they dry up … ask yourself where does that water go to? Pupil: It evaporates… water changes from liquid to gas." (Banahene)*
	Promoting critical observation and understanding through field trip	At the start of the class, the teacher led learners to revise the previous lesson on pollution. The teacher then informed learners about the topic for discussion, 'The sun.' Teachers led the class outside to engage in brief observation of the sun. Directions were provided about the observation process. Teachers spelt out 'dos and don'ts.' For example, "Don't look at the sun directly; it can spoil your eyes. From here, you are going to describe the sun or tell me the importance of the sun. So, just look at the sun and when we go in, we will discuss the importance of the sun." (Dickson) *We were learning about the sun, and I know every child can identify the sun. But observation is very important. To see is to understand. That is why I picked them out to look at the sun to tell me what they see. So, if they see the sun, one day, they will remember that our teacher sent us out to observe the sun and say something about it. That is why I moved them out. otherwise, you may be teaching without the children observing what you want to teach them. (Dickson)*
	Peer support for learners with special needs	… They noted that pairing children gives others the opportunity to provide reading and writing support for the vulnerable ones. Teachers said the following about SEN preferences and adopting the peer support learning approach: *Some even prefer writing for them so they can complete the day's work. So, he will be relying on that friend. (Cecelia)*
	Role-play as a means of stimulating learning	… The role play was structured in a way that the actors followed the strict directions of the class teacher. The role play was considered an effective approach to teach contents that require performing multiple activities at the same time. According to the teacher, the role play approach "stimulated learners interested and promoted activity because learners

		had to perform actions and talk at the same time" (Cecilia).
	Deficit and strength-based teaching approach	… Teachers acknowledged that the learners with special needs in their classes had interests and special abilities such as writing and drawing. These abilities were seen as their strengths through which they could be engaged. For example, class teachers noted that, *She (child with SEN) likes writing a lot. So, when you give her that, she'll concentrate on that." (Victoria) Similarly, "He (John- learner with special needs) becomes happy. Even his friends without special needs, sometimes go to him for their work to be done. Because he knows how to draw, he assists them. So, when it happens like that, he becomes happy. You see him smiling and happy, but when it comes to the other subjects, he doesn't talk. (Ocquaye)*
	Differentiating learning or adopting the Pull-out strategy	In a case class (Agnes') class members were put in and were asked to produce sketches on a subject matter. Learners with special needs, on the other hand, answered objective questions: *…Those who will draw to my satisfaction will get the best mark ... It is a group work. The learners with visual impairment will not participate in the drawing. They will list the names of the leaders of the Big Six… In which year was the UGCC formed?* *That is the question I gave them, because they can't draw, I gave them in a question form so that they will also give me something to show that they have learnt and they understood my lesson very well (Agnes)*
	Developing lessons through songs	One of the motives for using songs and rhymes during lessons, as expressed by the participants, was to draw learners' attention to the lessons. Teachers also engaged in singing and dancing in class to make classes active. For example, *Initially, they will draw the attention and then their interest in whatever we are going to do. Maybe they have finished with the previous lesson; they are tired; they have sat for too long. So, when you bring in songs, they get up to sing and they become active. (Victoria)* *I use the song to make them active. (Oforiwaa)*
	Developing lessons using prescribed pedagogical approaches	*It's a trend we are following. With the literacy, it's different from the rest. We always start our lesson with dialogue. It helps pupils to improve their speech. If someone happens to be shy, it also helps... I followed that trend. We started it last week. Every day, we take 2 lines… It's a trend, the learning programme. (Mariam)*
	Promoting cooperative learning through group learning	*Teacher: Are you asking your friend? Pupils: Yes, madam...Teacher: Then ask him or her: Can I use your crayon please? Pupils: Can I*

		use your crayon, please? Teacher: Which one, please? Pupils: Which one please? Teacher: The blue crayon, please. Pupils: The blue crayon please." (Sarfoa)
	Developing and maintaining connections in lessons	*Teacher: Now, learners, I want you to look round the compound and tell me some of the things you see around, or when you were coming to school, what are some of the things you saw this morning? Pupils: Trees, buildings, cars…Teacher: Now, look at the JHS. You could see that some of the teachers are sitting under the tree. Why are they there? Because of the sun. So, the tree saves us from sun rays. (Oquaye)* *The teachers thought that this approach helps learners to easily relate to learning and recall what had been learned, "will help him to recognise it when he sees it. We talked about the importance of trees, so when he sees trees, he will know that this is what we can get from it. That is how I could include him in this lesson. It will help them to know the actual benefits of trees. (Ocquaye)*
• Promoting lesson accessibility through multiple communication techniques	Using speech, text and concrete materials	*…teachers presented lessons with pictures, sketches and real objects such as plants. For example, Sarfoa (Primary three teacher) used pictures of a marketplace, community centre, chapel and mosque to deliver a lesson about "Important places in the community."* Ocquaye used a plant to present his lesson on the importance of trees in the environment.
	Adapting learning materials • The use of real-life materials to promote practical learning	The plant was used to help learners identify parts of a tree, their functions and how to ensure their survival. For example, *Teacher: Then, let's go to how to care for transplanted plants or seedlings. Let's take this as our seed. This one, I took it from the compound; I am going to plant it. After planting, how to make sure that this plant does not die but survive...* *When you use real objects in your lesson, it makes the lesson easy for them to understand. For example, the plant I brought to class, most of them have not seen it before. They have heard about it. They don't know the parts so when I brought them to the class, they were able to see and can recognise it when they see it…(Ocquaye)*
	Enhancing understanding and reinforcing learning using visual TLMs	*Pictures and sketches were the two main visual teaching and learning materials used by teachers to convey information and support comprehension.*

		Teacher: Look at this picture here (teacher shows a picture to the class). Teacher: What are they doing here? Pupil: They are pushing boat. Pupil: They are pushing ship. (Oforiwaa) *I want them to know that what we have discussed, this is how it happens. So, we draw it on the card. Water vapor going up, getting into the atmosphere and falling as rain, also will help them to understand the topic more. (Oforiwaa)*
	Textbooks as structured resources for knowledge delivery	*Teacher: Okay, listen. We are going to read a passage, and the title is 'A dog and a Hen… (Pupils were called on, at random, to read portions of the passage in turns) … Pupil: Dog and hen. A dog (Bodome) and a hen (Akukobaa) were once friends. They served the same master (Nimpa). One day, Bodome and Akukobaa found each other in a sad mood*... (Agnes) *I told them that "If you don't have the book, join your friends because the textbooks were not enough. It got to a time that if it's reading, we will read the passage for them, and they will braille themselves. So, as we are reading, they will be following with what they braille." (Agnes)*
	Using learners' local language	The English Language was used mainly to provide information about objectives and the topic for discussion. For example, *So, this afternoon, we are going to look at how the British adopted the Indirect Rule system." (Cecilia)* *"Okay, today, we are moving on to LCM, which means what? (James)* Teachers used the local or heritage language to enhance understanding of the subject under study. Teachers argued that most of the learners would not benefit from the lesson when only English Language was used. *For them to understand better. Not all can understand the English Language well. Some are coming from villages, so if you don't mix it up, they won't understand what you are teaching. So, when you mix, they will understand a little and I think it is good for them. (Victoria)*
• Encouraging learners' action using variety of assessment techniques	Individual versus group assessment	This was done mainly through questions and answers. For example:

		Teacher: For your exercise, you are going to summarise the passage we have read, not more than a page. Do you understand what summarise is? (Agnes) *A separate assignment: they will do it, but this one is a group work, so they will involve them. When it comes to drawing, I have not seen them drawing before, and they should also do something for me to mark. That is the question I gave them, because they can't draw, so I gave them in a question form so that they will also give me something to show that they have learnt, and they understood my lesson very well (Agnes).*
	Peer assessment	*Now you know what to do. Give the books back to the owners. Write the correct words below what you have written. 6 out of 6 Drop all your pencils. 5, okay, you have also done well. 4, 3, 2, 1, be on your feet. All right. Now, write the correct word below what you wrote. Don't erase anything. (Mariam)*
	Differentiating assessment	The exercises given to the learners with special needs depended on their ability levels as determined by the class teacher. "The learners with visual impairment will not participate in the drawing. They will list the names of the leader of the Big Six." (Agnes) The following questions were written on the board: 1. Write the names of the Big Six. 2. In which year was the UGCC formed? *…When it comes to drawing, I have not seen them drawing before and they should also do something for me to mark. That is the question I gave them, because they can't draw, so I gave them in a question form so that they will also give me something to show that they have learnt, and they understood my lesson very well. (Agnes)*
• Building support for learners with special needs through creative collaboration	Working with resource teacher	The majority of the class teachers admitted that they did not involve resource teachers in the planning process. *In the lesson planning and delivery, to be frank, he doesn't get involved. But sometimes he comes for the child to their end and then they will give them individual tuition; find out their problem and refer them to the necessary centres for assistance. (Cecelia)* …the resource teachers monitored the work and progress of the learners with special needs and ensured the welfare of learners with special needs in their respective classes. *The resource teacher normally comes and monitors how things are going in the classroom, because when they came, I made*

		him know that this is the problem in the class. So, he also accepted it, called her and then also tried to know one or two things about it to verify what I was saying…
	Working with other teachers	Colleagues provided information about learners with special needs: *Especially the KG" madam. That was where I got the information from. She told me – 'This is how she is.' That is why I also called her grandma. She told me that she is a special girl. So, I also have to notice some one or two things; know how she behaves and that. Ok, if I don't understand anything, I go to class 2. If I have any problem concerning this girl, I go to class 2. We share ideas and see which will help. (Victoria)* Colleagues as resource teachers/persons in lessons: *Sometimes I give them work that they are to present in class, and then they are graded. So, in presentation, I use about 2 or 3 teachers to come and sit down and then assess. So that it won't be biased; everything will be fair. (James)*
	Working with special needs learners and typically developing peers	*… the typically developing peers were involved in providing support for learners with special needs in different ways. The typically developing peers were either paired with learners with special needs or assigned to help them….*
The rationale for teachers' inclusive pedagogical practice		
• Barriers to effective inclusive pedagogical practice	Human and material resource challenges	*One teacher handling about 16 classes. We have two streams. He is the only person doing that when you come to this school and other schools. So, if we can get more teachers to assist him, it will be good. (Ocquaye)* *The books were not enough to reach table by table. That is why I do it that way, so that they would all have a copy of the book. …We don't have the exact provision that will really help them to grasp what they need to know. Last time, the resource teacher told me there was something he can do for them, and I told him to do it so I can pay him. I know that the child needs this, but the provision is not there so I ignore it. When we come to writing, writing* aids that will help them are not available" (Sarfoa)
	Work overload, large class size and time constraints	*I don't have specific time for one person who is having problem. I have to move fast because they are many. I have to give 3 exercises; you have to mark the work of 60 pupils before you move on to the next lesson. So, it makes us rush, otherwise, you cannot finish teaching the topics within the term. (Dickson)*
	Unfavourable physical school and classroom environment	*…The environment is not conducive for them. As I said earlier, we try encouraging them to walk alone to know where they are, but here is the case, our school environment is not flat…*

		they have been falling all the time. When it rains too, it's bad... (Agnes)
	Challenges resulting from characteristics and conditions of LWSNs	*You call her; you ask her question, and she won't even be willing to answer question when you ask her. Like what I did to the kids yesterday, sometimes they won't raise their hand, then I call them. But for her (a learner with special needs), it was as if we were forcing her. So, for somebody like her, I even told the resource teacher that when I come to class and teach, I would involve her, but I won't pay much attention on her.*
	Limited professional development opportunities and low self-efficacy belief	*No, I don't have all the skills. I have not been well trained. (James)* *No, I don't, so I need training for us to position ourselves better to handle such situations. (Dickson)*

Appendix D: Participant Information Sheet

Name of department: School of Education
Title of the study: Inclusive Education in Ghana: Understanding inclusive pedagogical practice of primary and junior high school teachers in the general education classrooms.
Introduction
My name is Novignon Nicholas, a Ghanaian and currently studying for my Doctor of Philosophy degree in Education at the Department of Education, School of Humanities and Social Sciences, University of Strathclyde, 16 Richmond Street, Glasgow G1 1XQ.
What is the purpose of this research?
The purpose of this study is to explore the nature of the inclusive pedagogical practice of teachers in the mainstream schools. The research seeks to understand how teachers in the general education classrooms enact and develop their inclusive pedagogical practices while they seek to provide equal learning opportunities for all learners in the inclusive classroom. The study will provide the chance to document some pedagogical practices that teachers in the inclusive settings are developing.

Hence, the current study does not seek to evaluate teachers' work, or inclusive education in Ghana. It will contribute to knowledge about practices that could enhance inclusive education.

Do you have to take part?

Participation in this study is voluntary. Hence, the decision to participate in this study is ultimately yours. You are at liberty to refuse to participate in the study or withdraw. Any decision you make has no negative effect on your personal or professional life.

What will you do in the project?

If you agree to participate in this study, the researcher will undertake two separate non-participant observations of your lessons. You will also be requested to participate in two interviews, which will be scheduled after the lesson observations during break, in order to avoid interruptions with your classes. Each observation and interview will last no more than one hour. The lesson observations will be conducted in your classrooms and the interviews held at the school premises. Pictures of your lesson plans for the selected lesson and teaching artifacts used in the delivery will be taken to allow for careful study. However, we will ensure that no aspect of the documents will disclose your identity.

Why have you been invited to take part?

Participants in this study are teachers and resource teachers. You have been selected to participate in this study because you teach in a regular education classroom (Primary/ Junior High departments); You are involved in teaching all children including those with special needs and possess the necessary experiences to provide adequate data relating to the topic understudy.

What are the potential risks to you in taking part?

Some learners and teachers may feel uncomfortable with our presence. This may lead to some anxiety among them. In line with this, I will endeavour to properly introduce myself to all members of the school community. My identity can also be verified using the contact details provided at the end of this document. To avoid the spread of COVID-19, all protocols and school-related rules will be strictly adhered to.

What information is being collected in the project?

The observations will explore the pedagogical approach used to teach, the practices that you engage in to include all learners in your lessons and the nature of classroom interactions. The interviews will explore further, why certain approaches are used and other things that occur during lesson delivery. The documents collected will help to probe how you prepare to include all learners in lessons. Other personal information that will be collected include your gender, age and your years of service in your current position.

Who will have access to the information?

The data generated will be transcribed verbatim and crosschecked with you. During analysis, the data you provide will be anonymised and treated with confidentiality. Pseudonym will be assigned to your name. Any information that discloses your identity will not be added during analysis. No other individual except the research team will have access to the data generated.

Where will the information be stored and how long will it be kept for?

Transcribed data will be stored on the University of Strathclyde's secure server. The documents will be password protected. The University's systems are protected by a password, which will allow the data to be accessible only to the research team. The data will then be kept for five years and securely destroyed afterwards.

Thank you for reading this information – please ask any questions if you are unsure about what is written here.

What happens next?

For enquiries, or further information about this project please contact the research team on the addresses provided below. You may either send an email, call the telephone numbers or request a meeting (Zoom or any other means) for briefing.

Your attention to this information is duly appreciated. You will be required to sign the consent form if you agree to participate in the study. After the research is completed, a research briefing will be organised for participants to share the output of the study. Articles generated from the research output will be made available.

Researcher contact details:

Name: Nicholas Novignon
Institution: University of Strathclyde, 16 Richmond Street, Glasgow G1 1XQ
Department: School of Education
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This research was granted ethical approval by the Department of Education Ethics Committee, University of Strathclyde.

If you have any questions/concerns, during or after the research, or wish to contact an independent person to whom any questions may be directed or further information may be sought from, please contact:

Secretary to the University Ethics Committee
Research & Knowledge Exchange Services
University of Strathclyde
Graham Hills Building
50 George Street
Glasgow
G1 1QE
Telephone: 0141 548 3707
Email: ethics@strath.ac.uk

Appendix E: Consent Form for Teachers

Name of department: School of Education
Title of the study: Inclusive Education in Ghana: Understanding inclusive pedagogical practice of primary and junior high school teachers in the general education classrooms.

- I confirm that I have read and understood the Participant Information Sheet for the above project and the researcher has answered any queries to my satisfaction.
- I confirm that I have read and understood the Privacy Notice for Participants in Research Projects and understand how my personal information will be used and what will happen to it (i.e. how it will be stored and for how long).
- I understand that my participation is voluntary and that I am free to withdraw from the project at any time, up to the point of completion, without having to give a reason and without any consequences.
- I understand that I can request the withdrawal from the study of some personal information and that whenever possible researchers will comply with my request. This includes the following personal data:
    - audio recordings of observation that identify me;
    - audio recordings of interviews that identify me;
    - pictures that identify me;
    - my personal information from transcripts.
- I understand that anonymised data (i.e. data that do not identify me personally) cannot be withdrawn once they have been included in the study.
- I understand that any information recorded in the research will remain confidential and no information that identifies me will be made publicly available.
- I consent to being a participant in the project.
- I consent to being audio recorded as part of the project.

(PRINT NAME)	
Signature of Participant:	Date:

Appendix F: Observation guide

Name of Teacher (Pseudonym):
Name of School (Pseudonym):
Class: Date: Time:
Research Questions:

How do teachers enact and justify their inclusive pedagogical practice in regular education classrooms in Ghana?

Sub-questions:

- How do teachers conceptualise inclusive pedagogy?
- What is the nature of teachers' inclusive pedagogical practice within a regular classroom context?
- What is the rationale behind teachers' inclusive pedagogical practice?

Coverage of the observations and interviews:

- What is being taught.
- Inclusive pedagogical approaches/ practices being adopted.
- How and why those inclusive pedagogical practices are used.
- Classroom Dynamics.
- Learners' characteristics
- Who else is involved in teaching and how do they contribute to lessons?

Specific Guidelines to Lesson Observation	Observation Notes	Remarks
Activities • What subject/ knowledge is being taught?		
Teaching Approach 1. What strategies are adopted to engage all learners, especially those with special needs? • What actions do teachers take to sustain the interests of all learners? • What strategies are taken by the teacher to enhance the learners with SENs' involvement in the lesson? 2. How do teachers present content to all learners? • What means do teachers display what is being learnt to the class?		

3. How do learners express what they learn/ teachers evaluate pupils' learning? • How are learners' (mainly with SENs) work evaluated? • In what ways do teachers communicate learners' feedback? • How do the feedback and ways they are communicated help learners to improve what they do?		
Nature of collaboration with other professionals 1. How are other professionals such as resource teachers involved in lesson preparations 2. In what creative ways do teachers work with others during lessons? 3. In what ways do teachers identify		
Classroom Interaction 1. The nature of interaction within the classroom. • Who is involved in the interaction? • How is interaction carried out? • How do teachers promote classroom interaction? 2. How are others without SENs worked with in class?		
Other observations 1. Where and how do learners with special needs get help when needed? 2. The general belief held about the ability of children with special needs to learn 3. Evidence of commitment to support all learners including those with special needs.		
The nature of the classroom environment.		
The characteristics of learners in the classroom.		
Notes on Documents 1. Lesson plans 2. Artefacts and how they are used.		

Appendix G: Interview Drafts for Teachers

Name of Teacher (Pseudonym):
Name of School (Pseudonym):
Class: Date: Time:
Research Questions:

How do teachers enact and justify their inclusive pedagogical practice in regular education classrooms in Ghana?

Sub-questions:

- How do teachers conceptualise inclusive pedagogy?
- What is the nature of teachers' inclusive pedagogical practice within a regular classroom context?
- What is the rationale behind teachers' inclusive pedagogical practice?

Questions

1. Please share with me some of your experiences about teaching children with diverse needs in the same classroom.
2. How do you identify learners with special needs in your classroom?
3. How does the presence of persons with special needs affect your lessons, or your teaching approach?
4. How would you define or describe inclusive pedagogy?
5. What teaching strategies do you adopt to include persons with special needs in your lessons?
6. Why do you use the strategies or approaches?
7. Why do you use the artefacts in the ways you did?
8. What role does the resource teacher play in the learning process?

Appendix H: Sample of an observation note

Lesson Observation
Date: 17/03/2022
Subject: Mathematics
Topic: Money
Teacher: Female
Class size: 51
Class: Primary 1
LWSNs: 1
Characteristics: ID, reading and writing difficulties
Lesson Introduction
The teacher started by teaching the learners how much change they would receive when they bought 30 pesewas worth of a product and handed 1 cedi to the storekeeper. Some learners responded- 20 pesewas, while others said 70 pesewas. The teacher called for other views. Learners mentioned 20 pesewas, 80 pesewas …
The main lesson activities
Using TLM
The teacher showed 1 cedi to the class. The teacher asked the LWSNs to give the answer. She took her time to explain the questions to the LWSNs and asked the question.
Rhymes were used to perform activities such as subtracting pesewas from the amount at hand. Teacher kept reminding learners, don't forget your pesewas. She

Strategies used by the teacher
1. one on one support
The teacher went round the class during lesson delivery to observe what learners were writing. She asked learners to correct errors. For example, add your 'P' [Pesewas] to your answer. She encouraged learners, including LWSNs, to write down answers. Learners whose additions were wrong were asked to correct them. She did this by approaching the learners in a friendly manner.
2. Teacher used direct teaching/explanation in the lesson
2. The use of several examples and illustrations
3. Questions and answers
Questions were asked often during the lesson. The teachers' questions required answers from learners. For example, if you take 30 pesewas from 1 cedi, what will be left?
Questions were asked to find out if learners understood what was being done.
Other questions were asked to guide learners to write the correct letters, words or answers. For example, is this correct?
Some learner asked questions to find out what to write or whether their answers were correct.
Although the LWSNs did not ask any questions during the lesson, the teacher directed some questions to her. In most cases she was unable to answer the questions. However, the teacher took time to explain the questions and guided her to give an answer. The teacher accepted all answers given by her but asked TDPs to give the right ones, in most cases.
4. Brainstorming
The teacher gave examples and allowed all learners to think through them and suggest answers. For example, 'If you have 1 cedi and buy something for 30 pesewas, how much will be left?
5. Repetition
The teacher repeated most examples, words, sentences, questions and answers many times.
6. Focus on the LWSNs

Because the LWSN was easily distracted, the teacher paid a lot of attention to her. She directed questions to her, mentioned her name to answer questions or find out if she understood it, participated in activities such as holding the TLM and mentioning answers.

7. Use of L1

The Twi language was used throughout the lesson. It was used to give explanations to learners. The English language was used while mentioning numbers, for example, 1, 20, 70. It was sometimes used to give instructions about learners sitting, standing, etc. Mostly when used, the Twi was used to explain further.

7. Lesson evaluation

Evaluation went on during the lesson. After every example, learners were asked to provide answers. It was done mostly orally for the LWSNs as she had problems with writing. During the lesson, learners were asked to write answers in their books, while the teacher went round to observe what was being done.

Summary

The lesson ended with the reading of a short passage. The teacher read the passage for learners to repeat. Two TDPs were invited to read while others repeated it. The LWSNs then raised her hand to read. Although she struggled to read, the teacher guided her to complete it.

The teacher finally took learners through words starting with 'K' and 'D'

The teacher asked oral questions based on the short passage.

Using TLMs

The 1 cedi note, 20 and 10 pesewas coins were used as TLMs in the lesson. Learners felt the TLM as they demonstrated subtraction and addition. This was done throughout the lesson. Everyone, including the learner with SEN, got the chance to touch and have a feel of the TLM. The teacher spent extra time to get the SEN child to participate in the lesson.

Presentation of information

Information was written on the board (visual) and read out (audio). Learners got the chance to touch the TLM while the teacher explained the activity.

Support for LWSNs

- Peer support

TDPs seemed more accommodating as the LWSNs pulled their exercise books, pencils, but they did not engage in any fights.

The TDP sitting close to her tried, on some occasion, to tell her what the right answer was and asked her to say it. Example, 'This is correct, say it.'

- Teacher One-on-one support

The teacher moved towards her most of the time. The teacher spent time trying to explain the activity to her. Sometimes, this was done 2 to 3 times. Even when the LWSNs did not get the answer right, the teacher appreciated her efforts by saying good and patting her shoulder.

Classroom interaction and relationships

Learners' views were sought for most of the time. For example, 'What is the answer?' 'Is it correct?'

When the teacher noticed distractions from other learners, she quietly asked them to sit.

The atmosphere was a friendly one where all learners were at liberty to ask the teacher any question or give suggestions and she took time to answer them.

Most of the time, she used positive reinforcements such as 'Clap for her' and 'good' to motivate learners.

Other observations

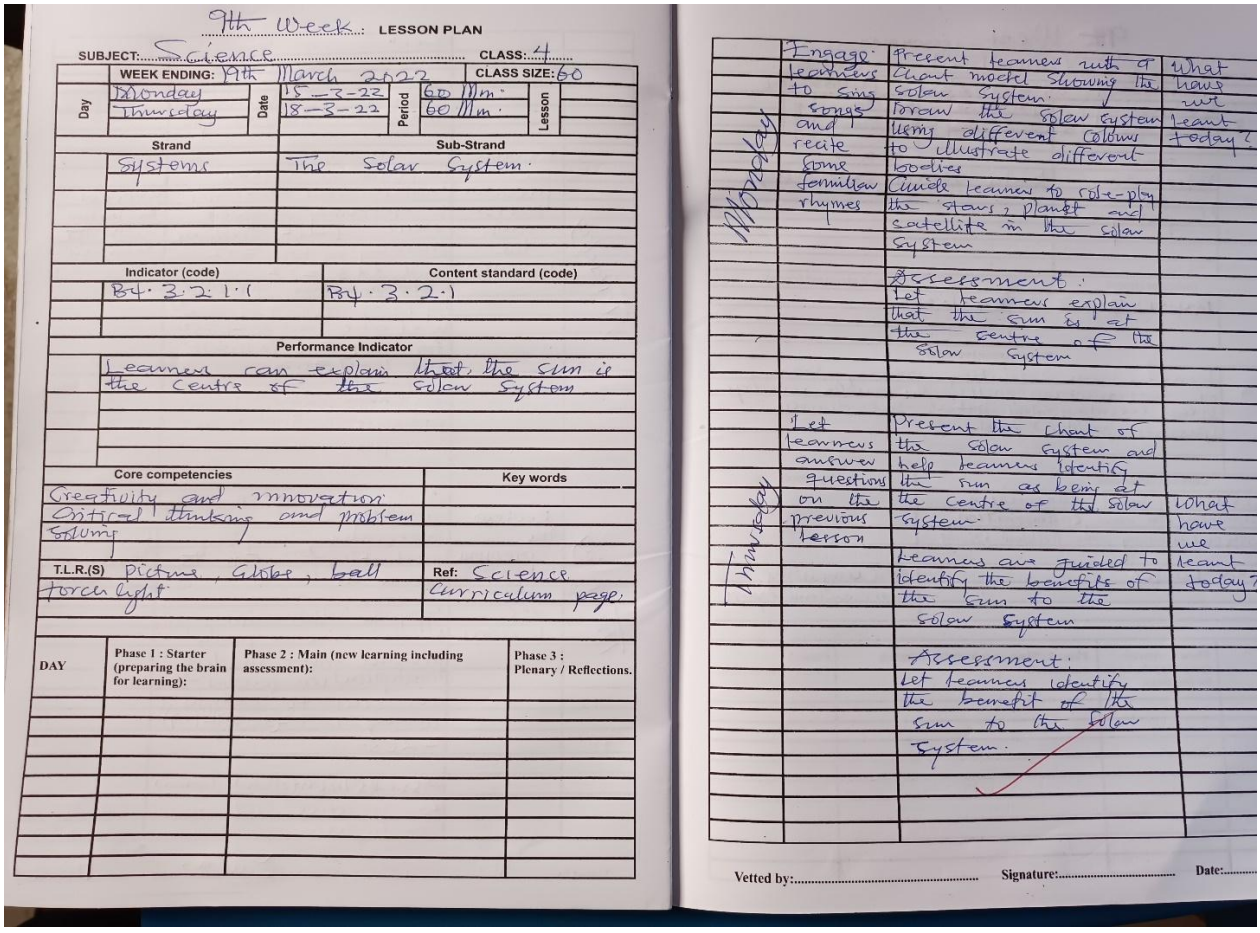
The LWSNs were easily distracted and dozed off sometimes. However, the teacher continued to mention her name often to gain her attention.

LWSNs went round picking pieces of chalk while the lesson was going. The teacher sometimes asked or held her to her seat, but other times did not bother, continued teaching.

Class organisation or environment

The teacher seemed to have control of her class. Although she tried to get learners to pay attention, the learners were free to contribute and suggest answers. The classroom was organised with learners sitting in pairs. The learner with special needs sat in the middle, front row of the class, facing the teacher directly.

Appendix I: Sample of a lesson note



9th Week LESSON PLAN

SUBJECT: Science CLASS: 4

WEEK ENDING: 9th March 2022 CLASS SIZE: 60

Day	Date	Period	Lesson
Monday	15-3-22	60 Mn.	
Thursday	18-3-22	60 Mn.	

Strand: Systems

Sub-Strand: The Solar System.

Indicator (code): B4.3.2.1.1

Content standard (code): B4.3.2.1

Performance Indicator: Learners can explain that the sun is the centre of the solar System.

Core competencies: Creativity and innovation. Critical thinking and problem Solving

Key words:

T.L.R.(S): Picture, Globe, ball, torch light

Ref: Science Curriculum page:

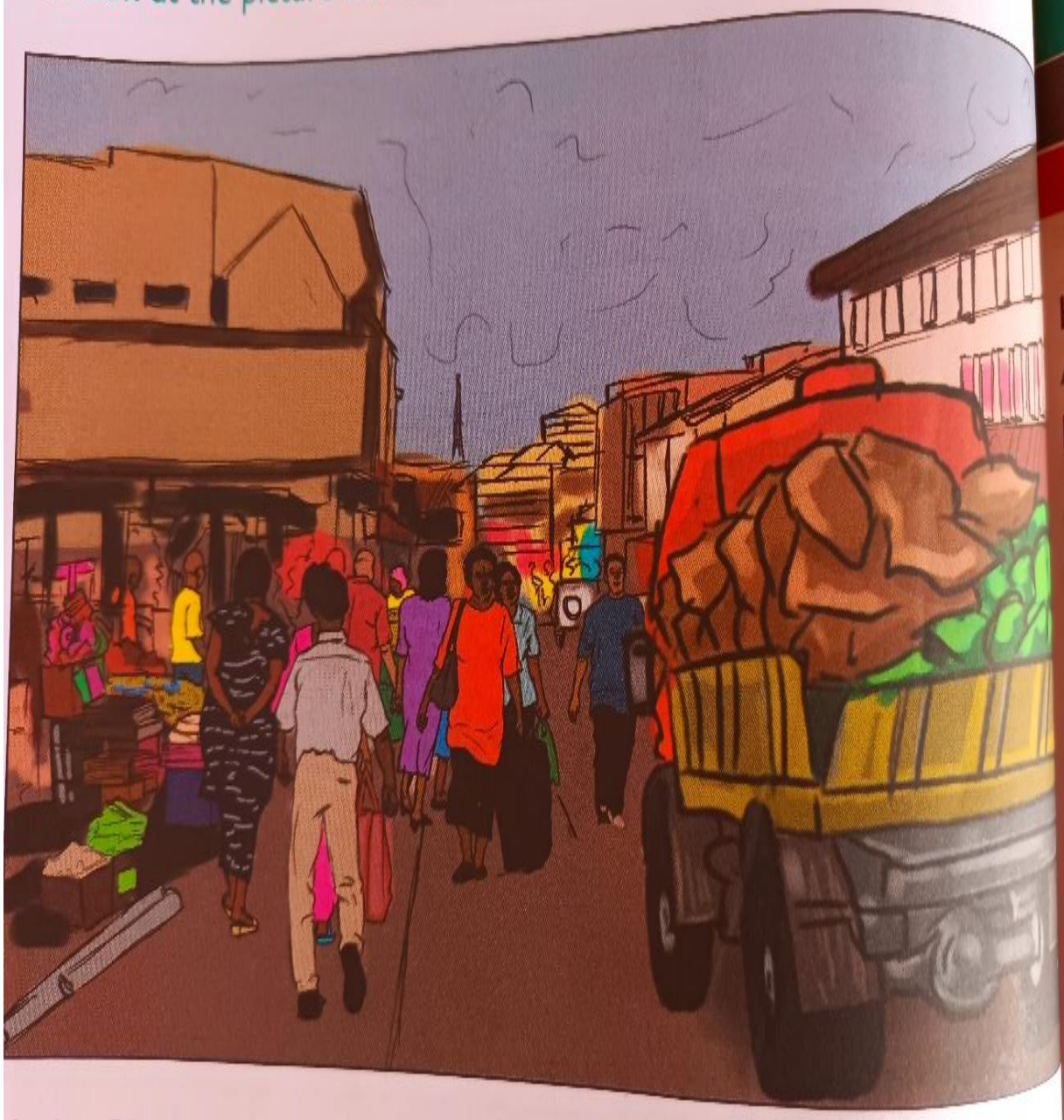
DAY	Phase 1 : Starter (preparing the brain for learning):	Phase 2 : Main (new learning including assessment):	Phase 3 : Plenary / Reflections.
Monday	Engage learners to sing songs and recite some familiar rhymes	Present learners with a chart model showing the Solar System. Draw the Solar System using different colours to illustrate different bodies. Guide learners to role-play the stars, planet and satellite in the Solar System. Assessment: Let learners explain that the sun is at the centre of the Solar System	What have we learnt today?
Thursday	Let learners answer questions on the previous lesson	Present the chart of the Solar System and help learners identify the sun as being at the centre of the Solar System. Learners are guided to identify the benefits of the sun to the Solar System. Assessment: Let learners identify the benefit of the sun to the Solar System.	What have we learnt today?

Vetted by:..... Signature:..... Date:.....

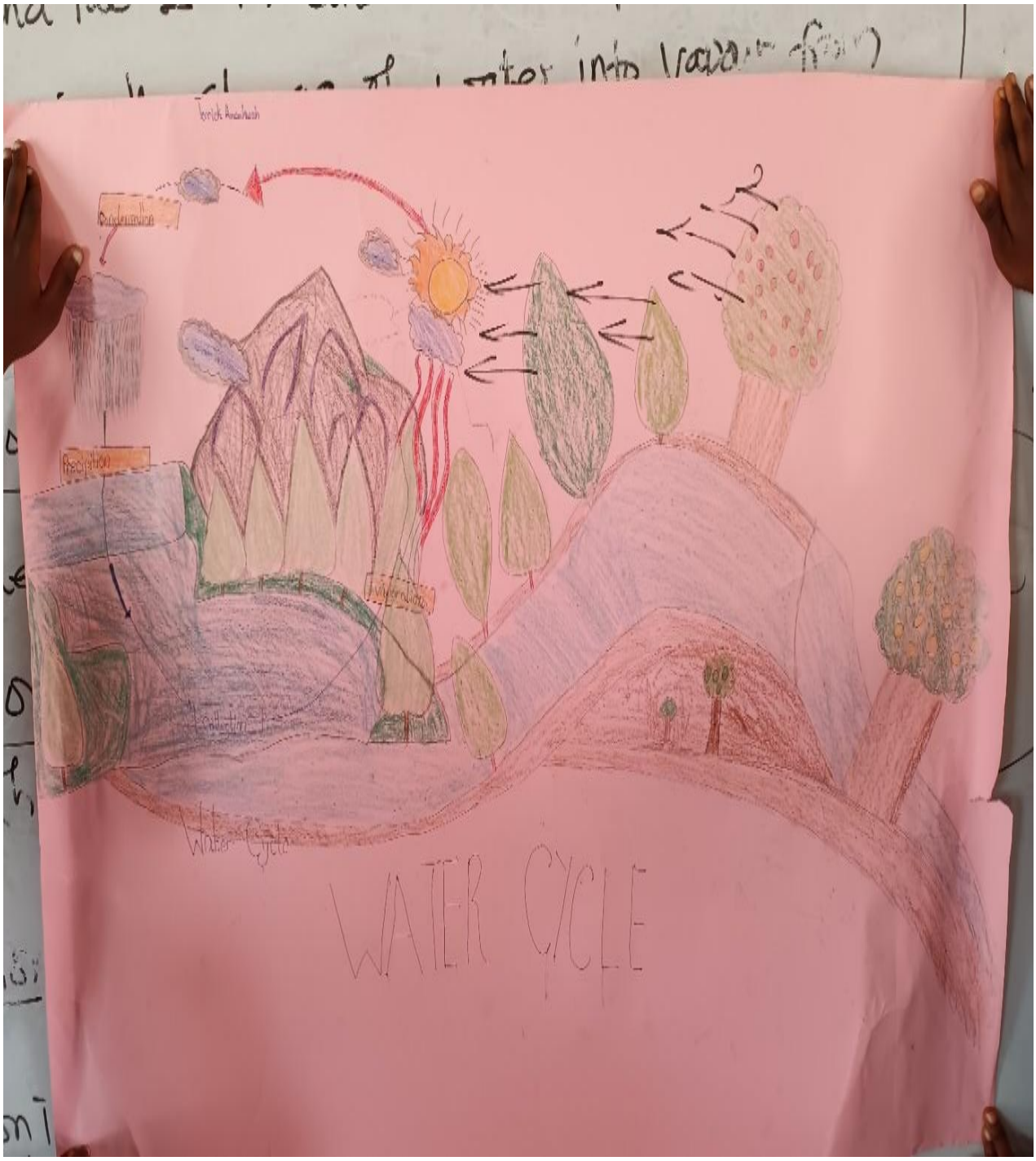
Appendix J: TLMs used in lessons


GH¢2
Two Cedis
GH¢2
BANK OF
GHANA

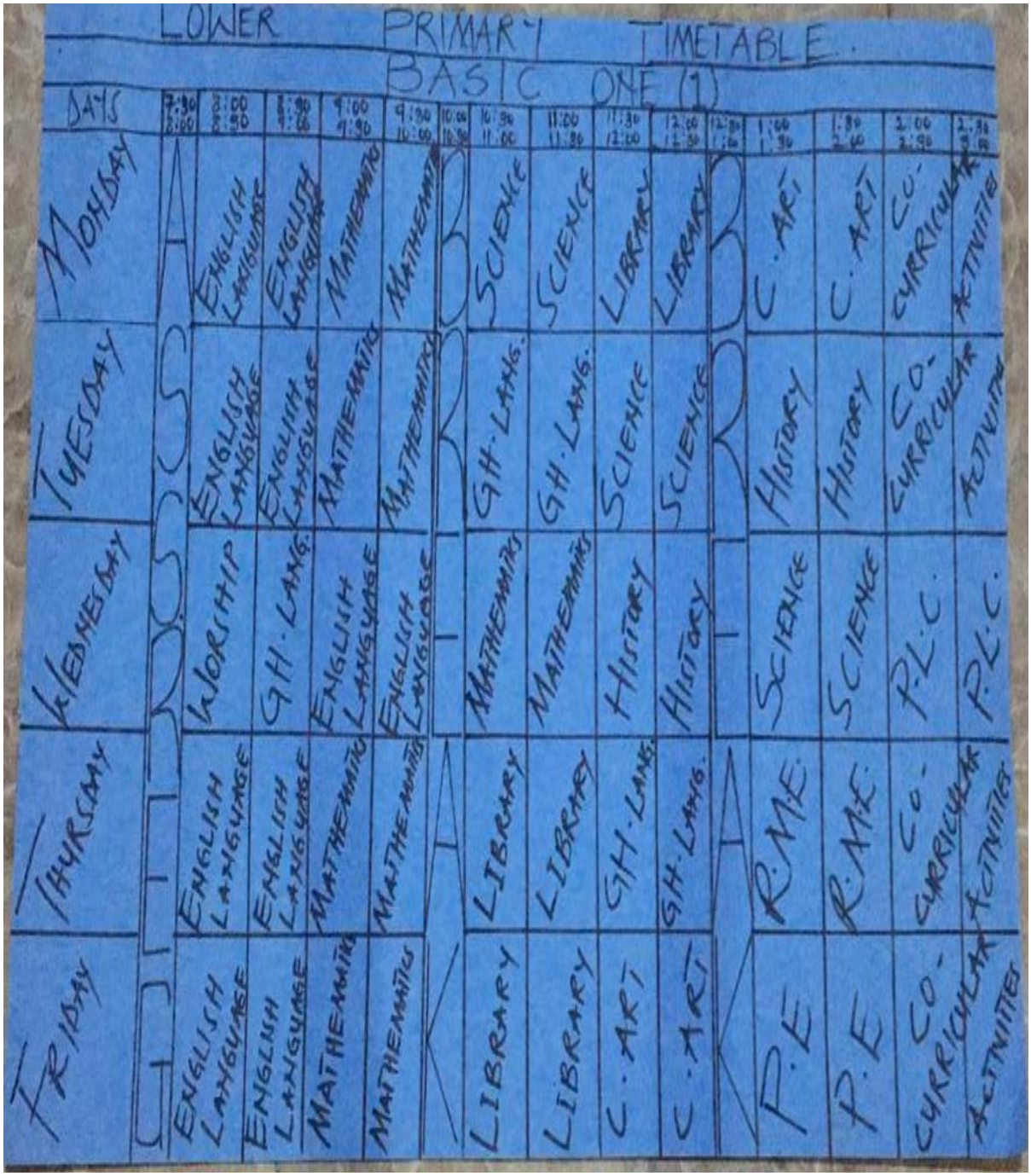
A. Look at the picture and talk about it.



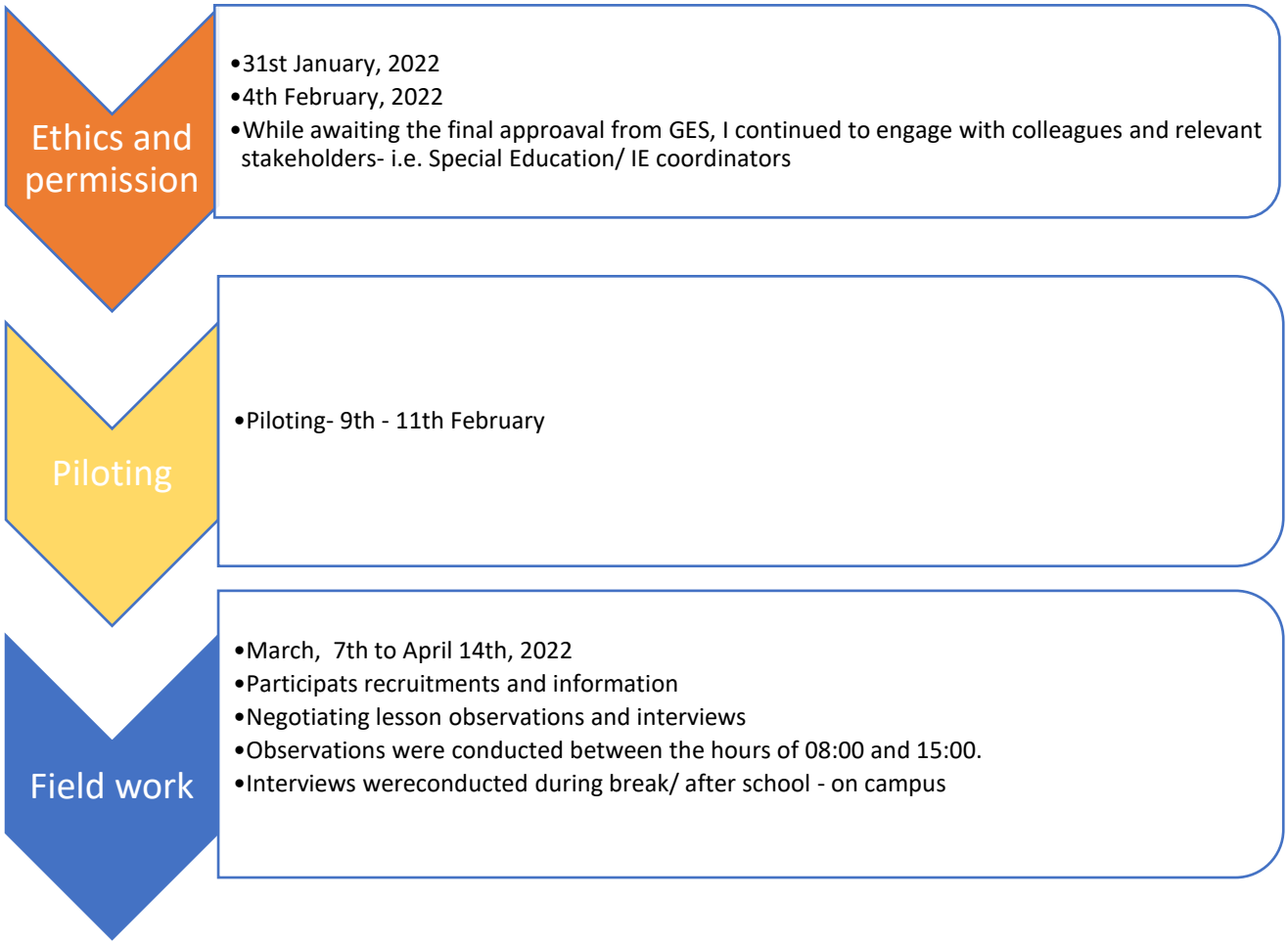
Market Place


Condensation
Precipitation
Evaporation
WATER CYCLE

Appendix K: Sample of School's Timetable



Appendix L: Timelines of field work



Appendix M: Map of Ghana showing the various regions