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UNITE DE RECHERCHE ET DE FORMATION  
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THE UNIVERSITY OF YAOUNDE I

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POST GRADUATE SCHOOL FOR  
HUMANITIES, SOCIAL AND EDUCATIONAL  
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RESEARCH AND DOCTORAL TRAINING  
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# The Impact of Pedagogic Practices on Effective Learning in Inclusive Classrooms in Pilot Inclusive Primary Schools in Mfoundi Division

A Dissertation Submitted in Partial Fulfilment of the Requirements for the  
Award of a Master's Degree in Education  
Specialty: **Educational Psychology**

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July 2023

## **CERTIFICATION**

This is to certify that this thesis entitled " The Impact of Pedagogic Practices on Effective Learning in Inclusive Classrooms in Pilot Inclusive Primary Schools in Mfoundi Division" submitted to the Department of Fundamental Teachings in Education, Faculty of Education in the University of Yaounde 1 is the original work of WIRTUM Divine BANBOYE, Registration Number 19P3636 and was carried out under my supervision. The work has been duly acknowledged and referenced.

Yaounde, the 15 June 2023



**MAINGARI Daouda**  
**Professor**

## **DEDICATION**

To my late mother Bernadette Wikom

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## List of Abbreviations

APEHM	Association of Parents and Friends of Mentally Handicapped Children
CBA	Competence-Based Approach
CBCHS	Cameroon Baptist Convention Health Services'
CWDs	Children with Disabilities
DEEWR	Department of Education, Employment and Workplace Relations
DI	Differentiated Instruction
EFA	Education for All
ESEDA	Ecole Spécialisée pour les Enfants Déficients Auditif-
ESSA	Every Learner Succeeds Act
ETSSP	Education and Training Sector Strategy Paper
GESP	Growth and Employment Strategy Paper
IDEA	Inclusion, Diversity, Equity and Access
IEP	individualized education programs
LRE	Least Restrictive Environment
MINAS	Ministry of Social Affairs
MINEDUB	Ministry of Basic Education
NGOs	Nongovernmental Organizations
OBA	Objective-Based Approach
PLWD	Persons Living with Disabilities
PWD	Persons with Disabilities
SDG4	Sustainable Development Goal
SEL	Social and Emotional Learning
SEN	Special Educational Needs
SLD	Specific Learning Disabilities
SPD	Services of Persons with Disabilities
SPSS	Statistical Product for Service Solutions
STEM	Science, Technology, Engineering and Mathematics
UDL	Universal Design for Learning strategy
UN	United Nations
UNCRPD	UN Committee on the Rights of Persons with Disabilities
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNICEF	United Nations Children's Fund
ZPD	Zone of Proximal Development

## Abstract

This study on “*The Impact of Pedagogic Practices on Effective Learning in Inclusive Classrooms in Pilot Inclusive Primary Schools in Mfoundi Division*” was carried out in Mfoundi Division of the Centre Region. It was based on the framework that pedagogic practices play an important role on effective learning in inclusive classrooms. Four research questions and four hypotheses were posited to guide the study. It was conducted with a sample of fifty three (53) teachers purposively selected from Govern Pilot Inclusive Primary Schools in Mfoundi Division. Data were obtained with the use of a questionnaire and an interview guide. Quantitative data collected were analysed using both the descriptive and inferential statistics. A regression method was used. Data were presented using tables and descriptive statistics like percentages, frequencies, and means. Correlation and the statistically more advanced method of simple linear regression was used in data analyses. Qualitative data were analysed using content analysis. Thematic analysis was chosen as the most appropriate method here since it represents the thematic content of qualitative data. Regression was used to test the hypotheses. Based on the evaluated data and the study hypotheses examined, the results show that the mean of all variables ranges from 3.22 for effective use of feedback in the classroom, 3.36 for Classroom Management Strategies, 3.37 for Teacher professional development, and 3.37 for inclusive teaching methods. Effective use of feedback has the lowest mean of 3.22. Teaching methods and teacher professional development had the highest average of 3.37. This indicates that the respondents agreed that these different facets were combined to contribute to effective learning in inclusive classrooms in government pilot inclusive primary schools in Mfoundi division. Based on these findings, it was recommended amongst others that teacher training curriculum in the teacher training colleges needs to be reinforced with aspects of special and inclusive education such as: inclusive teaching and learning methods, inclusive classroom management strategies, special education capacities such as brail, conventional sign language and others in order to enhance inclusion in our school systems. Equally, some suggestions for further research were made.

**Key words:** Pedagogic Practices, Pilot School, Inclusive classroom, effective learning.

## Résumé

Cette étude sur "*L'impact des pratiques pédagogiques sur l'apprentissage efficace dans les classes inclusives dans les écoles pilotes inclusives du département du Mfoundi*" était basée sur le cadre selon lequel les pratiques pédagogiques jouent un rôle important sur l'efficacité de l'apprentissage dans des classes inclusives. Quatre questions de recherche et quatre hypothèses ont été posées pour guider l'étude. Elle a été menée auprès d'un échantillon de cinquante-trois (53) enseignants sélectionnés à dessein dans les écoles pilotes inclusives du département du Mfoundi. Les données ont été obtenues à l'aide d'un questionnaire et d'un guide d'entretien. Les données quantitatives recueillies ont été analysées à l'aide des statistiques descriptives et inférentielles. Une méthode de régression a été utilisée. Les données ont été présentées à l'aide de tableaux et de statistiques descriptives telles que les pourcentages, les fréquences et les moyennes. La corrélation et la méthode statistiquement plus avancée de la régression linéaire simple a été utilisée dans l'analyse des données, tandis que les données qualitatives ont été analysées à l'aide d'une analyse de contenu. L'analyse thématique a été choisie comme la méthode la plus appropriée ici puisqu'elle représente le contenu thématique des données qualitatives. La régression a été utilisée pour tester les hypothèses. Sur la base des données évaluées et des hypothèses d'étude examinées, les résultats montrent que la moyenne de toutes les variables varie de 3,22 pour l'utilisation efficace du feedback en classe, 3,36 pour les stratégies de gestion de classe, 3,37 pour le développement professionnel des enseignants et 3,37 pour les méthodes d'enseignement inclusives. L'utilisation efficace du feedback a la moyenne la plus basse de 3,22. Les méthodes d'enseignement et le développement professionnel des enseignants avaient la moyenne la plus élevée de 3,37. Cela indique que les répondants ont convenu que ces différentes facettes étaient combinées pour contribuer à un apprentissage efficace dans les classes inclusives des écoles pilotes inclusives pilotes du département du Mfoundi. Sur la base de ces conclusions, il a été recommandé, entre autres, que le programme de formation des enseignants dans les instituts de formation des enseignants soit renforcé avec des aspects de l'éducation spéciale et inclusive tels que : les méthodes d'enseignement et d'apprentissage inclusives, les stratégies de gestion de classe inclusives, les capacités d'éducation spéciale telles que le braille, la langue des signes conventionnelle et d'autres afin d'améliorer l'inclusion dans nos systèmes scolaires. De même, quelques suggestions pour des recherches ultérieures ont été faites.

**Mots clés :** Pratiques pédagogiques, école pilote, classe inclusive, apprentissage efficace.

# CHAPTER ONE

## INTRODUCTION

Inclusive education is a global trend (Armstrong et al., 2019; Crispel & Kasperski, 2019) and an educational right that refers to the inclusion of learners with special educational needs (SEN) in general education settings (Pit-ten Cate et al., 2018). The term ‘special needs in education’ in pedagogy refers to children who differ socially, mentally, or physically from general learners to the extent that they require modifications of routine teaching practices in school for efficient learning to take place (Block et al., 2019). In inclusive classrooms, learners with special educational needs have the opportunity to learn with their peers without disabilities by receiving embedded, specially designed instruction (Lindner & Schwab, 2020). Inclusive education or practices vary because of countries' diverse implementation procedures and policies (Ainscow, 2020; Kouladoum, 2023; Tchombe, 2017). Commonly, inclusive education is defined in the literature as a practice (Alexiadou & Essex, 2017; Ambei, 2016), a procedure of systematic education (Dreyer, 2017) and a learning environment in which learners with special educational needs receive all necessary supports in learning and behaviour as based on their individual needs within the general education classroom (Ebontane, 2011; Tani & Nformi, 2016).

The inclusion of learners with special educational needs in general education classrooms has gained substantial global consideration in recent years (Armstrong et al., 2016; Bakaniene et al., 2022; Tanyi, 2016), especially after the establishment of the Salamanca Statement (United Nations Educational, Scientific, and Cultural Organization [UNESCO], 1994). After establishing the Salamanca Statement (UNESCO, 1994), governments established policies to improve the inclusion of learners with special educational needs in general education classrooms (Pit-ten Cate et al., 2018).

Developed and developing countries enacted the concept of inclusive settings where children with special needs receive teaching appropriate to their ability and interests without discrimination (Ainscow et al., 2020; Medan, 2020). All children with a range of special educational needs have access to mainstream primary and secondary schools/universities. Ordinary schools are still being reorganized in such a way as to make this possible (Tanyi, 2016). Besides, integrating children perceived to have special educational needs in regular school guides parents to make other choices for their children (Antoninis et al., 2020; Croll &

Moses, 2000; Education UNESCO, 1994; Norwich, 2014; UNESCO, 2001). Currently, there is progress in inclusive education to develop the ways of teaching and to eradicate impediments restricting the interest and performance of all children, capacities, and access to quality education; and elimination of all types of segregation in the learning environment to benefit all children (Ainscow et al., 2019).

Teachers are essential in the success of learners with special educational needs in inclusive settings as they are the implementers of inclusive practices in the classrooms (Tabot & Ojong, 2008). Current demands in schools require teachers to use the most effective teaching methods and practices to advance all learners' achievement in learning and behaviour (Chwab, 2021). Applying the most effective practices is particularly essential for learners with special educational needs in inclusive education settings (Brussino, 2020). Cook et al. (2018) indicated that although there is a wide range of effective practices and evidence-based practices (EBPs) established to address the needs of learners with special educational needs, these practices are not extensively implemented in an inclusive classroom by teachers (Cooper & Scott, 2017). Applying effective practices becomes more challenging with the increasing number of learners with special educational needs placed in an inclusive classroom and teachers' lack of confidence to use these practices (Alexiadou & Essex, 2016; McLeskey et al., 2018; Pit-ten Cate et al., 2018).

Ambei (2016) conducted a study to explore the effective variables for preparing inclusive education teachers. She indicated that collaboration, using research-based models, field experience, using effective practices, and EBPs are the main elements of inclusive practices. Additionally, while exploring supportive, inclusive practices for learners with severe disabilities, Tanyi (2016) categorized the practices under seven themes as follows: arrangements in teaching and instruction, classroom engagements, available support in inclusive classrooms, the form of support, type of activities for learners, learners' interactive relation with others, and opportunities for learners. Focusing on these variables in teacher preparation programs would help to increase the in-service teachers' preparedness to teach in inclusive classrooms. Thus, this study investigates pedagogic practices for effective learning in an inclusive classroom.

## **Background of the study**

This study's background comprises the historical, contextual, conceptual, and theoretical background.

### **The History of inclusive Education in Cameroon**

The history of inclusive education in Cameroon can be divided into four continuous phases, namely the pre-colonial, colonial, post-colonial, and contemporary. In Cameroon and in other countries worldwide, the treatment and acceptance of people with disabilities have evolved and continue to evolve with time.

**Pre-Colonial Era:** Attitudes toward people with disabilities have never been identical throughout Cameroon. This disparity is due to the diverse beliefs, customs, and traditions representing about 230 tribes divided into four socio-cultural groups: The Bantu, the Bantoid or semi-Bantu, the Sudanese and the Pygmies (United Nations [UN], 2008).

Historically, most of the tribes have been known to associate disability with a curse or ill omen on the family of the person. As a result, disability called for much pity toward disabled persons and their families. Disability, particularly severe cases, was mostly considered a burden or disgrace by family members and society (Oliver, 1990; Shey, 2003; Tohnain & Tamajong, 2014; Yuh & Shey, 2008). Learners with disabilities were treated as 'invalid' or outcasts and in need of very special protection (Tukov, 2008).

Parents and relatives mostly transmitted Knowledge acquired by children with disabilities at home. Tabot and Ojong (2008) attest that Cameroonians educated all their children before European explorers, traders, and missionaries. Children with disabilities, just like those without disabilities, were taught how to become productive members of society. (Tabot & Ojong, 2008).

**Colonial Era:** With the introduction of Christianity in the 1800s by Western missionaries, persons with disabilities started to receive more humane treatment and consideration through Christian schools and churches (Shey, 2003; Tukov, 2008). Individuals with mild disabilities started to receive education alongside those without disabilities and began to join the workforce. The missionaries who came to Cameroon brought with them the idea that any form of education must operate in the interest of faith, that is, church interest and doctrines.

Education was to start with children who were regarded as a nursery in which righteousness may be implanted (Tabot & Ojong, 2008).

A new level of consciousness and compassion for persons with disabilities was undoubtedly born by the new influence of Christianity. Schools, especially parochial schools, began to accept children with mild orthopaedic and visual impairments. The colonial administration partnered with churches to create and run the few existing schools, mostly parochial ones. Considering that only a few primary and secondary schools were in existence during the colonial period, the greatest concern of colonial leaders was to train a few nationals who could assist them in the education of learners with special education needs. However, educating learners with disabilities was not an issue of priority for a society which was immensely illiterate. Estimates indicate that by 1914 there were about 531 primary schools—mostly elementary schools—with enrolments of about 34,117 (Doh, 2007; Ngoh, 1987; Tchombe, 2001). Most of these schools belonged to the Baptist and Catholic Missionary Societies.

The leading religious groups in the spread of Christianity and Christian education were Baptists and Catholics. The determination by the churches to stop the exclusion of persons with disabilities from being educated was adamant despite their inability to access a greater number of individuals with disabilities. This decision is evident in the following 1989 declaration of the Catholic Missionary Societies, “...*all children have a right to be educated so that he or she can better achieve according to his ability and to serve the community in which he forms a part*” (Tabot & Ojong, 2008).

**Post-Colonial Era:** Cameroon’s independence in 1960 led to the creation of more schools and the education of leaders in different fields. The independence of the country led to the creation of several more primary and secondary schools and the first National University in the country. However, the first government efforts to educate children with disabilities were seen in the creation of “Rehabilitation Centres”, which provided mostly vocational-oriented education to children with disabilities (Tchnain, Fonkeng, & Nguesso, 2008).

The first schools created in 1972 were called *Ecole Spécialisée pour les Enfants Déficients Auditif-ESEDA* (Special School for Children with Hearing Impairments); and *Externat Médico Pédagogique-La Colombe* (Special School for the Mentally Handicapped Children). From 1975, the newly formed Ministry of Social Affairs was in charge of the formal education of learners with disabilities through these specialized centres. After the Ministry of Social Affairs



creation in 1975, a Department of National Solidarity was created to oversee the well-being of learners with disabilities. In collaboration with the Ministry of National Education, this department made strides in creating structures and funding vocational education programs for children with disabilities. In 1975, another centre, known by its French acronym as *PROHANDICAM* (*Promotion des Handicapés du Cameroun*) or Centre for the Wellbeing of Handicapped Persons, was created. Even though the reason d'être for these centres was not to prepare children with disabilities for eventual integration into the general education system, they prepared children with disabilities for vocational training for their eventual socio-economic integration into society.

To train young Cameroonians with visual impairments in arts and crafts, the Ministry of Social Affairs (MINAS) created the Rehabilitation Institute for the Blind in Buea, South West Region, called Bulu Blind Centre (MINAS, 1990). With the willingness of the Cameroon government to offer state grants to vocational schools and centres for the training of children and young adults with disabilities, many more centres were created. Churches, religious groups, and private persons have, since the 1980s, created more centres to provide education for children with disabilities.

In a UNESCO report titled *Review of the Present Situation in Special Needs Education*, information is given about the status of special education policies in 63 countries, including Cameroon (Hegarty, 1995). According to this report, the relevant legislation on special education in Cameroon is contained in laws passed in 1983 covering the protection of people with disabilities and a follow-up law enacted in 1990 to ensure the implementation of the 1983 law. This legislation stipulates multidimensional support for schools, special pedagogical assistance, training of specialized staff, and the development of curriculum materials for special education. Even though this law existed since 1983, the institutionalization of special needs learners has occurred since Cameroon's independence. Despite its limited curricula, specialized centres for the education of children with disabilities provided a strong base for Cameroon inclusive education. Today, most of these centres are owned by private individuals, churches, and nongovernmental organizations (NGOs), and they are mostly found in the cities (Tukov, 2008).

In Cameroon, the responsibility for special education is officially shared between the ministries of education (Ministry of Secondary Education and Ministry of Basic Education) and the Ministry of Social Welfare. There has been increasing pressure in recent years from newly

created organizations for the rights of persons with disabilities, human rights groups, the International Monetary Fund and the UN (UNESCO, 2009b).

### **Contextual background**

The 1983 law number 83/013 was the first legislation from the Cameroon government to protect educational and human rights for people with disabilities. As a follow-up, another law was passed in 1990, enforcing the implementation of the 1983 law (Biya, 1984). This legislation contains provisions for various grants to support special education schools, special pedagogical assistance, training of specialized staff, and the development of adapted curricula. Article 6 of the law specifically mentions government support for the education of children with disabilities by admitting them to public schools but also cautions that the extent of the support will only be according to available means.

On April 10, 2006, a meeting was held between the Ministers of Social Affairs and Public Works to ensure the smooth application of the 1983 Act to grant individuals with disabilities access to public buildings and of the full implementation of Decree No. 90/1516 of 26 November 1990. Many other laws have been introduced by ministers to enforce the July 21, 1983, law. Furthermore, the joint circular letter No. 34/06/LC signed on 2 August 2006 by the Ministers of Secondary Education and Social Affairs sought to facilitate the registration of children with disabilities or born to poor parents with disabilities in public schools. It also exempts these learners and their parents from paying registration and parent association fees (International Disability Alliance, 2011).

Another circular (No. 003/CAB/PM) from the office of the Prime Minister, signed on April 18, 2008, requested that all public building contractors adopt construction norms that accommodate persons with disabilities by facilitating their accessibility to schools, public buildings and facilities, and roads (International Disability Alliance, 2011).

The 2010 Law No. 2010/002 of April 13 emphasized the dispositions of the previous laws to cater to the needs of individuals with disabilities. This law insists on the welfare of disabled persons and psychological support, which according to section 17, will improve their self-esteem and strengthen relationships among persons without disabilities. Section 29 of this law facilitates access to education for learners with special education needs (Mbibeh, 2013).

Recently Decree No. 2018/6233/PM of July 26 setting the terms of application of Law No. 2010/002 of April 13, 2010, on the protection and promotion of persons with disabilities, in its article 3, provides that "education and vocational training of persons with disabilities are provided either in conventional training institutions and centres or in specialized training institutions and centres created or subsidized by the state according to the nature or degree of disability." Paragraph 2 of this article specifies that disability cannot be a reason for refusing admission or enrolment of a child in a conventional school or training centre. For exams and competitions, article 6 prescribes that disabled people should be given all the necessary support (teaching materials, technical aids, human support, etc.), granting them a third of the time and creating special examination centres for candidates with specific difficulties.

The concluding remark to be made here is that in as much as these laws may sound so good, their application is still daunting. Laws are only theory; their practice renders them visible, and the dream of all stakeholders in the inclusive set up is to see the laws more in application than simply on paper. In effect, the laws should be made policy. One of the challenges of the application of these laws remains the lack of qualified personnel, given that the schools of education engaged in teacher training do not provide learner teachers with enough skills/courses in inclusive education.

### **Conceptual framework**

**Pedagogy:** As a contested term, pedagogy entails activities that induce changes in the learner. Some authors have come up with various definitions for the term pedagogy as a concept. For instance, Powell and Pfahl (2018) consider it as a concept that deals with all a teacher does to influence learning in learners. Their definition places the teacher in a position of a 'director' of learning. Thus, Watkins' & Mortimore's perspective of pedagogy focus on ensuring that the teacher's goal is ultimately towards learning in learners. "The function or work of teaching: the art or science of teaching, education instructional methods" (Department of Education, Employment and Workplace Relations (DEEWR), 2009). Pedagogy refers to the interactive process between teacher/practitioner and learner, and it is also applied to include the provision of some aspects of the learning environment.

**Pedagogic practices:** Armstrong et al., (2019) conceptualizes pedagogic practice with a conscious, deliberate and participatory process implemented by an educational system or an organization in an attempt to enhance performances and results. Similarly, pedagogic practices

have been defined by Sanger (2020) as a sustained process whereby somebody acquires new forms or develops existing forms of conduct, knowledge, practice and criteria from somebody or something deemed to be an appropriate provider and evaluator. Pedagogic practices must thus, target the subject matter and the needs of the learners, learning theories, objectives, instructional methods, interaction, assessment, as well as strategy development (Rhim & Lancet, 2018). Some key issues worth considering have been indicated by Qvortrup and Qvortrup (2018) they include teachers' understanding of the various philosophies of education, knowledge of the principles and techniques of classroom management, knowledge of theories of learning and general principles of instruction, as well as general knowledge about learners.

**Inclusive classroom:** Inclusive classroom is a term used within Western pedagogy to describe a classroom in which all learners, irrespective of their abilities or skills, are welcomed holistically. It is built on the notion that being in a non-segregated classroom will better prepare special-needs learners for later life. According to Qvortrup (2019), the inclusive classroom is an educational space where all types of learners work and learn together. Learners of all learning levels, types, and abilities are in one room and receive the tools and instruction they individually need to access the curriculum. The inclusion model brings all types of learners together to reflect a more equitable and equal form of education (Van Mieghem et al., 2020). Furthermore, it also refers to the belief that all learners, regardless of labels, should be members of the same classroom (Brussino, 2020). The philosophy of inclusion advocates for the elimination of the dual general and special systems and instead supports the creation of a merged system that is responsive to all learners' needs. Peers (who may or may not have certain needs) in age-appropriate, general education environments. While this is the most common use, inclusive classrooms are evolving to ensure they are inclusive for different reasons, not just special education (UNESCO 2016).

**Special Education:** According to the general philosophy of Special Education (that all people can learn, regardless of their particular disabilities), the term special education is defined as a form of instruction that is designed to meet the needs of learners with disabilities so that learners with SEN can learn the same skills and information as other normal learners in the special school (Botha & Kourkoutas, 2016)

The definition of special education is centred on the teaching and learning procedure of learners with exceptional needs, such as learners with learning disabilities or mental challenges. An example of special education is the type of reading help that is provided to a learner who is

dyslexic (Special education dictionary definition, 2016). American Heritage dictionary defines special education as a classroom or private instruction involving techniques, exercises, and subject matter designed for learners whose learning needs cannot be met by a standard school curriculum (Booth & Ainscow, 2016).

**Inclusive education:** IE is a wider concept that requires fully organized rearrangement in terms of teacher training and educational performance, educational programmes, the content of the curriculum, and a reconfiguration of the environment settings of schools (Ianes et al., 2020).” “The fundamental principal of an inclusive school was defined by United Nations in 1994 as that, all children should learn together, wherever possible, regardless of any difficulties or differences they may have. Inclusive schools must recognize and respond to the diverse needs of their learners, accommodating both different styles and rates of learning and ensuring quality education to all through appropriate curricula, organizational arrangements, teaching strategies, resource use, and partnerships with their communities. There should be a continuum of support and services to match the continuum of special needs encountered in every school (UNESCO, 1994).”

The concept of inclusive education implies equal opportunities for all learners and children to access school education in mainstream schools without any form of discrimination. Educators contribute a lot to the success of inclusive settings by providing good teaching. And their support plays an essential role in accommodating all learners, including those with special educational needs (SEN) and disability, in ordinary schools (Leifler, 2020).

## **Theoretical background**

Constructivism and behaviourism are two different schools of thought employed for this study.

### **Constructivism Theory**

Constructivism involves a person understanding the importance of the social dimension during the learning process through observation, treatment, interpretation, and adaptation of information on building a cognitive structure. Vygotsky (1962) emphasized the social role of learning because of its impact on cognitive development through learning and interaction between children and their peers, parents, and teachers. Constructivism equates to learning that involves constructing, creating, and inventing, basically for individuals to develop their own knowledge and meaning. Constructivists believe that an understanding of the brain informs teaching (Lenjani, 2016). Akpan and Beard (2016) state that, "constructivism is the best

paradigm for teaching all learners, but particularly learners with special educational needs". Teachers are essentially considered facilitators, providing essential information, and organizing activities for learners to discover their own learning (Liu & Ju, 2015).

The key aspect of constructivism is that learning should include learner-centred, task-based, hands-on and minds-on activities (Shi, 2013) while also being meaningful and closely related to practical and real-life experiences (Lenjani, 2016). In addition, constructivist-based classroom activities should provide internal and external scaffolding strategies for all learners, which is essential for learners with special educational needs (Shi, 2013). Practically, constructivism-based inclusive education practices are the applications of constructivism in inclusive education settings, which would involve instructional methods and strategies to assist learners to explore complex topics actively (Ertmer & Newby, 2013). Possible strategies for exploring these topics include: situating tasks in real-world contexts and using real-life examples, utilizing cognitive apprenticeships (i.e. modelling and coaching), According to Hulgin and Drake, (2016) "Inclusive education requires a constructivist approach to teaching and learning".

Learners in a constructivist inclusive education setting would benefit most from the following best practices as reported by Hattie (2018) such as peer tutoring and cooperative learning. Through peer tutoring and cooperative learning, learners can interact with each other and actively learn in a real-world setting. Cooperative learning groups, for example, may be formal or informal. Formal groups may be organized by learner ability or interest, whereas informal groups may be spontaneous within which learners are asked to pair and brainstorm on topics. In the constructivist inclusive classroom, the belief is that learners learn from experience and real-life application.

### **Behaviourism Theory**

Behaviourism is one of the classical theories of learning and also recognized as the oldest (Nalliah & Idris, 2014). Behaviorism is known as a predominant psychological model (Harold & Corcoran, 2013), as suggested by the metaphor for, 'learning as the acquisition of stimulus-response pairs' (Doolittle, 2014). Behaviourists 'believe the objective of the theory is to impart to the learner the knowledge of reality' (Hickey, 2014). Behaviourism occurs when consequences are associated with the stimulus or response that is followed by reinforcement to be maintained (Ertmer & Newby, 2013). To summarize, the key principles of behaviourism

that support education are: behaviour is learned, behaviour is governed by the setting in which it occurs, teaching does not occur without learning, learning equates to changing behaviour, behaviour is governed by what follows actions, and there needs to be a focus on the observable (Harold & Corcoran, 2013).

Behaviourism-based inclusive education practices include the application of behaviourism in inclusive education settings, which clearly appears in the emphasis on learner behaviour and performance in manipulating stimulus materials (Ertmer & Newby, 2013). Examples of behaviourism-based inclusive education practices are included in well-known instructional approaches such as explicit or direct instruction (AlShammari, 2019). The method has shown positive research results with learners with special needs in general education classrooms (Al-Shammari, Al-Sharoufi, & Yawkey, 2018). Practices based on explicit or direct instruction are systematic, involving a step-by-step process provided by a teacher and followed by learners during instruction (Zhang et al., 2016).

In addition, explicit or direct instruction-based practices that break down tasks into their smallest elements are widely used for teaching learners with special educational needs in inclusive education classrooms (Steele, 2015). During the instructional process, Behaviourists assess learners to determine at what point to begin instruction and which reinforcers are most effective. Basic assumptions and characteristics of behaviourism are embedded in many current instructional practices. For instance, some of the best interventions for learners with special needs in inclusive education settings include: direct instruction, functional behavioural analysis, and assessment, evaluation, and feedback (Hattie, 2018).

Therefore, it is considered that strategies based on behaviouristic theory are related to several best practices necessary for inclusive classroom settings (Salend, 2011). Under such settings, a teacher-centred environment is established in which the teachers deliver and design the lessons according to the learner's objectives. In addition, such classroom settings are focused on conditioned responses, evaluation, assessment, and feedback that facilitate the assessment of transfer and gain of knowledge between learners and teachers (Ertmer & Newby, 2013).

## **Statement of the Problem**

The Cameroonian government signed a law in 1983 covering the protection of people with disabilities and promulgated this law in 1990 (Biya, 1990). The government also officially committed itself to promoting inclusion in schools by signing the UNESCO Salamanca Statement, which aimed to further the objectives of inclusive education (UNESCO, 1994). As recently as 2010, another law was signed to emphasize the dispositions in the previous laws. This law insisted on the welfare and education of people with special education needs.

The fundamental principle of the inclusive classroom is that all children should learn together wherever possible, regardless of their difficulties or differences (Mastropieri & Scruggs, 2017; Smith, 2017). Inclusive schools must recognize and respond to the diverse needs of learners, accommodating both different styles and rates of learning and ensuring quality education to all through appropriate curricula, organizational arrangements, teaching strategies, resource use and partnerships with their communities. There should be a continuum of support and services to match the continuum of special needs encountered in every school (UNESCO, 1994).

Several years after independence, educating learners with disabilities has not been treated as a priority in Cameroon. Children or persons with disabilities are still perceived, treated, and officially labelled as “handicapped persons” and are admitted into private and government-run institutions often called “Centres for Handicapped Persons” or “Rehabilitation Centres” (Disability and Rehabilitation Team, 2002). Despite Cameroon’s signing of the Convention on the Rights of the Child, much is left to be done in the area of special education. (Disability and Rehabilitation Team, 2002).

Until recently, there has been a complete lack of special education programs in teacher training colleges and the absence of the special education component in-school professional development programs. However, there has not been an effective implementation of special education laws, particularly those related to the practice of inclusion in Cameroon schools. This situation can be attributed to the non-readiness of schools, caused by a lack of appropriate and adequate facilities, such as self-contained classrooms and resource rooms, and the shortage or absence of trained teachers and paraprofessionals.

Special education is best managed when qualified teachers and related service personnel are available (Fonyuy, 2018). This availability of professionals ensures proper identification,



development of individualized education programs (IEP), and implementation and evaluation. Academic achievement for the learners is better promoted when individualized education programs IEPs are established, taking into consideration not only the degree of impairment but also the temperament, cognitive abilities, personality, and experience of the learner (Abubakar, 2019). Even though there are services aimed at the prevention and treatment of impairments, the identification and referral of learners with special needs at the level of schools are almost absent in Cameroon (Disability and Rehabilitation Team, 2002). Considering that inclusion is still in its initial stage in a few primary schools in Cameroon, the need to diagnose pedagogic practices on effective learning in inclusive classrooms in some inclusive schools is very imperative.

### **Objectives of the study**

This study sought to investigate the impact of pedagogic practices on effective learning in inclusive classrooms in government pilot inclusive primary schools, looking at teachers' ability to teach learners with special needs, their ability to manage inclusive classrooms and learners' learning outcomes.

### **Specific of objectives**

This study aims to:

1. Examine the impact of teaching methods on effective learning in inclusive classrooms.
2. Assess the impact of teachers' professional development on effective learning in inclusive classrooms.
3. Investigate the impact of classroom management strategies on effective learning in inclusive classrooms.
4. Explore the impact of feedback during instruction on effective learning in inclusive classrooms.

### **Research Question**

1. What is the impact of teaching methods on effective learning in inclusive classrooms?
2. How does a teacher's professional development have an impact on effective learning in inclusive classrooms?

3. What is the impact of classroom management strategies on effective learning in inclusive classrooms?
4. What is the impact of feedback during instruction on effective learning in inclusive classrooms?

### **Research Hypotheses**

**H<sub>a1</sub>:** Teaching methods have a statistically significant effect on effective learning in inclusive classrooms.

**H<sub>o1</sub>:** Teaching methods do not have a statistically significant effect on effective learning in inclusive classrooms.

**H<sub>a2</sub>:** Teacher's professional development has a statistically significant effect on effective learning in inclusive classrooms.

**H<sub>o2</sub>:** Teachers' professional development do not statistically affect effective learning in inclusive classrooms.

**H<sub>a3</sub>:** Classroom management strategies have a statistically significant effect on effective learning in inclusive classrooms.

**H<sub>o3</sub>:** Classroom management strategies do not have a statistically significant effect on effective learning in inclusive classrooms.

**H<sub>a4</sub>:** Feedback during instruction has a statistically significant effect on effective learning in inclusive classrooms.

**H<sub>o4</sub>:** Feedback during instruction does not have a statistically significant effect on effective learning in inclusive classrooms.

### **Significance of the study**

The findings of this study are expected to have implications for professional development, teacher training, and pedagogic modification. The study reveals the specific needs of inclusive schools and guides the conception and implementation of pedagogic practices, teacher professional development programs, and the acquisition of needed resources in mainstream and special schools. The results are anticipated to be particularly beneficial to the Ministry of Education and Social Welfare of Cameroon, the main sponsor of special education in Cameroon.

The findings will give Cameroon educational officials knowledge related to the levels of commitment of general education teachers working with learners with disabilities. The study addresses and determines the needs and extent of investment required by educational leaders in teacher preparation for the management of inclusive classrooms. The results of this study will have a strong potential to provide valuable information for the proper management of learners with disabilities in inclusive classrooms in Cameroonian schools.

According to the Sustainable Development Goals 2015 – 2030, Goal for Education (No.04) ‘Ensure inclusive and equitable quality education and promote life-long learning opportunities for all’. Thus, Cameroon needs to take the initiative to achieve this goal in the future. “This study will play a vital role in helping in the implementation of inclusive education in order to achieve the above-mentioned goal at the national level.”

Researchers believe this study's findings will identify the current obstacles in inclusive pedagogic practices. Furthermore, it will propose ways to address the issues and to improve the understanding and practice of inclusive education in schools of the research area.

The findings of the study can be generalized to other schools in the research area; thus, this research will support the implementation of inclusive pedagogic practices by influencing a change across several levels, including school-level policymaking, administration, resource adaptation, and teacher professional development. Finally, this study will provide information on the current status of inclusive pedagogic practices in the research area and how the implementation of inclusive education can be improved.

### **Scope of the study**

This study seeks to examine pedagogic practices on effective learning in inclusive classrooms in three government pilot inclusive primary schools in Mfoundi Division. The study is delimited to pedagogic practices, teachers’ ability to teach learners with special needs, ability to manage inclusive classrooms and learners’ learning outcomes and teacher’s professional development.

## **Definition of terms**

**Teaching methods:** The didactic methods are part of a trainer's methodological aptitudes. This means that these types of methods will influence the degree of intervention of the trainer on the learner (Leifler, 2020). Classroom management and methods are a major challenge for teachers and school administrators, often qualified as the main area of concern for teachers and the most common reason why many choose to leave their profession. Teachers' classroom management strategies directly impact their learners' probability of success (Evertson & Weinstein, 2016).

**Teaching strategy:** Teaching strategies refer to a teacher's methods, techniques, procedures and processes during instruction. It is generally recognized that teaching strategies are multidimensional, and their effectiveness depends on the context in which they are applied.

**Classroom management:** refers to the wide variety of skills and techniques teachers use to keep learners organized, orderly, focused, attentive, on task, and academically productive during a class. Generally speaking, effective teachers tend to display strong classroom-management skills. When classroom-management strategies are executed effectively, teachers minimize the behaviours that impede learning for individual and group learners while maximizing the behaviours that facilitate or enhance learning.

**Feedback during instruction:** Providing feedback means explaining what they are doing correctly and incorrectly, with the focus of the feedback on what the learners are doing right. It is most productive to a learner's learning when they are provided with an explanation as to what is accurate and inaccurate about their work.

**Professional development:** Teacher professional development involves continuous reflection, learning and action to further a teacher's knowledge and skills, leading to enhanced teaching practices that positively impact learners' learning.

**Primary school:** usually includes the first three grades of elementary school but sometimes also includes kindergarten.

**Disability:** A disability is any condition of the body or mind (impairment) that makes it more difficult for the person with the condition to do certain activities (activity limitation) and interact with the world around them (participation restrictions).

**Special Educational Needs:** This is education that provides appropriate modification in curricula, teaching methods, educational resources, a medium of communication or the learning environment to meet special educational needs.

**Special school:** Special schools are for all learners who require high-intensity support (Zhao, 2018). Bennett (2017) identified special schools as catering exclusively to learners with disabilities. In addition, special schools in most African countries are transitioning to function as resource centres for the provision of expert staff, and transferring support in curriculum differentiation, assessment and teaching strategies to neighbouring mainstream and full-service schools.

**Mainstreaming refers to** participation in the general education environment when the child is academically or emotionally ready. Mainstreaming refers to the placement of a child in the general education classroom for one or more periods.

### **Organization of the study**

Chapter one of the study provides a background of the study, explains the problem being studied, and outlines the research questions to be answered in subsequent chapters. Chapter two presents a synthesis of previous interconnected studies and scholarly writings linked to special education, the concept of inclusion, pedagogic practices of inclusion, the theoretical framework of an inclusive classroom and the conceptual framework of inclusion in Cameroon. Chapter three discusses the methodology of the study. Chapter Four presents the survey results and the study's findings and interpretations. Finally, Chapter Five presents a discussion, conclusion, recommendation, and future research.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

This chapter focuses on the review of the literature on inclusive education, particularly the pedagogic practices of inclusion. The review presents a) a conceptual framework of inclusive education, pedagogic practices and inclusive classrooms, b) the overview of special education internationally and in Cameroon, including the current State of inclusive education in the country, c) factors that influence pedagogic practices on the integration of children with disabilities in the general education classroom, d) best inclusion practices, e) the theoretical framework guiding the study, f) empirical studies, and g) conceptual diagram from the review of literature and theory.

#### **Conceptual framework**

##### **Inclusive education**

Although many scholars have discussed inclusion in multiple contexts, a consensus has not been reached on a single definition since the Salamanca Statement was issued in 1994. Subsequently, inclusion has acquired several different definitions over the years. Lindner and Schwab (2020) suggest that variations in literature from across the globe make it challenging to produce an agreed definition, while the lack of a single standard definition contributes to the confusion that exists within the fields of special education needs and inclusion internationally (Florian, 2015; UNESCO, 2016). Inclusion can be defined in a descriptive or prescriptive way, depending on how it is understood (Sanger, 2020).). Subsequently, without explicit definitions of the term, readers are left to infer meaning, giving rise to a variety of contrasting understandings (Finkelstein, Sharma & Furlonger, 2021).

Inclusive education is defined as learners with learning difficulties or disabilities having access to mainstream education on an equal basis with others for progression (Barow & Berhanu, 2021; Slee, 2018). Thus, learners participate in education to improve their quality of life and integrate into broader society, regardless of their learning difficulties or disabilities. The concept of inclusive education mainly covers three aspects (Pit- Ten Cate, 2019):

- ⇒ Children with special needs improve their academic and social skills as well as their self-esteem. Besides that, other learners who do not have special needs will improve their caring attitude, understand society's diversity, and gain academic skills.

- ⇒ Most countries almost adopt the inclusive education concept that children with special needs have a right to be taught with their peers and have been accepted as a matter of equity and social justice.
- ⇒ In the last argument, inclusive education is economically applicable, including transportation and accommodating those children.

Inclusive education must not transmit academic knowledge but strengthen learning capacities (Mihai, 2017; Slee, 2018; Virgina & Kurniawati, 2018). Inclusive education awakes children of the differences of society and teaches them how to live with that. Existed studies show that children with disabilities being enrolled in mainstream schools is advantageous for everyone (Barow & Berhanu, 2021; de Beco, 2020; Mihai, 2017). Integration of children with disabilities into the education system helps shape society: transform the Community, and build a tolerant society in which future generations will live in harmony with each other regardless of differences (Mihai, 2017; Virgina & Kurniawati, 2018).

Göransson and Nilholm (2014) noted different understandings of inclusive education, such as disabled learners' placement in mainstream classrooms. Mitchell & Sutherland (2020) assert that it is not only the placement of learners with disabilities but also a condition of being or a sense of belonging for all learners and acceptance. Mitchell (2020) stated that inclusion concerns much more than placing pupils with disabilities in regular classrooms. Further, this inclusive school is characterised by nine factors such as:

**Figure 1: Characteristics of an inclusive school**



**Source: Mitchell (2020 p12)**

Importantly, inclusive schools contain both learners with and without disabilities, taught together in the same classrooms, and their educational needs are met at a high level. Furthermore, Florian (2015) pinpoints that teaching practices which include all children with and without disabilities make schools more inclusive and seem to be evidence that makes education to be more inclusive.

Globally, inclusive education is a reform that involves transforming schools and other centres of learning to cater to all learners, including learners with learning difficulties and special education needs (SEN) (Ainscow et al., 2019). It is central to achieving high-quality education for all learners and developing more inclusive societies because it promotes the social and educational advantages of accessibility to schooling, quality education, and educational resources (Schwab, Sharma & Hoffmann, 2022).). Indeed, inclusive education is one education system that involves teaching all learners (with and without disability) together in an ordinary school-class setting, where they all get instruction that corresponds to their capacity and interests without discrimination (Devries & Gebhardt, 2018). Inclusive education in this present study is understood from this perspective.

Despite the discourse on inclusion, in education, the meaning is about responding to diversity; listening to unfamiliar voices; being open; empowering all members; and learning to live with one another (Gubic & Baloi, 2019). The emphasis of inclusive education is, learning together, not in separate classrooms but alongside mainstream peers (Florian 2015; Booth, 2019; Ainscow, 2020; Ainscow, Booth & Dyson, 2021). Inclusive practice has a significant difference from integration in that it implies attitudes and methods to ensure all learners can access mainstream education.

In other words, responding to diversity is the challenge the Salamanca Statement posed to schools: when education is truly inclusive, it can benefit all learners, not only those with special education needs (SEN) (UNESCO, 2015). According to Haug, (2017) responding to diversity refers to removing organisational and structural barriers to facilitate all schools to accommodate every child, regardless of their disability, and ensure all learners belong to a community (2002). Oliver et al., (2019) suggests responding to diversity means fairness, and if something is offered to all children, then it must be accessed by all children without discrimination. Inclusion and exclusion in any country is shaped by its culture and history (Booth, 2017). Slee (2014) configures inclusive education as a means of shaping an inclusive society to create a legacy of diversity in education, and not a set of adjustments applied to ideas



and practices to give the gleam of inclusion. As illustrated, global inclusion involves an emphasis on those groups of learners who may be at risk of marginalisation, exclusion or underachievement (Terzi, 2014).

### **Inclusive education as international policy**

According to The Salamanca Statement (UNESCO, 1994), The Dakar Framework for Action (UNESCO, 2000) and The Incheon Declaration (UNESCO, 2015), the purpose of inclusive education has implications outside of the educational context. In these documents, inclusive education is linked to The Universal Declaration of Human Rights (United Nations, 1948), where the purpose of education is stated to be: 'the full development of the human personality' and to 'promote understanding, tolerance and friendship among all nations, racial or religious groups' (article 26). Education is regarded as a public good, and inclusive education is seen as an expression of a vision 'inspired by a humanistic vision of education and development' (article 5, UNESCO, 2015). Inclusive education is seen as a 'crucial step' to develop an inclusive society' (article 3, UNESCO, 1994). Values like social justice, equity, shared responsibility and diversity are defined as central, and schools with an inclusive orientation are claimed to be:

⇒ 'the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society and achieving education for all; moreover, they provide an effective education to the majority of children and improve the efficiency and ultimately the cost-effectiveness of the entire education system.' (UNESCO, 1994, article, p. 2).

According to these UNESCO documents, i.e. The Salamanca Statement (1994), The Dakar Framework for Action (2000) and The Incheon Declaration (2015), inclusive education aims at developing the whole personality. In the Dakar framework, this is formulated in article 3 in terms of

⇒ '...an education that includes learning to know, do, live together and be. It is an education geared to tapping each individual's talents and potential, and developing learners' personalities so that they can improve their lives' (UNESCO, 2000).

The Incheon statement connects inclusive education to education for all and 'quality education' and argues that it 'develops the skills, values and attitudes that enable citizens to lead healthy

and fulfilled lives, make informed decisions and respond to local and global challenges (UNESCO, 2015, article, p. 9). Further, pupils are to be able to influence their school situation, and curricula and teaching are to be adapted to their needs and prerequisites. Additionally, parents are defined as 'privileged partners' and are, as such, to be given the opportunity to participate and influence their children's education, as well as be 'accorded the choice of education for their children' (UNESCO, 1994, article 60). The goals above are likely to be of interest to all pupil groups.

To summarise, from an international policy perspective, inclusive education can be seen as a set of political ideals – even decrees – for educational practice, ranging from specific definitions and foci on pupils with special needs or disabilities to broader ideals of 'creating communities for all pupils. As discussed above, a similar shift and lack of clarity have been identified in the research literature (Nilholm & Göransson, 2017). However, the common nominator as regards policy is that inclusive education is viewed as means to create a more just society, as well as to increase cost-effectiveness and attainment and to create competent, tolerant and self-sufficient citizens for the future society. Hence, these documents have elements of both collectivist and individualist notions (Adjei, Naab, & Donkor, 2017). The meaning of inclusive education in practice is thus subject to prioritisation among politicians and governmental actors, policy writers, researchers, practitioners, parents/guardians and pupils. The interpretation, in turn, sets constraints on the construction of inclusion within the organisational framework of education and possibilities of practice (Guest, Namey, & Mitchell, 2018). As different countries have different prerequisites to implement such ideals, it becomes important to study whether such ideals are expressed in national education policies.

### **Inclusive Education in Cameroon**

The Salamanca Statement of 1994 marked a new phase in Cameroon's special education history. The signing of the accord by the government meant that schools were legally required to admit learners with mild to moderate disabilities in general education classrooms. The law urged all governments to "adopt as a matter of law or policy the principle of inclusive education, enrolling all children in regular schools unless there are compelling reasons for doing otherwise" (UNESCO, 1994).

As a follow-up to the World Conference on Special Education Needs (UNESCO, 1994), the Cameroon government and eleven other countries committed to the UNESCO Inclusive

Schools and Community Support Programs, which sought to "support action and disseminate information on small-scale innovations at the national, regional and local level, promoting the inclusion of children with disabilities and learning difficulties in regular schools" (UNESCO 2001). The two-phase program (1996-97 and 1998- 2001) allowed participating countries to choose the exact nature of their activity from a list of target areas (Tchombe, et al., 2014).

Cameroon's involvement in the project became visible during its second phase, but its management was more complicated than anywhere else because responsibility for the provision of education is split between the Ministry of National Education and the Ministry of Social Affairs (Association of Parents and Friends of Mentally Handicapped Children [APEHM]-UNESCO, 2000). While the Ministry of National Education (now the Ministry of Secondary Education and Ministry of Basic Education) was responsible for the regular schools, the Ministry of Social Affairs is responsible for special education (Titanji, 2008). The Cameroon government's perspective on the reform was essential to promote the training of inclusive education personnel and to establish the foundation for inclusive schools by developing and revising legislation. The objectives were described as follows:

- ⇒ A change in discriminatory attitudes
- ⇒ The introduction of child-centred instruction, capable of educating all children
- ⇒ The creation of communities which are more receptive, just and inclusive ([APEHM]-UNESCO, 2000).

The following outcomes were expected:

- ⇒ Greater awareness of decision-makers of the need for inclusive education
- ⇒ Training of teachers for inclusive schools in Yaounde
- ⇒ The development of strategies for the diffusion of information about inclusive education approaches throughout Cameroon ([APEHM]-UNESCO, 2000).

The government of Cameroon has been trying to prepare the ground for educating pupils with disabilities as advocated by UNESCO's Education for All (EFA) goals. This has been done through the organisation of seminars and workshops within the country the signing and ratification of some legislations and policies internationally and locally.

Based on the Republic of Cameroon (2013) report on the 53rd session of the African commission on human and people's rights of the African Union, Cameroon has signed a number of instruments to promote and protect the right of Persons with Disabilities (PWD). This includes the United Nations Convention on the right of people living with disabilities, adopted in New York on December 13, 2006, and signed on October 1 2008, and the Optional Protocol to the United Nations Convention on the right of persons with disabilities adopted in New York on December 13, 2006, and signed on October 1 2008. Among the legislative and regulatory texts adopted at the local level to protect and promote the human rights of PWD is law number 2010/002 of April 13 2010, on the protection of PWD.

As stated by the Ministry of Social Affairs (2015), in order to remedy the discrimination and marginalisation faced by PWDs, the government of Cameroon joined the International Community in the development of a global policy such as:

- ⇒ The adoption of the Convention on the Rights of Persons with Disabilities and the Optional Protocol thereto by the General Assembly of the United Nations on December 13 2006, and duly signed by Cameroon on October 1 2008.
- ⇒ The Committee on the Rights of PWDs effectively implemented in Geneva.
- ⇒ The African Decades of PWD extension for the 2010-2019 periods.

This is to ensure that the unique need of every child is met.

Due to the 1983 Presidential Decree, other regulations were introduced principally through the Ministry of Social Affairs initiative in collaboration with the Ministries of Basic, Secondary and Higher education. In this respect, the following circulars could be cited: Joint Circular No 34/06/JC/MINESEC/MINAS of August 2, 2006, relating to the admission of (Children With Disabilities) CWDs and children born of needy parents with disabilities into government education establishments; Joint Circular No 283/07/JC/MINESEC/MINAS of August 14, 2007, relating to the identification of (Children With Disabilities) CWD's enrolled in government primary schools, colleges, high schools and participation in official exams.

Moreover, the education sector strategy for 2013-2020 adopted in August 2013 emphasise inclusive education and spells out the following orientations: specific modules will be introduced in the initial training of trainers, sight savers, an international non-governmental organisation in collaboration with the Ministries in charge of education, and the Ministry of

Social Affairs began to commission studies to organise workshops on inclusive education, especially at the primary level of Cameroon. One of these workshops was held at Ebolowa from 18th-20th December 2013 and recommended:

- ⇒ Reviewing the primary school syllabus for the purpose of including inclusive education modules into the primary school curriculum.
- ⇒ Mobilising all the Ministries of education and other partners involved in inclusive education for the preparation of strategic and functioning plans for the implementation of inclusive education.

In April 2015, the second Biennial Inclusive Education Symposium in West and Central Africa took place at the University of Buea from 6th-10th April 2015. It had as theme "Perspective of Inclusive Education in West Africa with Multidisciplinary focus: "Including the Excluded". The attitude of teachers and preservice teachers' inclusivity is critical to the success of inclusive practices. Therefore, pedagogic practices influence the implementation of inclusive education practices in the classroom (Ngole, 2011).

### **Curriculum for an inclusive classroom**

Accessible and flexible curricula are essential in implementing inclusive education (UNESCO IBE, 2016, UNESCO, 2019). Tani & Nformi (2016) defined curriculum as the overall plan for instruction adopted by a school or school system. Its purpose is to guide instructional activities and provide consistency of expectations, content, methods, and outcomes.'

Many inclusive education initiatives focus on how to differentiate teaching, content and materials to ensure children with disabilities can access the general curriculum (Armstrong et al., 2016). It has been argued that it is more effective to reform the general curriculum in order to provide access to and support learning for all children (Doh, 2007; Ngoh, 1987; Tchombe, 2014). This can lead to a curriculum that is better for all learners and reduce the need for individual modifications and the use of assistive technology (UNESCO, 2017b, UN Committee on the Rights of Persons with Disabilities, 2016). All children have the right to benefit from a commonly accepted level of quality education. Therefore, all children have the right to the same core curriculum (UNESCO, 2019, UN Committee on the Rights of Persons with Disabilities, 2016).

Traditional curricula are often content-loaded and perceived as a list of facts which learners need to repeat in exams and tests (UNESCO IBE, 2016, UNESCO, 2019). They are built on the idea that all children in a group learn the same things simultaneously by using the same means and methods (UNESCO, 2019). There is, however, a general recognition that all children are different and learn in different ways (UNESCO, 2017b, UN Committee on the Rights of Persons with Disabilities, 2016). Inclusive curricula are, therefore, flexible, encouraging a range of different teaching and learning styles and methods and including flexible and ongoing strategies to assess learning (UNESCO, 2017b, UN Committee on the Rights of Persons with Disabilities, 2016).

### **Guiding principle in designing inclusive curricula**

In learning, there exists a responsibility for educators to design their curriculum in such a way as to promote success among all learners. An inclusive curriculum design approach is one that considers learners' educational, cultural, and social background and experience, as well as the presence of any physical or sensory impairment and their mental well-being (Pirchio, et al., 2017). An inclusive curriculum design acknowledges that learners have multiple identities that are shaped by their previous experiences and that a diverse range of personal circumstances influence how they learn.

Universal Design for Learning is the guiding principle in designing inclusive curricula (UNICEF, 2014b, UN Committee on the Rights of Persons with Disabilities, 2016). Key elements of inclusive curricula using a Universal Design for Learning framework include:

- ⇒ Flexible goals to provide appropriate challenges for all children
- ⇒ Multiple means of representation of content
- ⇒ Flexible and diverse methods to provide appropriate learning experiences for all.
- ⇒ Flexible assessment methods to continuously inform teachers and children about their learning progress and adjust instruction when needed (Ainscow & Slee, 2019).

### **Inclusive Education in Basic Education System in Cameroon**

Nursery and Primary Education are the foundation of sustainable learning. On this basis, Cameroon has ratified several conventions related to compulsory education. These conventions range from the Jomtien Education Framework of 1990, the Salamanca Statement of 1994, and the Dakar Framework of 2000 to the Incheon Declaration of 2015, precisely the fourth

Sustainable Development Goal (SDG4). Besides these international conventions, the Constitution of the Republic of Cameroon guarantees the child's right to education and further highlights it in the 1998 Law to Lay Down Guidelines for Education. In view of becoming an emergent nation by the year 2035, the government developed the Growth and Employment Strategy Paper (GESP) in 2009 to provide major orientations to all sectors of society. The document tasked ministries in charge of education to develop the human capital required to attain this vision. The 2013-2020 Education and Training Sector Strategy Paper (ETSSP) clearly defines each sub-sector mission in the educational system.

This curriculum is designed to guide the development of learners' knowledge, skills and attitudes and to set the foundation for learning with an emphasis on Science, Technology, Engineering and Mathematics (STEM) (Ngoh, 2007). The curriculum, therefore, responds to one of the key missions assigned to the Ministry of Basic Education (MINEDUB).

The learners' uniqueness and variety of experiences are primordial in developing any school curriculum. This curriculum considers that learners bring unique personalities, talents, attitudes, and interests into the classroom (Tabot & Ojong, 2008). They also have a variety of experiences which the teacher must build on to effect and affect the teaching–learning process. Analyses of curricula that have been successful in many countries throughout the world suggest that appropriate curriculum design should:

- ⇒ Involve parents in their children's education
- ⇒ Develop an atmosphere based on sound human relationships
- ⇒ Establish a balance between child-directed and teacher-directed activities
- ⇒ Specify the objectives and needs of individual learners
- ⇒ Emphasis on pragmatic and play-based learning in pre-primary and primary education

Basic Education moulds learners and encourages them to be dynamic and creative. Every child has learning potential that needs to be awakened and guided by appropriate instruction and instructional materials. Hence, the 1996 Constitution of the Republic of Cameroon clearly spells out the State's engagement in guaranteeing the child's right to education. Cameroon also adheres to the Human Rights Declaration and related legal instruments. Consequently, the Ministry of Basic Education (MINEDUB) has undertaken a massive reform of the Nursery and Primary school curricula to ensure quality basic education for all Cameroonian children

(Ngwang, 2008). This will therefore serve as an important reference and working document for teachers and the entire education community (Tukov, 2008). The inclusive nature of this document, therefore, makes it user-friendly. Thus, classroom teachers should be able to claim ownership of it and be totally accountable for its implementation.

### **Pedagogic approaches in Cameroon basic education**

Teaching methods are special procedures through which educational goals are attained. The Cameroon education system has experienced pedagogic evolutions from the Objective-based Approach (OBA) through the Inferential Thinking Approach, which was referred to as the "New Pedagogic Approach" to the Competence-based Approach (CBA) or the Behavioural Objective-based Approach which is in use today (Tamukong, 2004). The CBA facilitates the development of skills through the practice of Project Based Learning, Cooperative Learning and Integrated Theme Learning. The underlying philosophy of the CBA requires that learning should be based on the potential of the learner (Tohnain & Tamajong, 2014). The learner should be responsible for his/her own learning. The focus is on learning and not on teaching. It is important for classroom teachers to diligently determine their learners' characteristics. Lesson preparation should always implicitly or overtly provide for gender equity, inclusiveness and multiple intelligences (Yuh & Shey, 2008)

The vision of a country is expressed through its curriculum, which is tailored to meet the needs of the learners. According to Daiute & Sullu (2021) an emphasis the curriculum must be dynamic and ever-changing as new developments and needs in our society arise. For education to be an effective driver of development, its curriculum must meet societal expectations across its dispositions in teacher training, content, teaching methods, teaching resources, evaluation procedures, and school organisation as a whole (Göransson & Nilholm, 2014). Hence, the quality of the national curriculum is based on the extent to which it meets the requirements of the national economy, the needs of society, and the future challenges and aspirations of the nation (Schwab, Zurbriggen, & Venetz, 2020).

### **Curriculum Accommodation and Adaptation**

Learners with disabilities that are included in the general education classroom "need to feel they are part of the class and to be challenged academically at their level" (Wilson et al., 2011). Curriculum accommodation and adaptation can significantly impact teachers' attitudes toward



inclusive education (Tanyi, 2016). When learners with disabilities are included in general education classes, general education teachers need to adapt the curriculum to fit their ability levels, individualised education program goals, and other requirements unique to the individual learner (Chwab, 2021). For this to happen, educators need to adjust the curriculum and learning activities to provide learners with special needs an accommodating yet challenging learning environment. General strategies to individualise instruction for learners with special needs include varying learning objectives, adapting materials and resources, teaching strategies, providing flexible time, and using technology (Brussino, 2020).

Educators have identified nine types (forms or areas) of adaptations that are believed to make a difference in the learning ability of learners with disabilities:

- ⇒ Size, number, or amount of work.
- ⇒ Time for learning tasks and tests.
- ⇒ The level of support: peer buddies and teaching assistants.
- ⇒ Input/Instruction: hands-on, cooperative groups, concrete examples, visual aids.
- ⇒ Difficulty: skill level, simplify directions.
- ⇒ Output/task: verbal, written, hands-on material.
- ⇒ Participation: extent and amount.
- ⇒ Alternate the same material with adapted goals.
- ⇒ Substitute curriculum, and differentiate instruction and material (Guest, Namey & Mitchell, 2018).

The need to make accommodations for learners with physical and sensory challenges is critical in inclusive classrooms (Cook, 2018; Tanyi, 2016). This urge is crucial, particularly the case in Cameroon, where these categories of learners with disabilities constitute more than 95 % of learners with disabilities in general education classrooms (Shey, 2003). Learning tools such as large print materials, low-vision devices (magnifying glasses), bright lights, closed-circuit televisions, and portable note-takers have been known to assist learners with sensory or physical disabilities (Hayes & Bulat, 2017).

### **Inclusive pedagogy: Teaching and Learning**

As a contested term, pedagogy entails activities that induce changes in the learner. Klibthong & Agbenyega (2020) consider it a concept that deals with all the teacher's actions to influence learning in learners. Their definition places the teacher in a position of a 'director' of learning.

Pedagogy refers to the interactive process between teacher/practitioner and learner, and it is also applied to include the provision of some aspects of the learning environment (Talley & Brintnell, 2016). Skae et al. (2020), explained that "inclusive pedagogy is a (procedure) an approach to teaching and learning that supports teachers to respond to individual differences between learners but avoids the marginalization that can occur when some learners are treated differently."

Mitchell and Sutherland (2020) define pedagogy as 'the act of teaching with its attendant discourse. It is 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'. There is an ongoing debate in the literature whether teaching children with disabilities is essentially different, requiring a specific pedagogy, or if a regular pedagogy can be used. The suggestion that there is a special pedagogy has been reinforced by a medical model of disability and the associated belief that experts and specialists best address the needs of children with disabilities (Slee, 2018). Researchers such as Adcock and Rensburg (2020) claimed they were unable to identify any substantive evidence to support the argument that children with disabilities need a specialised pedagogy. Brownell and Lewis (2018) argued that the idea itself that there is a group of children who learns in a similar way and another group, often those with disabilities, who learn in a fundamentally different way is flawed. They furthermore argued that all children learn uniquely due to a huge number of subtle differences (Khan, 2017).

### **Paradigm shift in pedagogical thinking for inclusive education**

Florian and Black-Hawkins (2014) argued that inclusive education requires a paradigm shift in pedagogical thinking. Pedagogy in inclusive classrooms usually starts from the assumption that general teaching and learning strategies will be enough for most children and that differentiated or additional strategies are necessary for children with disabilities or other identified learning needs. Armstrong (2019) suggested moving towards a pedagogy available for all children and providing rich learning opportunities for everyone. This is in line with the requirements of the UN CRPD and GC4 to ensure children with disabilities access education and the same high-quality curriculum on an equal basis with others (UN Committee on the Rights of Persons with Disabilities, 2016). A general pedagogy that is available to all learners avoids stigmatisation, which is often associated with differentiation. It encourages teachers to have high expectations for all children and supports them in reaching their potential (Florian & Black-Hawkins, 2014).

## **Pedagogical approaches that are available for all learners are:**

⇒ 'Universal Design for Learning'

⇒ 'Child-Centred Pedagogy'.

**Universal Design for Learning':** The UNCRPD (UN Convention on the Rights of Persons with Disability) defined Universal Design as 'the design of products, environments, programmes and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialised design' (UN, 2006 Art.2). Universal Design for Learning aims to design learning environments and teaching and learning approaches that are accessible to all learners. In doing so, it shifts the burden for removing barriers to access and participation from the individual learner and special educators towards the general education system. As a result, the quality of education increases for all children (Jordan, 2018). Key features of Universal Design for Learning include offering multiple means of representation, action and expression and of engagement (UNICEF, 2014b).

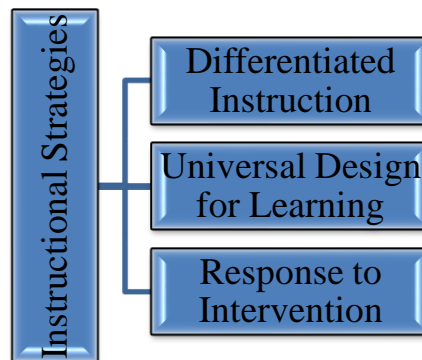
**Child-centred or learner-centred pedagogy:** This approach has been promoted by UNESCO and UNICEF to implement inclusive education (Schwab & Hoffmann, 2022, UNICEF, 2014c, UNESCO, 2016). Child-centred pedagogy also starts by recognising that all children learn differently. Teachers, therefore, use a wide range of teaching methods and activities to approach the same content with a diverse group of learners (UNESCO, 2018). Other key features of child-centred pedagogy include the recognition that children create their own meaning and knowledge, linking learning at school with learning at home and in the Community to create meaningful learning opportunities, encouraging cooperative learning in mixed-ability groups, designing accessible and attractive learning environments and ongoing assessment of learning (UNICEF, 2022).

## **Pedagogic practices for effective learning in an inclusive classroom**

**Instructional Strategies for Inclusion:** A very diverse population of learners in today's classrooms requires teachers to be aware of each learner's uniqueness to provide the best learning environment for everyone (Qvortrup, & Qvortrup, 2018). Teachers need to learn and understand the differences in culture, gender, family, religion, skills and ability, and discrimination to be able to meet learners' individual and collective learning needs (Powell & Pfahl, 2018). Recent research has identified some instructional strategies to help teachers

manage learner diversity and uniqueness in inclusive classrooms. These strategies include differentiated instruction, universal design for learning, and response to intervention.

**Figure 2: Instructional Strategies for Inclusion**



**Differentiated Instruction (DI):** Teachers in inclusive classrooms have to practice differentiated instruction (also known as multi-level instruction) (Benitez & Carugno, 2021). Differentiated instruction means tailoring instruction to meet individual needs. This successful inclusive teaching method involves teachers' differentiation of content, process, product, and learning environment and the use of ongoing assessment and flexible grouping of learners to meet their individual needs (Bennett, 2017).

According to the Wisconsin Education Association Council (2018), some of the acceptable steps involved in differentiated instruction include:

- ⇒ Identify concepts and learner objectives
- ⇒ Clarify the concepts and content used to develop the concepts
- ⇒ Select a method of presentation
- ⇒ Incorporate adaptations to environment, materials, and teacher presentation
- ⇒ Consider learning styles and provide guided choices
- ⇒ Adapt learner participation as needed
- ⇒ Select the method of evaluation

Wilson et al. (2018) points out that a crucial aspect of differentiated instruction is that it allows each learner to participate at his or her level and meet individualised outcomes. It permits the teacher to offer different materials on the same topic but at different reading levels. In all, the

same curriculum goals are expected of all learners, but differences are taken into consideration to accommodate each learner.

**Universal Design for Learning strategy (UDL):** For successful inclusive education to take place, teachers need to tailor the curriculum to suit the needs of all learners. The curriculum can be modified by using the universal design for learning strategy. Universal Design for Learning is a theoretical framework that guides developing flexible curricula supporting learners (Walker & Graham, 2019). The concept calls for structures designed to anticipate the needs of individuals with disabilities and accommodates these needs from the onset (Shi, 2020). The curriculum aims to be innately flexible and enriched with multiple media so that the alternatives can be assessed whenever necessary.

The Universal Design for Learning strategy (UDL) requires adaptation:

- ⇒ To support recognition learning and provide multiple, flexible methods of presentation.
- ⇒ To support strategic learning and provide multiple flexible methods of expression and apprenticeship.
- ⇒ To support affective learning and provide multiple, flexible options for engagement.

The joint recommendation of these principles is to select goals, methods, assessments, and materials in a way that will be beneficial for all learners.

**Response to Intervention (RTI):** Response to Intervention is a multi-tiered method of service delivery in which all learners are provided with appropriate levels of evidence-based instruction according to their individual needs (Grové & Laletas, 2019). The notion of Response to Intervention is not new. What is new is the legal provision for its use as an evaluation tool. Response to intervention allows teams of education professionals to make educational decisions based on the premise that all learners have received adequate research-based instruction (Odebiyi, 2016). The results of this process can be used to make eligibility decisions for learners with specific learning disabilities (SLD). Response to intervention varies among countries. However, most models of Response to Intervention include the following components:

**Screening:** Response to Intervention involves some form of general education screening to identify learners at-risk for failure and the learning needs of all learners.

**Interventions:** Response to Intervention includes the implementation of a scientifically-based curriculum and multi-level interventions.

**Progress Monitoring:** Response to Intervention includes some form of assessment to identify the learner's response to intervention

**Data-Based Decision-Making:** Response to Intervention incorporates the use of data to modify the type, frequency, and intensity of interventions for learners failing to respond (Azorín & Ainscow, 2018).

Response to intervention is criticised for lack of clear guidelines and descriptions regarding its implementation (Weiss, Lerche, Muckenthaler, Heimlich & Kiel, 2019). It is based on fixed principles, but how it is implemented varies among countries. This type of flexibility creates a sense of ambiguity because no commonly held standards exist for its implementation. Varying features of response to intervention include the number of tiers of interventions, the roles of the teacher and psychologist, and the type of interventions used (Akalin, Demir, Sucuoğlu, Bakkaloğlu, & İşcen, 2014), and how data from the response to intervention is used when determining SLD eligibility (Anderson, 2017). Response to Intervention data does not provide information about why a learner failed to respond to the interventions. Opponents of response to intervention believe that, when used alone, it does not provide sufficient data for identifying learning disabilities.

Despite these criticisms, response to intervention allows teams to focus on the results and outcomes of interventions rather than on the process of determining eligibility. The primary purpose of a response to intervention is teaching the learner, not what the learner has failed to learn. This strategy has been promoted as a process to provide services to struggling learners without delays. It can, therefore, alleviate the "wait to fail" approach often associated with the achievement discrepancy model by offering early interventions to all learners without the need for a special education evaluation (Bots, 2015).

**Instructional practices:** Special education teachers apply their pedagogical and content-related knowledge when they design, deliver, and evaluate instructional procedures (McLeskey et al., 2018). Inclusion, Diversity, Equity and Access (IDEA) (2004) and Every Learner Succeeds Act (ESSA) (2015) support the rights of individuals with special education needs and promote inclusion by stating that all individuals must be educated in the least restrictive

environment (LRE). IDEA requires that all learners participate and show improvements in the general education curriculum. Thus, this authorisation requires teachers to provide the most effective instruction and supportive services to learners with special needs placed in an inclusive classroom utilising the general education curriculum (Raley et al., 2018). Further, these mandates require teachers to use Evidence-Based Practice (EBPs) to improve learners' outcomes in general education classrooms (An inclusive classroom) (Brodzeller et al., 2018; Solis et al., 2019).

According to Kurth et al. (2015), learners with significant disabilities who need more assistance than learners with mild and moderate disabilities observed in their study showed positive participation during large group instruction in an inclusive classroom. Additionally, researchers also indicated that learners with significant disabilities who received individual instruction provided by paraeducators showed increased participation in an inclusive classroom. Hence, researchers highlighted that self-contained classrooms might not be needed for individual instruction if it could be delivered effectively in an inclusive classroom (Kurth et al., 2015). On the other hand, instruction in inclusive settings still presents challenges because of teachers' lack of training experience in inclusive education, as McKenna et al. (2019) indicated.

McLeskey et al. (2019) listed the instructional practices for inclusive classrooms as:

- ⇒ Identifying learning goals (i.e., short- and long-term goals)
- ⇒ Systematically designing the instruction for specific learning goals.
- ⇒ Accommodating curriculum and materials to reach the identified goals.
- ⇒ Teaching effective strategies for improving learners' outcomes in learning and self-determination.
- ⇒ Implementing constructed support.
- ⇒ Employing explicit instruction.
- ⇒ Employing adaptable grouping strategies (e.g., small and large groups).
- ⇒ Employing effective strategies to improve learners' engagement.
- ⇒ Using technology (assistive and instructional).
- ⇒ Providing in-depth instruction.
- ⇒ Teaching maintenance and generalisation skills to learners.

⇒ Guiding learners by providing feedback (e.g., positive and constructive) during the instruction.

**Assessment Practices:** Being a high-quality teacher requires skills such as thoroughly understanding the learners' strengths and areas of need, using and interpreting the assessment data to identify the needed services, and developing the programs (Lin & Lin, 2019; McLeskey et al., 2018). IDEA (2004) requires teachers to apply various informal and formal assessments to establish a complete portrait of the learners.

Lin and Lin (2019) conducted a survey study to explore how often teachers apply assessment practices in inclusive education settings. They defined assessment practices as assessments for learning, assessment of learning, accommodations, and modifications. The result of the study showed that teachers, especially special education teachers, mostly apply accommodations and modifications as assessment practices. The findings also showed that teachers who utilised assessments in one of these manners tended to apply other assessment practices. Conversely, a small percentage of participants reported that they utilised assessment practices "not frequently" or "never" in inclusive education settings (Lin & Lin, 2019). In a previous study, Lin and Lin (2015) stated that some teachers do not use assessment to guide their teaching and instruction practices. Rather, they rely on their own in-service experiences. Researchers also noted that preservice teachers might have misconceptions about assessment practices. Thus, they suggested that teacher education programs should improve preservice teachers' understanding of assessment in inclusive practices (Lin & Lin, 2015).

McLeskey et al. (2018) summarised effective assessment practices for inclusive classrooms as applying numerous information resources to understand the characteristic of learners regarding strengths and needs, using information from the assessment to develop and implement educational plans in collaboration with other stakeholders, and using the data from the assessment, scrutinising practices for instruction, and making arrangements to increase learner success.

**Building Community in the Classroom:** Another best practice of inclusion and education, in general, is the teacher's responsibility for building Community in the classroom. Schools take diverse groups of learners in each classroom and teach them in ways that meet their needs on every level: academic, emotional, and social (Mezzanotte, 2020). A community is a group of people who work with one another to build a sense of trust, care, and support. Therefore, for



classrooms to be communities, educators need to provide opportunities and structures by which learners can help and support each other even as they help teachers assist them. In the classroom community, everyone is accepted, and differences are not ignored but embraced and used as learning tools (Wilson et al., 2011).

Teachers can help build a classroom community by creating a safe learning environment for all learners, planning opportunities for social interaction, nurturing friendships and supportive behaviour, and providing a positive role model. The benefits of building classroom communities are many and go beyond the classroom to society. Nishina et al. (2019) indicate that beneficiaries of a caring classroom community include special needs learners, general education learners, teachers, and society.

### **Classroom management strategies in an inclusive classroom**

Classroom management is a broad term that encompasses the preventative and responsive strategies teachers use to support and facilitate both academic and social/emotional learning in the classroom (Bennett 2017). Effective classroom management creates a learning environment in which learners are encouraged to be engaged in lesson activities and motivated to learn (Sullivan et al., 2014). Classroom management also refers to teachers' strategy to create an environment that supports learner learning (Epstein et al., 2018). The classroom management strategies of individual teachers are critical for creating a positive learning climate, although they will be most effective when there is a consistent school-wide approach that provides a shared understanding of the classroom learning environment (Oliver, Lambert & Mason 2019).

### **Preventative strategies**

Preventative strategies aim to create classroom environments where the majority of learners are engaged in learning and on task. They reduce the amount of time teachers spend addressing inappropriate behaviours because they reduce disengagement from learning and disruptive behaviours (Mitchell et al., 2017). Effective preventative classroom management strategies include encouraging a positive social and emotional classroom climate, using structured instruction, using rules and routines, providing pre-corrections to remind learners of expectations, and actively supervising the classroom to ensure all learners are supported to stay engaged in learning.

**Positive classroom climate:** A positive classroom climate is characterized by warm, respectful and sensitive interactions between learners and their peers and between learners and their teachers. The classroom climate is impacted by the quality of the teachers' relationship with each of their learners and the social and emotional competence of learners. Establishing and maintaining a positive classroom climate is an important preventative classroom management strategy because it encourages learners to be engaged in learning (Pianta, Hamre & Allen 2019). It can also reduce the frequency and severity of disruptive and antisocial learner behaviours in classrooms.

**Learner-teacher relationships:** Establishing and maintaining positive relationships between teachers and learners can impact the classroom learning environment. Evidence suggests a two-way relationship between learner-teacher relationships and learner behaviour in the classroom: learner behaviour can influence the quality of the learner-teacher relationship, and the quality of the learner-teacher relationship can influence the behaviours a learner exhibits in the classroom. It can be learner-teacher relationships are commonly measured by reported levels of conflict and closeness (McGrath & Van Bergen, 2015). challenging for teacher

**Emotional and social competence:** A learner's emotional and social competence can impact their ability to engage in appropriate (on task, motivated to learn and prosocial) behaviours and not engage in inappropriate (disengagement from learning and disruptive) behaviours. Supporting the development of emotional and social competence is also important for creating and maintaining positive classroom climates, as it can impact how learners interact with teachers and their peers (Skiba et al. 2016). One way to support social and emotional competence is by using social and emotional learning (SEL) programs to explicitly teach learners cognitive, affective, and behavioural skills, including self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (Collaborative for Academic, Social, and Emotional Learning 2015). A meta-analysis found that SEL programs delivered by classroom teachers that teach learners about emotions, managing stress, empathy, and decision-making are effective in improving a number of learner outcomes, including reducing disruptive classroom behaviours, increasing prosocial classroom behaviours and improving academic outcomes (Durlak et al. 2018).

**Structured instruction:** One way to increase appropriate behaviours in the classroom is through structured instruction. Structured instruction involves clear communication of learning

expectations and how to meet them, what the lesson will cover, task directions, and also providing timely task-focused feedback, organised and consistent lessons, and smooth transitions between learning activities (Jang, Reeve & Deci 2018). Substantial literature suggests structured instruction is important for supporting learners to understand task requirements and stay on task, increasing appropriate behaviours and decreasing inappropriate behaviours (Simonsen et al. 2018). Some researchers argue that structured instruction contributes to learners' internal (or 'intrinsic') motivation to stay on task and engage in learning activities because learners feel competent and in control of their learning (Jang, Reeve & Deci 2018). Well-developed internal motivation for appropriate classroom behaviours can support learners to maintain these behaviours even in the presence of external factors detrimental to learning (for example, other learners' disruptive behaviours).

**Rules and routines:** Classroom rules are statements that identify acceptable and/ or unacceptable behaviours in the classroom (Alter & Haydon 2017). Classroom routines are explicit guidelines for procedures or recurring events in the classroom (Epstein et al., 2018). Rules and routines serve different functions in the classroom, but the principles underlying their effective use as classroom management strategies are similar. Classroom rules are considered fundamental to effective classroom management (Alter & Haydon 2017; Reinke, Herman & Stormont 2019). Routines can be used in a range of situations to help minimise disruption and support learner engagement in learning. Routines increase the predictability and structure in classrooms so learners know what is going to happen when and what they should be doing during and between regular classroom events and activities.

Predictability and structure can benefit all learners but may be especially helpful to scaffold and support learners with challenging behaviours (Cooper & Scott 2017). Teachers may create routines for the beginning and end of the day or class, transitions (for example, moving from one lesson activity to the next), different types of learning activities (for example, teacher-led instruction and group work activities), and for frequently occurring classroom events (for example, distributing and collecting materials). As with rules, routines are more likely to be effective when they are explicitly taught to learners (Cooper & Scott 2017; Epstein et al. 2018).

**Pre-corrections:** Pre-corrections are positively stated reminders of expectations that are used proactively to help support learners to engage in appropriate behaviours (Ennis et al. 2018). Pre-corrections can be brief verbal reminders of expectations or can be instructional activities

(Ennis et al., 2018). For example, a teacher may remind their class about the expectations about taking turns to talk before a whole group discussion. Precorrections can also be targeted towards individual learners who demonstrate difficulties regulating their behaviour in certain contexts (Llewellyn et al., 2018). For example, a learner who has difficulties transitioning into the learning environment could be offered a positively stated reminder of the expected next step as they enter the classroom. The aim of pre-corrections is to reduce the incidence of inappropriate behaviours and thus reduce the need for corrective responses (Ennis et al. 2018). Pre-corrections also aim to increase the incidence of appropriate behaviours, thus providing teachers with more opportunities to offer positive statements towards learners (Ennis et al. 2018).

### **Responsive classroom management strategies**

Responsive classroom management strategies address learner behaviours that may impact their own and other learners' learning. Responsive strategies include correcting inappropriate behaviours to support learners to re-engage in learning. Effective corrective responses<sup>8</sup> address learners' needs, ensure learners understand the corrective response, provide consistent and expected responses, are delivered calmly and are proportional to the level of behaviour (Gage et al., 2018). Responsive classroom management strategies may also use praise and rewards to recognise appropriate learner behaviours, however, there is mixed evidence about the effectiveness of these practices.

**Correcting inappropriate behaviours:** An important responsive classroom management strategy is correcting inappropriate behaviours. Consistent implementation of preventative strategies can reduce the frequency and severity of disengagement from learning and disruption, but is unlikely to stop all occurrences of these in the classroom, therefore responsive strategies such as correcting inappropriate behaviours may also need to be used. The dynamic nature of classrooms also mean preventative approaches alone may not be enough to ensure effective classroom management (Obsuth et al., 2017). Effective corrective responses not only stop inappropriate behaviours and support re-engagement in learning, but also minimise distractions and maintain a positive classroom climate.

**Identifying learner needs:** An important consideration when providing corrective responses is to identify what a learner needs to support them to re-engage in learning. Understanding why a learner is disengaged from learning or being disruptive is critical for providing an appropriate

and effective corrective response. Learners may demonstrate the same disengaged or disruptive behaviour for different reasons (Epstein et al., 2018). For example, a learner may start talking to their friends during an independent lesson activity if they do not realise the teacher expects them to work quietly, they do not remember the task instructions, the task is too difficult, the task is too easy, or they are having trouble focusing on the task due to difficulties self-regulating their attention or emotions. To effectively respond to each of these instances of disruptive talking, a different type of corrective response is required to ensure that the inappropriate behaviour stops and that the learner is supported to re-engage in the learning activity. For example, a learner who did not know they were expected to work quietly may be redirected back to task by a teacher reminding the whole class they should be working quietly. However, this reminder for a learner who is finding the task too difficult may stop them from talking but not stop them from quietly disengaging from the task.

**Ensuring learners understand corrective responses:** For learners to successfully stop inappropriate behaviour and learn from a corrective response, they need to understand why it is being given. The manner in which teachers provide corrective responses can impact learner understanding. For example, avoiding rapid sequences of corrective responses is advised so that learners have sufficient time to attend, comprehend and react appropriately (Kern & Clemens 2017). In addition, keeping corrective responses brief and specific is important for providing learners with the most relevant information to learn, much like academic error corrections (MacSuga-Gage, Simonsen & Briere 2017). Longer explanations that do not use plain language may be especially difficult for learners with delayed language development to comprehend (Snow 2014).

### **Effective strategies teachers use to create positive classroom learning environments.**

The most effective classroom management approaches combine preventative and responsive strategies. Preventative strategies aim to create classroom environments where the majority of learners are engaged in learning and on task (Korpershoek et al. 2016). Preventative strategies reduce the amount of time teachers spend addressing inappropriate behaviours because they reduce disengagement from learning and disruptive behaviours (Lucariello et al. 2016). This review outlines the most effective preventative strategies:

- Positive classroom climates, with high-quality learner-teacher relationships and explicit teaching of social and emotional skills

- Structured instruction to engage and motivate learners in learning
- Providing and explicitly teaching effective rules and routines
- Offering pre-corrections to remind learners of expectations
- Using active supervision to help learners stay on task.

This review also considers responsive strategies for correcting inappropriate behaviours. Effective corrective responses aim to support learners to re-engage in learning, minimise distractions and maintain a positive classroom climate (Chaffee et al. 2017). This review outlines the following aspects of effective corrective responses:

- Identifying learner needs
- Ensuring learners understand corrective responses
- Consistent and expected responses
- Remaining calm
- Responding proportionally to the level of behaviour displayed.

Effective classroom management is crucial for creating and maintaining an environment that facilitates learning. Evidence suggests that teachers can use both preventative and responsive strategies to encourage learners to behave in appropriate (on task, motivated to learn and prosocial) behaviours and reduce inappropriate (disengaged and disruptive) behaviours (Salkovsky, Romi, & Lewis, 2015). Effective preventative strategies include creating and maintaining a positive classroom climate, using structured instruction to engage and motivate learners in learning, explicitly teaching learners rules and routines, using pre-corrections to remind learners of appropriate behaviours, and actively monitoring the classroom (Shin & Ryan, 2017). Effective, responsive strategies require correcting inappropriate behaviours in a way that addresses the learner's needs, is understood by the learner, is consistent, expected, calm, and proportionate to the level of inappropriate behaviour displayed (Rucinski, Brown, & Downer, 2018). A whole school approach, access to professional learning, and proactive wellbeing support for teachers should support classroom management strategies.

### **Feedback during instruction**

Feedback is an essential part of education and training programmes. It helps learners maximize their potential at different stages of training, raise their awareness of strengths and areas of improvement and identify actions to improve performance (Sullivan, Johnson, Owens, &

Conway, 2014). Feedback is about giving information in a way that encourages the recipient to accept it, reflect on it, learn from it, use it, and hopefully make changes for the better. Feedback is a very important aspect of the teaching-learning environment. It enhances the integration of knowledge, skills and behaviours of teachers and learners in the classroom (Thaver & Lim, 2014). Feedback is central to developing the competence and confidence of teachers and learners at all stages of education. It clarifies good performance, helps develop self-assessment and delivers high-quality information to teachers (to improve teaching) and learners (to enhance learning) (Mpu & Adu, 2021)). It is a means of dialogue (written and verbal) between the teacher and the learner, which encourages motivational belief and self-esteem, and provides opportunities to close the gap between what is expected to be learned and what is actually learned (Yamani, 2014). Unfortunately, many learners ignore written feedback and only consider their grades. The grades are quite important, but ignoring the written feedback (and indeed all other forms of feedback) deprives learners of vital opportunities for action and improvement of learning.

An essential to learning and sound assessment practices, feedback allows learners not only to understand how they performed on the assessment task and justification for their grades but also and very importantly, it provides guidance for learners to build their capacity as learners. According to Brown (2017), feedback is the oil that lubricates the cogs of understanding. As Berger (2016) stated, feedback targets how learners learn to monitor, manage and take responsibility for their own learning. Feedback is not simply the correction of errors and awarding of marks/grades but also the guide for the improvement of learning. Tchombe et al. (2014) claimed that feedback could correct errors, develop understanding through explanations, generate more learning by suggesting further specific study tasks, promote the development of generic skills by focusing on evidence of the use of skills rather than on the content, promote metacognition by encouraging learners' reflection and awareness of learning processes involved in the assignment and encourage learners to continue studying.

Ianes, Demo & Dell'Anna, (2020) posited that feedback exists in all processes, activities, and information that enhance learning. It allows learners to reflect on their marks, understand their strengths, and identify areas requiring improvement (Lipnevich, Murano, Krannich & Goetz, 2021). Feedback can take many forms: a written form of feedback, where learners' responses are marked with comments to improve learning; an oral form of feedback, where teachers provide verbal feedback before, during and after classroom sessions and assignments,

seminars, discussions, and consultations; mail form of feedback where teachers provide feedback on assignments by email or other network facilitated means; and self- or peer- a form of feedback where feedback is provided by self and peers talking through their ideas on class discussions, assignments and other experiences.

According to Nicol (2021)., feedback is the moment in the learning process when learners get the most personalised instruction possible when the knowledge of what has improved and strategies provided for further improvement, what educators say and how they say them deeply influence the progress of learners and the pedagogy of teachers. (Narciss, 2017). found that effective feedback enhances learning and development in both givers and receivers of feedback. Effective feedback should be accessible and useful to learners to enhance their understanding of their studies and improve their future performances.

### **Benefits of effective feedback in teaching and learning**

Feedback is important for both the teacher and the learner as it improves learning. Creates responsive learners, and being responsive to learning and feedback improves learning and enhances learners' reflection on their work. Learning is enhanced when learners are responsive in processing the feedback and information received from the teacher (Hattie, 2019). Teachers must, therefore, assist learners in developing the skill of responding to feedback because learners who are good at self-regulation achieve highly (Nicol, 2021)

The implication of feedback is that as the learner uses information from feedback to improve his/her learning, the teacher also uses the information from feedback to sharpen his teaching, adjust his strategies, and improve his relationship with learners. The act of assessing has an effect on the assessor as well as the assessed. Assessors learn about the extent to which the assessed (learners) have developed expertise, and the assessor can tailor his teaching accordingly (Narciss, 2017).

Carless and Boud (2018) added that feedback allows teachers to build models of how their learners learn and to use this to inform future teaching and feedback processes, which on the whole produce better learners with enhanced learning skills, that result in improved learners' academic performance.



Feedback provides clear information about learners' behaviour and what is expected of them, thereby reshaping their behaviour. Especially when self-assessment and peer-assessment are involved, learners' reflection on their work and approvals/disapprovals from peers enrich effective feedback and enhance learners' learning (Berg & Smith, 2016).

Feedback promotes curiosity and encourages learners to try new behaviours, especially when learners interact with one another, exchanging and reviewing the teacher's comments on their responses and sharing ideas resulting from learning, assignments/tests, and feedback from the teacher (Panadero, Broadbent, Boud & Lodge, 2019). Effective feedback creates in learners the enthusiasm and motivation to find out more. Enhances learners' desire to learn by increasing their self-esteem and confidence whenever possible and by helping them believe that they can achieve the intended learning outcomes and demonstrate this in ways where they will be duly credited for this achievement. Encourages learners to gain some control of their learning which enhances learners' learning and academic achievement (Lipnevich & Roberts, 2014). This increases learners' engagement and awareness of their strengths and challenges and opens up endless opportunities for learners and teachers alike to grow. Such an environment builds trust and enthusiasm for the entire teaching and learning process, making learning exciting and creating infinite possibilities for learners to discover themselves.

### **Building Teachers' Capacity for Inclusive Practice**

Building the knowledge and capacity of teachers and other school staff is crucial to developing sustainable inclusion in schools. The evolution of an inclusive school culture depends on aligning staff attitudes and behaviour (Booth & Ainscow, 2016). Teachers must be knowledgeable about how inclusive education has progressed over time, particularly how the meaning of inclusion has changed and what it means in their school context. Understanding the concepts and values behind inclusion can help teachers appreciate its significance, prompting reflection on their own practice and how they see their learners (Chitiyo & Brinda, 2018).). This can allow any unhelpful assumptions or beliefs that may have been unconsciously informing their teaching practice, particularly in relation to learners living with disability, to be challenged and revised (McLeskey, Billingsley, Brownell, Maheady, & Lewis, 2019).

While attention to attitudes, values, and broad understandings is fundamental, the goals of inclusion will only be achieved when principles are consistently enacted in daily classroom practice. At the classroom level, inclusion relies on teachers' willingness and capacity to apply

evidence-informed inclusive practices, such as Universal Design for Learning (UDL) and Differentiated Instruction (Van Mieghem et al., 2020). UDL is primarily focused on inclusive task design, although the model has been expanded in recent years to include greater attention to pedagogy. UDL is a planning framework for learning activities designed to maximise curriculum accessibility for all learners by offering multiple opportunities for engagement, representation, action and expression (CAST, 2018; Sailor, 2015).

Differentiated Instruction (DI) is a holistic framework of interdependent principles and practices that enables teachers to design learning experiences to address variations in learners' readiness, interests and learning preferences (Armstrong, 2019). Differentiation encompasses elements of planning (clear, concept-based learning objectives; formative assessment to inform proactive decision-making for diverse learners), teaching (strategies to differentiate by readiness, interest and learning preference; ensuring respectful tasks and 'teaching up'), and learning environment (flexible grouping, classroom management, establishing an inclusive culture) (Yamani, 2014)

The application of UDL and DI principles and practices by skilled teachers enables diverse learners to access curriculum content in multiple ways (McMaster, 2013), at appropriate levels of challenge and support to ensure learning growth, and in ways that support motivation, engagement, and feelings of connection and belonging (Azorín & Ainscow, 2018.). These complementary frameworks apply to all learners and define general, flexible classroom practices that also reduce the need for individualised adjustments for learners with identified disabilities and specialised learning needs. However, in inclusive classrooms, teachers must also develop the knowledge and skills to make and implement reasonable adjustments and accommodations that enable learners with identified disabilities and more complex needs to engage with curriculum and assessment 'on the same basis' as their peers, as defined within the Disability Standards for Education (Jordan, 2018).

While inclusive teaching and classroom practices are non-negotiable, the challenge for some teachers to master the necessary skills and achieve a significant shift away from traditional teaching practices is often underestimated (Beckmann et al., 2018). It is well-documented that teachers often find it difficult to apprehend both the conceptual and practical tools of DI and to embed differentiated practices into their daily work (Dack, 2019), particularly when they are not adequately resourced or supported to do so (Florian, 2015; Brigandi et al., 2019). Perhaps related to teachers' perceived lack of competence and confidence, the past 5-10 years have seen

an enormous increase in the employment of teacher aides to work alongside learners with disabilities in mainstream classrooms, despite limited evidence for its effectiveness and often in the context of inadequate planning and oversight (Gajendrabhai & Saini, 2020).

Engagement in targeted professional learning (PL) is fundamental to supporting the shift towards inclusive teaching. Yet, traditional approaches to PL have been criticised for lack of systematic evaluation and inadequate adherence to principles of effectiveness (Sharma, Sokal, Wang & Loreman, 2021). Research on effective professional learning for teachers has established common principles and practices associated with practice changes, and these also align with teachers' stated preferences (Walker et al., 2019). These include:

- Professional learning is embedded in teachers' own work contexts and requires teachers to engage with content that is highly relevant to their daily practice and closely linked to learner learning (Spencer, 2016; Van den Bergh et al., 2019);
- Professional learning enables teachers to learn together with colleagues, such as in communities of practice (Gore et al., 2017);
- Professional learning activities are supported by robust school leadership and linked to broader school values and goals (Sharp et al., 2020)
- Professional learning is provided over extended periods, is led by facilitators with expert knowledge, and includes timely follow-up activities such as mentoring and coaching to embed changes in practice (Tomlinson & Murphy, 2015).

### **Ministry of Basic Education (MINEDUB), in partnership with Cameroon Baptist Convention Health Services' (CBCHS), Promote Inclusive Education**

The Cameroon Baptist Convention Health Services' (CBCHS) Services of Persons with Disabilities (SPD) and the Cameroon Ministry of Basic Education (MINEDUB) have signed a partnership to work together to promote the education of Persons Living with Disabilities (PLWD) in Basic Education system in Cameroon. The partnership was signed in Yaoundé on Thursday, January 13, 2022, between the Director of the CBC Health Services, Prof. Tih Pius Muffih and the Secretary General of MINEDUB, Daniel Adams Oyono.

The partnership, signed for ten years renewable, aims to strengthen the acceptability of education to primary school learners with disabilities by ensuring that the curriculum is inclusive and considering their needs. In addition to this, the agreement seeks to ensure an

accessible environment and laws that consider the needs of learners with disability and ensure that the mainstream education system is adapted to the needs of learners with impairment (Muffih, 2022).

In line with its strategic plans and legal framework, the CBC Health Services will commit to providing material support and individual follow-up to learners with disabilities to ensure they don't drop from school as a result of poverty or other factors, as well as collaborate with Councils alongside MINEDUB to reinforce Inclusive Education in Basic Schools effectively. According to the Etoug-ebe Baptist Hospital Administrator, Mr Yongwa Zaccs, the partnership will improve the lives of Children Living with Disabilities. He constituted part of the CBCHS delegation to the signing ceremony. Mr Yongwa emphasised that CBC Health Services adopted Inclusive education in 2009 and has a wealth of experience in inclusive education at the basic level. On his part, the Secretary General of MINEDUB, Daniel Adams Oyono, stated that the agreement would boost MINEDUB's capacity to promote inclusive education for all in the domain of pedagogy.

### **Barriers to Effective Inclusive Education in Cameroon**

The scope of the UNESCO Inclusive Schools and Community Support Programmes in Cameroon was very limited and beleaguered by a series of endemic issues. The project was limited to the capital city, covering an insignificant number of schools and participants ([APEHM]-UNESCO, 2015).

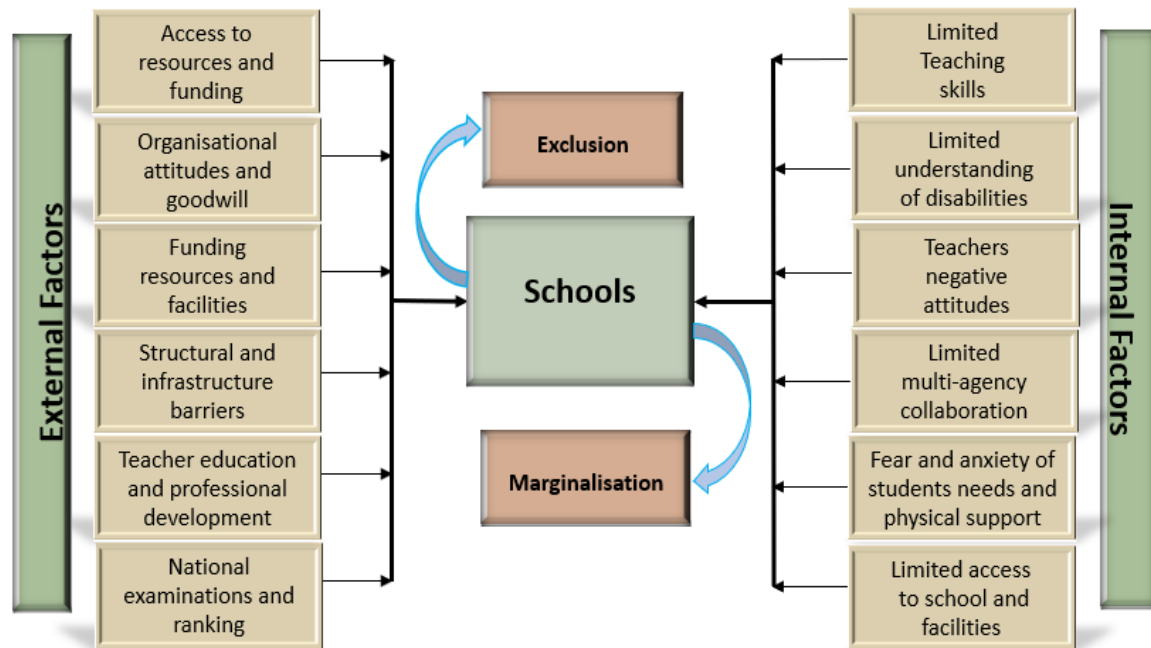
There is a need for laws regarding education for children/learners with disabilities to be revised and the responsibility given to the Ministry of Basic Education and the Ministry of Secondary Education. The first inclusion initiative in Cameroon was put in the hands of the APEHM and involved the education of only mentally impaired children in a special education school who had no experience or expertise in inclusive education. No matter the commitment of the NGO, lapses were bound to occur (UNESCO, 2016). The Ministry of National Education, which was supposed to head the inclusive education initiative, could not engage fully because local laws put the education of children with a disability under the responsibility of the Ministry of Social Affairs (UNESCO, 1999). Confusion on this management issue continues to plague the coordination or promotion of inclusive education initiatives today (UNESCO, 2017).

Evidence has pointed to most nations facing the challenge of moving educational policy and practice in a more inclusive direction ((Ainscow, 2020). This shows the complex nature of policy-making and interpretation, especially in relation to inclusive education (Armstrong, 2016). In particular, the challenges in addressing all forms of exclusion and marginalisation as exemplified in Cameroon and other African countries, with most countries facing implementation and organisational challenges in creating inclusive schools (Endeley & Zama, 2021).

Notwithstanding a determination to embrace change, a difference is observed between the noble intentions of the Cameroon government and the stated intentions of the Salamanca objectives concerning inclusive schools. The literature reviewed showed factors that challenge sound pedagogical practices, such as adapting curriculum content, diversity of needs in a class, and improving beliefs and attitudes (Tohnain & Tamajong, 2014). Tanyi (2016) identified these challenges as internal factors because most are caused within the school by the teachers, children or systemic influenced.

UNESCO (2020), on the other hand, identified external factors influencing education. The external factors that have a bearing on government efforts to improve inclusive schools are of central concern. External factors relating to governmental involvement, such as access, attitudes, examination results, ranking funding, cost sharing, teacher training, and architectural barriers, are also addressed. Literature suggests that the challenging factors are both external and internal because inclusive education involves practical application and engagement with both external and internal principles of inclusiveness (Azorín and Ainscow, 2018). The figure below is a summary of these factors.

**Figure 3: External and internal factors influencing inclusive education**



*Source: Azorín and Ainscow, (2018) p. 24*

The two categories summarised above are the factors that influence the implementation of inclusive schools. This means that the success of inclusion depends on how well these factors are met, modified or adapted to meet the needs of children with special education needs in mainstream schools.

### **Challenges for teaching in inclusive classrooms**

Several challenges to the implementation of inclusive education in classrooms have been identified in previous studies. They are summarised into four sub-themes: challenges related to classroom climate, school-related challenges, self-related challenges, and management-related challenges.

**Classroom climate:** According to McKay (2016), teachers in inclusive schools leave the profession early because of the workload made difficult by the diverse range of learners. She contends that the difficulties inside inclusive settings threaten educators' sense of efficacy and contribute to teacher *burnout*. Despite the efforts, they feel a lack of genuine achievement at work (Vehmas & Watson, 2016). The Canadian Hearing Society (2013) asserts that 'learners who use spoken language experience in an inclusive educational environment where they access the curriculum, what their teachers are saying and what their peers are saying, through

a language they all share.' In this inclusive classroom environment, deaf learners may face widely accepted practical discrimination based on *audism*. And due to *'the lack of language proficiency of teachers, access to education is, in essence, being withheld from signing learners.'* They agree that inclusion gives a sense of belonging. However, struggles at inclusion often result in exclusion and isolation, especially for deaf learners.

In an inclusive classroom, teachers have difficulties in maintaining the discipline of all learners because the behaviours of learners with disabilities are potentially very disruptive, and giving equal attention to all learners is somehow challenging (Agbenyega & Tamakloe, 2021). Besides, Bryant, (2017) argue that teachers generally do not want learners with special education needs in their classes because of their lack of knowledge and skills regarding inclusive practices. Further, they lack the skills to manage the learners with inadequate self-care skills.

Teachers claim a high number of learners in classrooms and learners with disabilities are not accepted by learners without disabilities (Brydges & Mkandawire, 2018). Many teachers believe that they are not responsible for some learners (Florian, 2015). They lack the skills to manipulate special devices and equipment used by learners with special educational needs, which causes difficulties in solving the problem posed by exceptional learners (Fitzgerald, 2018). Some teachers are not familiar with teaching strategies that can enhance the learning of learners with a disability. These teachers usually have difficulties with inclusive pedagogy (Agbenyega & Tamakloe, 2021).

**School-related challenges:** Studies demonstrated that schools do not have adequate resources to ensure the successful implementation of inclusive education. Insufficient paraprofessionals available to support teachers in teaching these learners with special education needs and limited support from school administrators (Bennett, 2017). Inappropriate infrastructures and instructional accommodation systems to accommodate learners with different disabilities (buildings are not barrier-free) (Pianta, Hamre, & Allen, 2019). Lack of specialised education teaching staff or strong educational collaboration team to support inclusion; and *lack of assistance to support diverse learners* (McKay, 2016).

Walker et al. (2019) opines that the lack of facilities in the governments' inclusive schools; teachers' incompetence; lack of resources, and appropriate infrastructure for disabled learners. The studies revealed that teachers receive inadequate training in inclusive education; teachers

not trained in identifying learners with challenges; unqualified and underqualified teachers, and inappropriate teaching methods since teacher attention is only on the special learners (Snow, 2014.). And further in-service teachers received inadequate staff development and training before implementing inclusive education (Gage, Scott, Hirn, & Macsuga-Gage, 2018). Most of their teachers were not developed professionally for inclusive education, and the availability of technology in their schools is limited (Alter & Haydon, 2017). These challenges explain the arguments of Ainscow and Slee (2019) that teachers who received inadequate education or training about inclusive education are not confident and are afraid to teach learners with diverse special needs.

**Self-related challenges (personal challenges):** The literature shows that teachers fail to identify children categorised as having special educational needs and disabilities (Leifler, 2020). Communication and collaboration between teachers themselves, professionals, and parents of learners with disabilities is a problem and time-consuming; lack of motivation and self-efficacy in teachers (Armstrong, 2016). Some educators are also incompetent to use a multi-sensory approach for learners with different disabilities, have inadequate skills in inclusive practice, and lack the experience, skills, the knowledge required to teach learners with Special Educational Needs (Pirchio, et al. (2017). For example, teachers of deaf learners in inclusive classrooms are not conversant in sign language and don't know how to sign many abstract words and concepts (de Beco, (2020). Further, when deaf learners feel isolated cognitively or socially in an inclusive classroom, their education may ultimately suffer (Grové & Laletas, 2019).

Moreover, teachers of learners in inclusive schools express a limited or lack of competencies to teach in inclusive classrooms and need for more competencies to teach children with special needs (Bots, 2015; Leifler, 2020; McKay, 2016). Consequently, teachers remain fearful and irresponsible (less willing) to educate learners with multiple special educational needs (McKay, 2016).

**Management/law-related challenges:** According to Abubakar (2019), management of the inclusive classroom is very challenging since the parents of children without disabilities do not appreciate or are not convinced with the idea of placing their children in the same classroom with disabled children. Inadequate administrative support to the implementation of the inclusive education program and the curriculum is not modified to benefit children with special needs (non-inclusive curriculum). Besides, the difficulties in including learners with severe



physical disabilities in co-curricular activities impact and authors report that teachers receive very little information on the learners with special needs included in their schools and lack of disability support staff (Odebiyi, 2016)).

### **Recommendations thought to solve challenges**

According to Bila (2015), the success of inclusive education will be attained if the schools have adequate resources, appropriate infrastructures, the supply of special education teachers into the system, and the proper use of funds for inclusive education. Further, the authors suggest that preparing adequate ongoing support for new teachers and general teachers working in classrooms with diverse learners or learning difficulties is crucial to improve their work (McKay, 2016).

Communities and schools need to plan buildings, accommodations, roads, and sporting facilities supporting learners with disabilities and special needs (Busby et al., 2012; Charema, 2010; McKay, 2016). Besides, Hayes and Bulat (2017) point out that 'learners with disabilities should receive reasonable accommodations within the (the school) classroom.' Appropriate training for teachers should allow them to meet and interact with parents, therapists, and family members of learners with disabilities. Furthermore, deaf learners should have access to deaf teachers, appropriate sign languages, adapted curriculum that includes the study of sign language (Canadian Hearing Society, 2013; United Nations, 2018; WFD Board, 2018).

Recommend establishing a vibrant in-service and preservice teacher training program by the Ministry of Education. In exploring the development of attitudes towards educational inclusion among prospective primary school teachers, Sosu et al. (2010) highlight the need for pedagogical scaffolding to facilitate the successful implementation of inclusive pedagogy. Alexiadou & Essex, (2017). These align with Anderson's (2017) arguments that providing preservice teachers opportunities is essential to develop skills, confidence, and effective inclusive education.

Moreover, providing more information, seminars, and workshops on teacher practices, on working with children categorised as having special education needs and in the field of special needs education can improve teachers' understandings and their capability to work in inclusive settings (Akalin et al., 2014; Miller, 2019). In other words, teachers need to be well-trained (Sanger, 2020). Since parents play a vital role in their children's education, Mezzanotte (2020)

and Florian (2015) also argue that partnerships between teachers and parents can contribute to sustaining and protecting inclusive education.

## **Theoretical framework**

Findings are reported in the literature about using behaviourist and constructivist principles/strategies for teaching learners with special education needs. Constructivism and behaviourism are two different schools of thought (Bell, 2021; Cansiz & Cansiz, 2019; Farrokhnia, Baggen, Biemans & Noroozi, 2022). Although most educationists support the use of any particular paradigm, both paradigms have their best and most practical perspectives that must be evaluated critically.

### **Theory of Constructivism**

Constructivism is a theory in learning and teaching found in psychology, which explains how people might acquire knowledge and learn based on their experiences, beliefs and attitudes (Olusegun, 2015). The constructivist theory has gained great popularity in recent years; although its idea is not new, trends towards constructivism can be observed through the works of Socrates, Plato, and Aristotle, who wrote about knowledge information. Constructivist conceptions of learning have their historical roots also in the work of Dewey (1929), Bruner (1961), Vygotsky (1962), and Piaget (1980) (Olusegun, 2015). Constructivism is a method for teaching and learning based on the idea that cognition (learning) is the result of "mental construction" (Olusegun, 2015). More specifically, learners learn by integrating new knowledge with what they already know.

Constructivism emphasizes providing an effective learning environment where learners can construct their knowledge through their learning experiences. Furthermore, constructivism theory stresses that learning should be relevant to real-life experiences and situations hence should be meaningful (Zhang et al., 2016). Theoretically, the constructivism paradigm focuses on creating cognitive tools that imitate the wisdom of the culture in which they are employed, along with the experiences and insights of learning. Constructivism incorporates an individual understanding of the significance of the social dimension during their learning process via observation, experimentation, interpretation and adaptation of knowledge to establish a cognitive structure (Sakarneh, Paterson & Minichiello, 2016). Al-Shammari (2019) highlighted the social role of learning due to its effect on cognitive development through

interaction among children, their parents, peers, teachers, and ultimately their learning. Constructivism focuses on learning, including creation, construction, and invention, primarily for individuals to establish their meanings and knowledge (Sakarneh, 2015). Lenjani (2016) argues that "constructivists believe that an understanding of the brain informs teaching".

Akpan and Beard (2016) also argue that constructivism is the best paradigm for teaching all learners, particularly learners with special educational needs. Liu and Ju (2020) claim that teachers are facilitators who provide essential information and organize different activities for their learners to enable them to discover their learning. Lenjani (2016) highlights the central values of constructivism as;

- Learning is about searching for the meaning to develop own understanding,
- Meaning requires establishing the perceptive of the whole and the individual parts constructing it,
- Teachers should have a complete awareness of the mental models used by learners to distinguish their world and the assumptions made for supporting their models,
- The purpose of learning should not be just memorizing the information being given by others while to construct individuals' their meanings.

The critical focus of constructivism is that learning should incorporate task-based, learner-centred minds and hands-on activities (Sakarneh, 2015; Shi, 2013) while being meaningful and relevant to real-life practical experiences (Lenjani, 2016). Moreover, the application of constructivist-based classroom activities is focused on providing external and internal scaffolding strategies for all learners that are essentially required for learners with special needs and learning disabilities (Shi, 2020).

From a practical perspective, inclusive education practices based on constructivism are the implementation of constructivism in inclusive classroom settings, which incorporate the strategies and teaching methods to facilitate learners in an exploration of multifaceted topics effectively (Hickey, 2014). Possible scenarios for exploring such issues comprise; employing real-life experiences and examples and situating activities in a real-world context, presentation of multiple perspectives (e.g. collaborative learning for developing and sharing alternative visions), provision of sufficient guidance for using the constructive process, utilization of cognitive apprenticeships (e.g. coaching and modelling), encouragement of reflective

awareness, and inclusion of social negotiations (e.g. discussions and debates) (Ertmer & Newby, 2019).

Botha and Kourkoutas (2016) argued that having a constructivist perspective, children with behavioural difficulties receive support in establishing and applying innovative practices. They further say that learners with behavioural difficulties sometimes develop psychological symptoms, including lack of motivation, learning difficulties, social withdrawal, and disengagement from school. Therefore, in an inclusive classroom, teachers should also focus on establishing constructive relationships with these learners, which leads to coping with their anti-social behaviours (Sakarneh & Al-Swelmyeen, 2021). Hence, learners with special learning needs can benefit most from the practices implemented in constructivist inclusive classroom settings, including cooperative learning and peer tutoring (Sakarneh & Al-Swelmyeen, 2020).

Cooperative learning and peer tutoring allow them to interact with others and learn actively in a real-world setting (Sakarneh, 2020). However, these collaborative and peer learning groups may be formally structured according to learners' interests and abilities. The informal ones may be designed spontaneously by asking learners to pair and brainstorm on a particular topic. The core purpose and underlying assumption of constructive inclusive classrooms are to make the learners learn from their experiences and real-life applications (Botha & Kourkoutas, 2016).

### **Role of a Teacher in a Constructivist Classroom**

The primary role of a teacher is to build a collaborative problem-solving environment in which learners show active participation in their learning process. From this viewpoint, an educator acts as a facilitator of learning instead of a teacher (Akpan & Beard, 2016). The educator ensures he/she knows about the learners' pre-existing knowledge and plans the teaching to apply this knowledge and then build on it.

Scaffolding is a crucial aspect of effective teaching, by which the adult frequently modifies the level of support according to the learners' level of performance. In the classroom, scaffolding may include modelling an ability, providing cues or hints, and adapting activities or material to meet the needs of individual learners (Al-Shammari, 2019).

In a constructivist classroom, the teacher's primary responsibility is to create a learning environment that encourages learners to construct their own knowledge through exploration and inquiry (Erdem, 2019).

The teacher also encourages learners to collaborate with one another, share their ideas, and reflect on their learning experiences. By doing so, the teacher helps learners develop critical thinking skills, problem-solving abilities, and a deeper understanding of the subject matter.

Another important role of the teacher in a constructivist classroom is to facilitate each learner's zone of proximal development (ZPD). This means that the teacher helps learners work on tasks that are just beyond their current level of understanding but still within their reach with guidance and support. By doing so, learners are able to stretch their abilities and develop new skills while feeling challenged and engaged in the learning process. The teacher may use a variety of techniques to facilitate the ZPD, such as scaffolding, modelling, and providing feedback (Picciano, 2021).

### **Pedagogical Objectives of Constructivist Learning Environment**

Following are the pedagogical objectives of constructivist classrooms:

- To offer experience alongside the knowledge construction process (learners decide how they will learn).
- To offer experience in multiple dimensions (trying out alternative solutions).
- To encourage learning in realistic contexts (factual tasks).
- To encourage learners' choice and ownership in the learning process (learning is learner-centred).
- To include social experience in learning (collaboration).
- To incorporate various methods of representation (text, audio, video etc.)
- To provide an understanding of the knowledge construction process (metacognition, reflection).
- Teaching methods such as discovery-based teaching. The success of such teaching techniques relies on successful collaboration among learners.

## **Theory of Behaviourism**

Behavioural learning theories were developed by J.B. Watson (1913). Their focus on behaviour that could be observed and measured was a departure from previous introspective theories that focused on internal thoughts. As a result, they made psychology relevant to science. From a theoretical perspective, behaviourism is among the classical theories of learning and documented as the oldest (Nalliah & Idris, 2014). It is also known as a dominating psychological model, as indicated by the metaphor "learning as the acquisition of stimulus-response pairs" (Doolittle, 2014; Harold and Corcoran, 2018). Behaviourists emphasize imparting reality knowledge to the learner (Hickey, 2014). Behaviourism prevails when results are linked with the response or stimulus followed by maintenance of reinforcement (Ertmer & Newby, 2013). The dominating principles of behaviourism that are implemented in education and inclusive classrooms are; individuals learn behaviours directed by the settings in which behaviour occurs, teaching cannot be done without learning, learning leads to changes in behaviours, behaviour leads to actions, and the focus should be on the observable (Harold & Corcoran, 2018).

From a practical perspective, inclusive classroom practices based on behaviourism incorporate the implementation of the behaviourism approach to the inclusive classroom settings with a significant focus on learners' behaviour and practices in manipulating the stimulus materials (Al-Shammari, 2019). Behaviourism-based inclusive classroom practices are direct and explicit and are systematic, including a step-by-step instructional process being instructed by teachers and followed by their learners (Zhang et al., 2016). Moreover, direct or explicit instruction-based practices focus on breaking down the tasks into more minor elements and are widely applied by teachers in inclusive classrooms for learners with special education needs (Steele, 2019).

### **Teachers' role in a behaviourist inclusive classroom**

Behaviourists permit the learners to determine the instructions' starting point during their instructional process and focus on more effective reinforcers. For example, in behaviourist inclusive class settings, the teachers' role is;

- Determination of the cues that may draw out learners' required response,
- Arrangement of practices where target stimuli and prompts are paired to elicit the expected response in a natural setting,

- Arrangement of suitable environmental conditions to have a correct response from learners in the presence of target stimuli and receiving reinforcement of such responses (Harold & Corcoran, 2019).

Essential characteristics and assumptions of the behaviourism strategies are widely embedded in current instructional practices in the classroom, including;

- Functional behavioral analysis,
- Direct instruction,
- Evaluation, assessment, and feedback (Ertmer & Newby, 2013).

**Direct Instructions** are commonly practiced in a teacher-leading environment where the teacher is the facilitator of learners to learn from the targeted lessons (Hattie, 2018). In such settings, the teacher elaborates on the lesson. The teacher teaches a structured lesson, learners' understanding is monitored, and feedback is taken from learners to know the level of their understanding.

In a similar context, the **functional behavioural analysis** classifies and targets particular behaviours, emphasizes changing disruptive behaviours, and encourages positive behavioural changes (Al- Shammari, 2019). Such analysis for learners in inclusive classroom settings incorporates a chart indicating mainly targeted behaviours monitored for antecedents, time of day, frequency, and consequences.

**Evaluation, formative assessment, and feedback** evaluate the progression of learning and investigate the gaps where enrichment or remediation is necessary. Examples include the usage of Exit slips like "things I found interesting", "things I learned", and "questions I still have" (Nalliah & Idris, 2014).

Therefore, it is considered that strategies based on behaviouristic theory are related to several best practices necessary for inclusive classroom settings (Salend, 2011). Under such settings, a teacher-centred environment is established in which the teachers deliver and design the lessons according to the learner's objectives. In addition, such classroom settings are focused on conditioned responses, evaluation, assessment, and feedback that facilitate the assessment of transfer and gain of knowledge between learners and teachers (Ertmer & Newby, 2013).

## **Empirical studies**

Tanyi (2016), examine if the curriculum, infrastructures and teachers' attitudes may influence school exclusion amongst disabled pupils. Three hypotheses were formulated based on the three variables: curriculum (teaching programmes), infrastructures and teachers' attitudes. 150 public primary school personnel from 12 primary schools in Yaounde, Mfoundi IV Sub-Division of the Centre Region of Cameroon were involved in this survey. A questionnaire was used for data collection. Both descriptive and inferential statistics were used to analyse the data. The results show that there was a significant impact of curriculum and teachers' attitudes on inclusive classroom but there was no significant impact with respect to the infrastructure variable. Considering that infrastructure variables have no impact, we still recommend that good quality and relevant infrastructure be put in place and also teachers' programme and training be revised to enhance the pedagogic skills that may include handling individual pupils' differences in inclusive classrooms.

A study was carried out by Fonyuy (2018) on the State of inclusive education programmes in Cameroon. The objectives of the study were to establish the perceived benefits of inclusive education, the challenges of the implementation and strategies to overcome the challenges. A case study research design was employed to guide the study. Purposive sampling was utilised to sample four (4) preservice teachers to participate in the study. Data in the study was collected using an interview schedule and thematically analysed. The finding established that the lack of a specific policy for inclusive education and limited human and material resources affect the inclusive education programme in Cameroon. Besides, the study recommends that the government should enact laws on inclusive education, train general education teachers in special needs education, create more community awareness concerning the importance of inclusive education, employment of itinerant specialist teachers, provide sufficient funds and provide more teaching resources for children with special educational needs in general education schools. According to the study, such strategies will provide excellent support and promote a culture of quality service delivery.

Enow, Bechem and Wemba (2019) conducted a study to assess the limitations of the Cameroonian education system in inclusive education; identifying the challenges teachers face in managing learners with special needs and proposing a way forward for the success of inclusive education in Cameroon. Two inclusive schools were used CEFED Inclusive Nursery and Primary School Santa and Model Bilingual Nursery and Primary School Nkwen. This



descriptive survey made use of a questionnaire, an interview guide, and an observation guide as instruments for data collection, all constructed by the researchers. The sample of the study was 20 teachers purposively selected from the two inclusive schools under investigation. The self-delivery method was used to collect the data. Data analysis was descriptive with the use of frequency counts and percentages. The findings indicated that teachers have insufficient knowledge on effective classroom management strategies in inclusive classrooms (75%); Teachers' professional training does not meet the challenges in inclusive classrooms (70%); Teachers use abstract materials in teaching pupils in inclusive classrooms (75%) of the 20 teachers of the study used only abstract materials in their teaching; and that teachers have limited competences in teaching inclusive classrooms (75%). It was concluded, among others, that all teacher training colleges and universities should include inclusive education as a subject in their curriculum so that the graduates are empowered with skills to teach pupils with special needs.

Francisca and Akum (2022) examined The Problems of Implementing Inclusive Education for Pupils with Hearing Impairment in the Fako Division, South West Region of Cameroon. Three research objectives were used to guide this study which was; to find out the problems faced in the use of Assistive technology needed for the implementation of inclusive education for pupils with hearing impairment, to find out the problems faced in the area of teachers training needed for the implementation of inclusive education for pupils with hearing impairment and to examine the problem faced in the area of inclusive assessment. The study adopted the descriptive survey research design. The population of the study consisted of all learners with hearing impairment in three all-inclusive primary schools in the Buea Municipality. A sample of 32 pupils was precisely obtained from classes 3 to 6 of the selected schools. The instruments used for data collection were a questionnaire and an observation guide. The study uses the thematic analysis method to analyse the results of the data collected. The findings revealed a significant relationship between assistive technology usage and the inclusive education setting and tutoring of pupils with hearing difficulties ( $r = 0.282$ ,  $p = 0.028$ ). Furthermore, the results showed that the learners did not face major challenges when taught by tutors using subtitles ( $z = -9.033 > /1.96/$ ). Lastly, from the observation checklist, the main difficulties faced by some of the pupils were that they could not attempt to repeat familiar words or turn to or move towards sound sources.

Philip (2022) conducted a study to establish the teaching models used and challenges experienced in secondary school classes with special needs learners in Tanzania, using a questionnaire and an interview schedule under the descriptive case study design. The study sample included 35 regular teachers, seven heads of schools, seven heads of departments and seven special needs teachers through the proportional and purposive sampling procedures. Data were analysed through content analysis and descriptive statistics. The study established that collaborative teaching was the most preferred model compared to consultative and coaching models. A bigger number of children with disabilities was one of the key challenges experienced in inclusive classrooms as teachers failed to provide sufficient support to cater to special needs learners' needs. Other challenges included a lack of awareness of Tanzanian Sign Language for Hearing Impairment and teachers' negative attitudes toward learners with special needs. The study recommends that the government recruit sufficient special education educators to work closely with regular teachers in supporting learners with disabilities in inclusive settings. Relevant authorities must introduce the Tanzania Sign Language course as compulsory in teacher training colleges for educators to gain knowledge to communicate effectively in inclusive settings. Finally, the government should provide seminars and workshops to teachers on the importance of inclusive education as such training will dispel negative attitudes of teachers towards children with disabilities.

Wakurul, Kisanga, and Vuzo, M. (2022) studied primary school teachers' pedagogical practices in the inclusion of pupils with moderate deaf blindness. It also explains the factors hindering pupils' participation in learning. A qualitative approach with a multiple case study design was adopted. Purposive sampling was used to select forty participants from four inclusive primary schools in Tanzania. Data were generated using semi-structured interviews, non-participatory classroom observations, focus group discussions (FGDs) and document reviews. Thematic analysis was used to identify, analyse, and record themes and sub-themes from the data generated. Findings indicate that lesson plans had long been homogenised, the teaching and learning approaches were not disability-sensitive and teaching and learning materials were also inadequate and inaccessible. Additionally, while the classroom environment was inaccessible for pupils with deafblindness, the assessment strategies were homogenised for all. The findings further show that the teaching practices and learning environment were exclusionary without considering the pupil's unique learning needs. Among other things, the paper recommends that there is a need to restructure teachers' pedagogical practices to accommodate the diverse needs

of learners in order to ensure equitable access to quality education and participation of all pupils.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

This study is seeking to investigate the impact of pedagogic practices on effective learning in inclusive classrooms in some pilot inclusive primary schools, looking at teachers' ability to teach the different learners in inclusive classrooms, their ability to manage inclusive classrooms and learners' learning outcomes. This section discusses the research methodology that will be used for collecting and analysing data. It reveals the processes used to collect data from the field. It opens with a description of the research design and how the study was carried out. Next, we shall discuss the study area, the population of the study, the target population, and the accessible population from which our sample size was derived. We will then receive the sample and the sampling techniques that were employed. The data-gathering tools and methods for validating them will be discussed. The processes for administering the instruments will also be discussed, data analysis techniques will be elucidated, ethical considerations, and reiteration of the hypothesis.

#### **Research Design**

A mixed method was used for this study. Mixed methods research combines qualitative and quantitative methods in the same study. The overall purpose and central premise of mixed methods studies are that combining quantitative and qualitative approaches provides a better understanding of research problems and complex phenomena than either approach alone (Creswell & Plano Clark, 2007; 2012). Better understanding can be obtained by triangulating one set of results with another, enhancing inferences' validity. Greene, Caracelli, and Graham (1989) point out other important purposes, rationales and advantages of mixed methods research: complementarity (elaboration or clarification of the results from one method with the findings from the other method), development (when the researcher uses the results from one method to help develop the use of the other method) and expansion (seeking to extend the breadth and range of inquiry by using different methods for different inquiry components).

#### **Area of Study**

This study was conducted in Mfoundi Division of the Centre Region of Cameroon. Mfoundi Division was purposively sampled because it has the highest number of piloting inclusive primary schools compared to other divisions in the national territory.

The Mfoundi division was created following Decree No. 74/193 of March 11, 1974, separating it from the division of Mefou (today itself divided into Mefou-and-Afamba and Mefou-and-Akono). The division covers an area of 297 km<sup>2</sup> and, as of 2022, had a total population of 2,881,876. The division forms the Yaounde capital and greater area.

### **Population of Study**

The target population is comprised of a group of individuals and objects from which samples are taken for measurement. Amin (2005) viewed it as a complete set of elements (persons or objects) that possess some common characteristics defined by the sampling criteria established by the researcher. In addition, the scholar stated that a population also refers to the larger group from which the sample is taken. The population in this study consists of primary school teachers.

### **Target population**

The researcher intends to generalise the findings to this population. The target population, often known as the parent population, may not always be reachable to the researcher (Amin, 2005). For Asiamah et al. (2017), the set of people or participants with particular traits of interest and relevance is referred to as the target population, and it is the portion of the general population that remains after it has been refined. The researcher must therefore identify and exclude members of the general population who might not be able to share experiences and ideas in sufficient clarity and depth from the target population. Thus, this study's target population comprises three pilot inclusive primary schools. Teachers were chosen because they are the main guarantors of quality education in the country.

**Table 1: Distribution of target population**

<b>No</b>	<b>Name of School</b>	<b>Target Population</b>
1.	Government Pilot Inclusive Nursery and Primary School of NCRPD Etoug-Ebe	17
2.	Government Pilot Inclusive Primary School, Yaounde Administrative Centre Group 1B	19
3.	Government Pilot Inclusive Practising Primary School Nkoldongo Group 1A	19
	<b>Total</b>	<b>53</b>

*Source: Division of Personnel, the Mfoundi divisional delegation of basic education, 2023*

Table 1 shows the total number of teachers in the selected schools.

### **Accessible population**

This is the population from which the sample is drawn (Amin, 2005). Asiamah et al. (2017) support this by postulating that after eliminating every member of the target population who might or might not engage in the study or who cannot be reached during that time, the accessible population is then reached. The last group of participants is the one from whom data will be gathered by polling, either the entire group or a sample taken from it. If a sample is to be taken from it, it serves as the sampling frame. People eligible to engage in the study but unable to participate or would not be available at the time of data collection are the accessible population. The accessible population of this study was drawn from all three schools. The researcher, therefore, had access to 53 teachers drawn from the three schools, as seen above.

### **Sample of the study**

The sample of this research work was drawn from the accessible population of 53 teachers of the three-pilot inclusive primary schools the researcher has access to. A good sample is one that statistically represents the target population and is sizable enough to provide an answer to the research issue. Amin (2005) views a sample as a portion of the population whose results can be generalised to the entire population. The author adds that a sample can also be considered representative of a population. Majid (2018) corroborates this by asserting that because the community of interest typically consists of too many people for any research endeavour to involve as participants, sampling is a crucial tool for research investigations.

The sample size was determined using the Research advisor sample size table (2006), which constituted 52 teachers from three schools. They were drawn in such a way that all teachers of these schools are represented.

**Table 2: Distribution of sample per school**

<b>No</b>	<b>Name of School</b>	<b>Target Population</b>
1.	Government Pilot Inclusive Nursery and Primary School of NCRPD Etoug-Ebe	17
2.	Government Pilot Inclusive Primary School, Yaounde Administrative Centre Group 1B	18
3.	Government Pilot Inclusive Practising Primary School Nkoldongo Group 1A	19
	<b>Total</b>	<b>52</b>

Table 2 above shows the study sample drawn in accordance with the Research advisor sample size table (2006).

### **Sampling technique**

Every research involves, to some degree or another, a sampling process. Sampling is one of the most important steps in research; it leads to valid results when carefully done. Sampling is a process of selecting representative portions of a population that permits the researcher to make utterances or generalisations concerning the said population. It can also be the process of selecting elements from a population so that the sampled elements selected represent the population. Sampling is involved when any choice is made about studying some people, objects, situations, or events rather than others. A good sample should be representative of the population from which it was extracted. Regardless of the sampling approach, the researcher should be able to describe and relate the characteristics to the population (Amin, 2005).

Sampling techniques refer to the various strategies a researcher uses to draw out a sample from the parent population of the study (Amin, 2005). There are two main sampling techniques; probability and non-probability techniques. The sampling technique suitable for this study is non probability sampling. Non-probability sampling is a method in which not all population members have an equal chance of participating in the study, unlike probability sampling. Each member of the population has a known chance of being selected. Non-probability sampling is most useful for this study like a pilot survey. Researchers use this method in studies where it is impossible to draw random probability sampling due to insufficient number of samples.

### **Research Instruments**

An instrument is any tool that has been methodically built to collect data and should be gathered accurately. The researcher made use of two instruments: a questionnaire and an interview guide. The two instruments were used to collect both qualitative and quantitative data to answer the research questions raised in the study. The researcher triangulated the different data collected to ensure the study's validity and reliability.

### **Interview guide**

This study made use of an interview guide. Interviews are used in qualitative research to provide meaningful information from the perspective of the participant and their lived experiences (Creswell, 2018). Harvey (2017) explained that in-depth interviews can vary from simple and informal conversation to more formal interviews, being either structured, unstructured, or semi-structured. In a semi-structured interview, which was used for this investigation, a set of broad questions are typically asked mostly in order, with some flexibility

to adjust to the participant's responses and is primarily a one-way data collection technique (Harvey, 2017). Interviews are typically comprised of a few main questions, but include several more detailed, supporting questions to follow-up. This is to prompt the participant to provide more in-depth information, if needed (Wechsler, 2013). Creswell (2018) explained that the goal of interviews is to ask open-ended questions that are not leading, allowing the participant to choose the direction of the answer. These questions should be broad enough not to limit the responses.

A set of four open-ended questions were formulated and put together for the interview guide, including an inquiry about the general information of participants. The interview questions were generated based on the reviewed literature, hoping to fill in the gap mentioned in chapter two. The key reason for using open-ended questions mainly in the guideline is because this type of question enables participants to overtly express and describe how they see, think and feel about circumstances that have happened in reality (Creswell, 2018).

### **Participants**

For some practical reasons, selecting participants in educational research sometimes cannot be done randomly (Harvey, 2017). Especially within the qualitative approach where small-scale research is being conducted (Creswell, 2018), it is implausible for the researcher to study everyone in all places covering everything that has happened (Wechsler, 2013). In such cases, non-probability sampling is the most suitable way of selection (Wechsler, 2013; Creswell, 2018).

Among several types of non-probability sampling (Creswell, 2018), this study used the method of purposive or judgemental sampling to select participants (Harvey, 2017). In this study, seven participants were chosen with professional training on inclusive education. The reason was to see the impact of training and experience in implementing inclusive education.

### **Questionnaire**

The questionnaire is the tool utilised to gather data for this investigation. According to Amin (2005), a questionnaire is a professionally crafted tool used to gather data in line with the research questions and hypothesis requirements. He continues by saying that a questionnaire can be considered a self-report tool used to collect data on factors of research interest. A questionnaire is a valuable tool for gathering survey data, providing structured, frequently numerical data, being administered without the researcher's presence, and often being



comparatively simple to analyse, as Cohen et al. (2007) reiterated. It is a tool for gathering data with specific questions that the respondent must answer and then return to the researcher. There are two different kinds of questionnaires: closed and open-ended. The type of study is the only factor influencing the questionnaire selection. This study will use closed-ended questions, including Likert-style rating scale items. These closed questions are simple to code and take little time to complete.

According to Creswell (2018), a questionnaire takes a quantitative approach to measure perceptions and provides data upon which generalisations can be made on the views of a given population on a particular phenomenon. In this study, a self-administered questionnaire was preferred because the targeted respondents could read and express themselves effectively. The researcher used a self-administered questionnaire to capture the teachers' views on the teaching and learning process in selected pilot inclusive primary schools. It is a rigorous instrument prepared by the researcher about the research problem under investigation, which was used to collect information from respondents. It comprises a carefully selected set of questions or statements requiring respondents' answers. The collection of the research-developed questionnaire titled: Pedagogic Practices and Effective Learning in Inclusive Classrooms (PPELIC) had two parts; A and B. Part A contains information on the personal data of the respondents, while part B includes thirty-two (32) statements built in five clusters A, B, C, D and E. Cluster A of the questionnaire focused on teaching methods in an inclusive classroom. Cluster B of the questionnaire concentrated on teacher's professional development for inclusive education. Cluster C of the questionnaire addressed classroom management strategies in an inclusive classroom. Cluster D address feedback during instruction for effective learning in an inclusive classroom and Cluster E addresses effective learning in an inclusive classroom. This enabled us to obtain information on the dependent variable, which is the actual problem.

**Table 3: Variables and statements**

<b>Variables</b>	<b>Statements</b>
Teaching Methods for effective learning in inclusive classrooms	1, 2,3, 4, 5, 6, 7, 8
Teacher professional development	9, 10, 11, 12, 13, 14, 15, 16
Classroom Management Strategies for effective learning	17, 18, 19, 20, 21 22
Feedback during instruction for effective learning	23, 24, 25, 26, 27,
Effective Learning in Inclusive Classrooms	28, 29, 30, 31, 32

All the five-clusters have several statements each, all relating to the research questions that are guiding the study. The response format for clusters A to E is based on a four-point scale of strongly agree (SA), Agree (A), Disagree (D) and strongly disagree (SD). In other words, the higher the aggregate scores on the rating scale, the more positive the response of the subjects and the lower the score, respondents indicated their level of agreement by ticking (✓) on the rating scale.

**Table 4: Questionnaire options and corresponding weights on the Likert scale**

Option	Weight
Strongly Agree (SA)	4 Points
Agree (A)	3 Points
Disagree(D)	2 Points
Strongly Disagree (SD)	1 Point

Table 4 shows how the questionnaire was weighted with the various options, from 4 points for SA to 1 point for SD.

### **Validation of the Instrument of Data Collection**

Validity refers to the measurement instrument and the level to which it saves the purpose of its design. According to Amin (2005), Validation refers to the instrument's accuracy in measuring what the researcher intends to measure. The instrument's validity can be affirmed because the questions are simple, understandable and easy for the respondents to answer. Face validity was adopted and this was done by giving the initial draft of the questions to expert rates who might kindly request to examine the adequacy of the statement relevance and suitability of language, structuring and sequencing of ideas and appropriateness of the instrument.

These experts' comments and observations were used for the instrument's modifications. They modified some of the research questions and improved the clarity of the questionnaire statements and the clarity of the response scale format of Strongly Agree (SA), Agree (A), Disagree (D) and strongly Disagree (SD). Their comments were incorporated in the revised version of the questionnaire statements. Our method of distributing questionnaires to the respondent was face-to-face distribution. This was to give room for the respondents to take their time in filling out the questionnaires without any inconvenience.

### **Face Validity**

The supervisor in charge of the dissertation examined and screened the questionnaire. Some of the statements on the questionnaire were adjusted and maintained, and others were disqualified.

### **Content Validity**

The supervisor examined the statements on the questionnaire in relation to the objective of our work. After proper examination and acceptance of the statements, the content of the instruments was made valid.

### **Pilot Study**

The researcher conducted a pilot test in Government Primary School Etoug-Egbe, Group 1, which did not constitute part of the sample. We did a pilot study because we wanted to develop and test the adequacy of the research instrument. This procedure ensured the content validity of the instrument. It also gave an advance warning about whether the main research project could fail, whether research protocols may not be followed, or whether proposed methods or instruments were inappropriate or too complicated.

### **Reliability of the study**

Reliability refers to the accuracy and consistency of the measuring instrument (Amin, 2005). Reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials. Reliability was carried out using a pre-test technique through a pilot school. This was done through a pilot study conducted in a school other than the one sampled. The exercise the researcher checks if the phrased questions drew a response from the participants, if the sentences read well, and transmit the same message to the participants. After the piloting exercise, the questionnaire was evaluated, and corrections were made to come up with a good questionnaire. The results obtained after piloting were compared to ensure consistency in the instruments used for data collection.

### **Method of data collection**

The researcher obtained an authorisation letter from the Dean of the Faculty of Education at the University of Yaoundé I to facilitate data collection in the field. The authorisation letter was used in order to have permission from various offices such as: the Regional Delegate of Basic Education for the Centre Region, the Divisional Delegate of Basic Education for

Mfoundi Division, the General Director of the National Centre for the Rehabilitation of Persons with Disabilities and a negative COVID-19 test in order to interact freely with the selected participants without abrogating any procedure. Consent was also be sought from all participants. The researcher will first conduct an interview with the selected teachers. After the interview, the questionnaire will be administered to the teachers from the selected schools.

## **Methods of data analysis**

### **Quantitative data analysis**

Quantitative data was analysed using descriptive and inferential statistics. A regression method was used. Data was presented using tables and descriptive statistics like percentages, frequencies, and means. Correlation and the statistically more advanced method of simple linear regression was used in data analyses.

### **Qualitative data analysis**

Qualitative data was analysed using content analysis. Thematic analysis was chosen as the most appropriate method here since it represents the thematic content of qualitative data such as interview transcripts (Anderson, 2007) through the identification and analysis of common themes or patterns of meaning in the set of data supplied in this stage (Anderson, 2007; Joffe, 2011). In addition, this method of analysis provided the researcher with the end result, which features the most noticeable yet valuable constellations of meanings found in the data (Anderson, 2007).

In this research, the content analysis method was used in the analysis of data based on the phenomenal data analysis technique proposed by Moustakas (1994). Qualitative data analysis begins with the process of organizing, reducing, and describing the collected data (Schwandt, 2001). Unlike quantitative analysis, there are no prescribed formulas for qualitative analysis. To guide the data analysis, the researcher used the six phases of data analysis described by Marshall and Rossman (2006) as a means to reduce data, create manageable pieces, allow for interpretation, and find meaning in the words of the participants.

**Table 5: Phases of Qualitative Data Analysis**

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Organizing the data
Immersion in the data
Generating categories and themes
Coding the data
Offering interpretations through analytic memos
Searching for alternative understandings

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**Source:** Marshall & Rossman (2006)

The content analysis is aimed to conceptualize the data and reveal the themes that can describe the phenomenon. The results are presented in a descriptive narrative, and direct quotes are often included. In addition, the themes which were revealed and findings about the patterns were explained and interpreted (Yıldırım & Şimşek, 2008).

### **The Extraneous Variable**

The extraneous variable is any variable that, if not controlled, can affect the experimental research outcome or result. In this study, the extraneous variables are the facilities for education, the behaviour of the teachers, and rewards

### **Expected Results**

After testing our variables, we saw how pedagogic practices (teaching methods, classroom management strategies, teachers' professional development and feedback during instruction) affect effective learning in an inclusive classroom.

### **Ethical consideration**

Kumar (1996) defined the term ethics as principles of conduct that are considered correct, especially those of a given profession or group. Wellington (2000) advanced that an 'ethic' is a moral principle or code of conduct that guides what people do. Certain behaviour in research, such as causing harm to individuals, breaching confidentiality, using information improperly and introducing bias, is regarded as unethical. For this reason, in this study, ethical clearance was obtained from the Ethics Committee of the University of Yaounde I before going out for data collection. Responses in this study were treated with maximum confidentiality as the data was purely for academic purposes.

## CHAPTER FOUR

### DATA ANALYSIS AND FINDINGS

This study sought to investigate the impact of pedagogic practices on effective learning in inclusive classrooms in some pilot inclusive schools, looking at teachers' ability to teach different learners together, their ability to manage inclusive classrooms and learners' learning outcomes. This chapter seeks to answer the questions raised in the study and test the research hypotheses.

#### **Data Screening**

The data was screened for univariate outliers. Of the returned questionnaire, there were neither outliers nor missing values. Hence the analysis of the study will be based on a total of 49 questionnaire.

#### **Demographic characteristics**

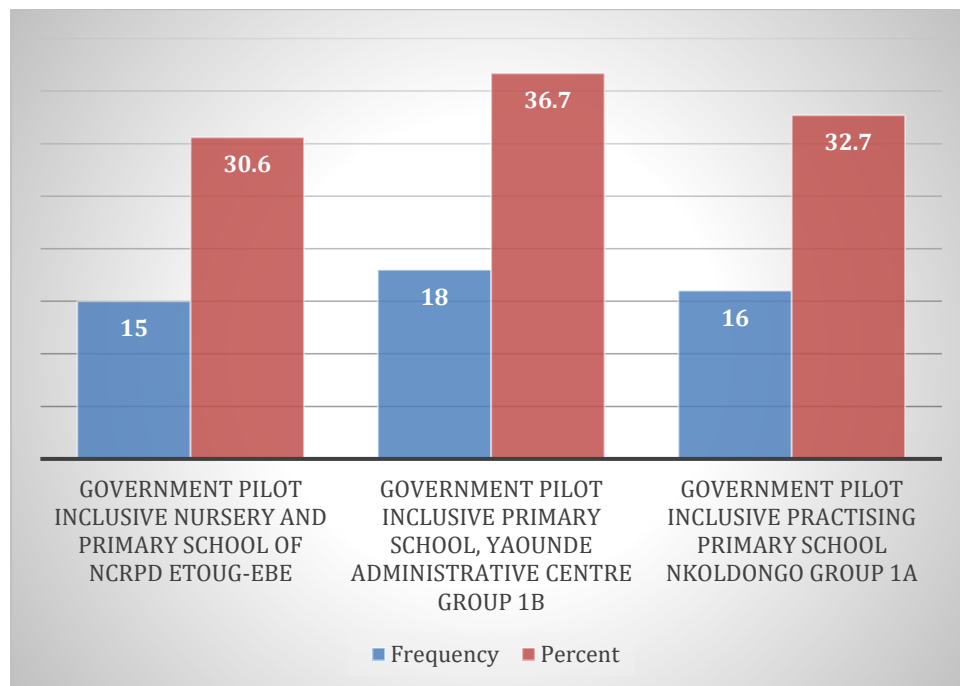
Demographic characteristics details with Name of School, gender, Age Range, Professional Qualification and Teaching Experience

**Table 6: Frequency Distribution and Percentage Distribution based on the Name of the School**

<b>Name of School</b>	<b>Frequency</b>	<b>Percent</b>
Government Pilot Inclusive Nursery and Primary School of NCRPD Etoug-Ebe	15	30.6
Government Pilot Inclusive Primary School, Yaounde Administrative Centre Group 1B	18	36.7
Government Pilot Inclusive Practising Primary School Nkoldongo Group 1A	16	32.7
Total	49	100.0

The above table represents the three selected pilot inclusive primary schools used in this study; questionnaire was distributed in these schools. Government Pilot Inclusive Nursery and Primary School of NCRPD Etoug-Ebe has a frequency of 15, giving a percentage of 30.6. Government Pilot Inclusive Primary School, Yaounde Administrative Centre Group 1B had a frequency of 18, giving a percentage of 36.7, and Government Pilot Inclusive Practising Primary School Nkoldongo Group 1A with a frequency of 16, giving a percentage of 32.7. This same result is represented in the figure below.

**Figure 4: Distribution of Respondents based on school**

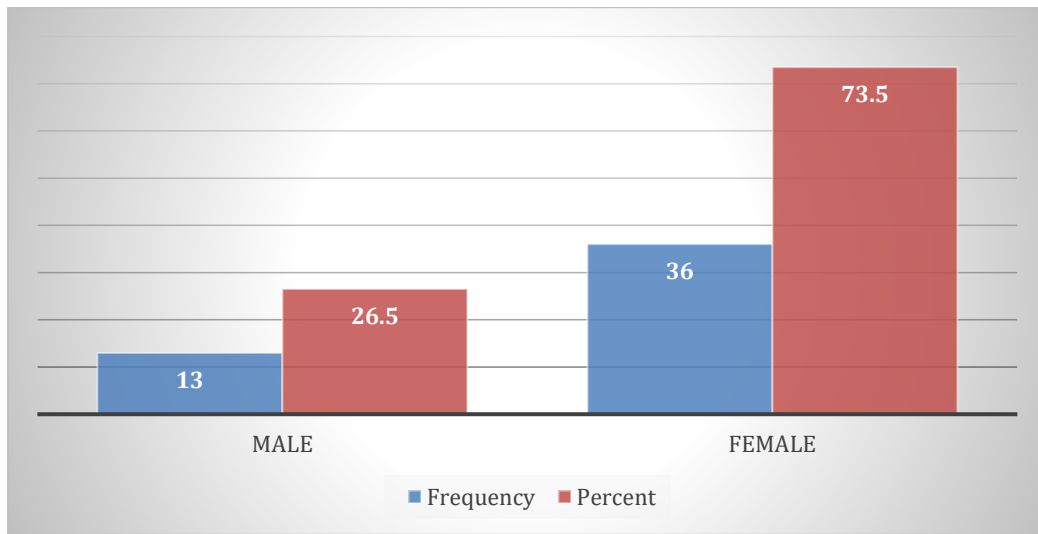


**Table 7: Frequency Distribution and Percentage Distribution based on Gender Distribution of Respondents**

Gender	Frequency	Percent
Male	13	26.5
Female	36	73.5
Total	49	100.0

The table represents the sex distribution of respondents. In the context of this study, we use a population of 49 respondents. According to the table, 13 of the respondents are male, while 36 of the respondents are female, making a percentage of 26.5 and 73.5, respectively. This variation is due to the fact that there are more females than males in the sample schools. This indicates that most of the teachers in primary schools in the Mfoundi-Division are females. This same result is represented in the figure below.

**Figure 5: Gender Distribution of Respondents**

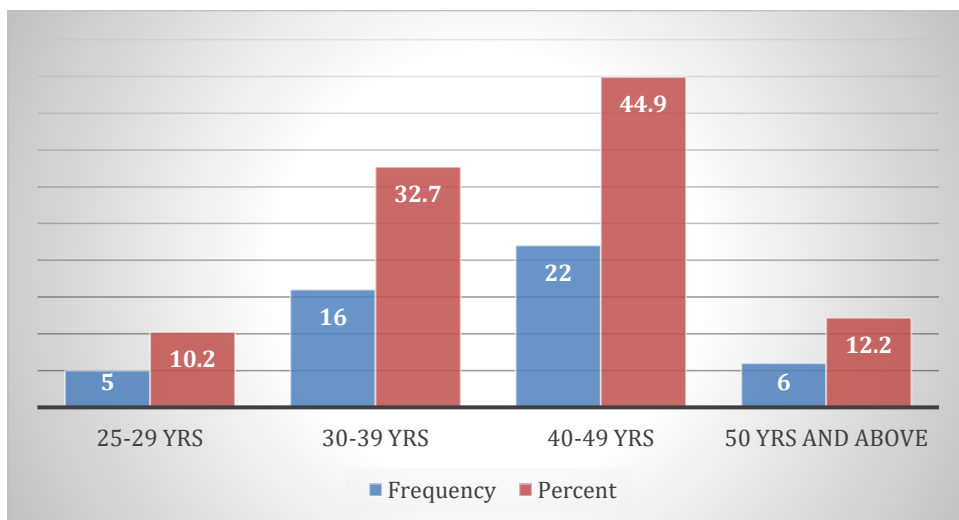


**Table 8: Frequency Distribution and Percentage Distribution based on on Age Range**

Age Range	Frequency	Percent
25-29 yrs	5	10.2
30-39 yrs	16	32.7
40-49 yrs	22	44.9
50 yrs and above	6	12.2
Total	49	100.0

The result shows that 10.2 % of the teachers are 25 to 29 years, 32.7% have ages between 30 to 39 years, 44.9% of 40 to 49 and 12.2% have between 50 years and above.

**Figure 6: Distribution of Respondents based on Age Group**



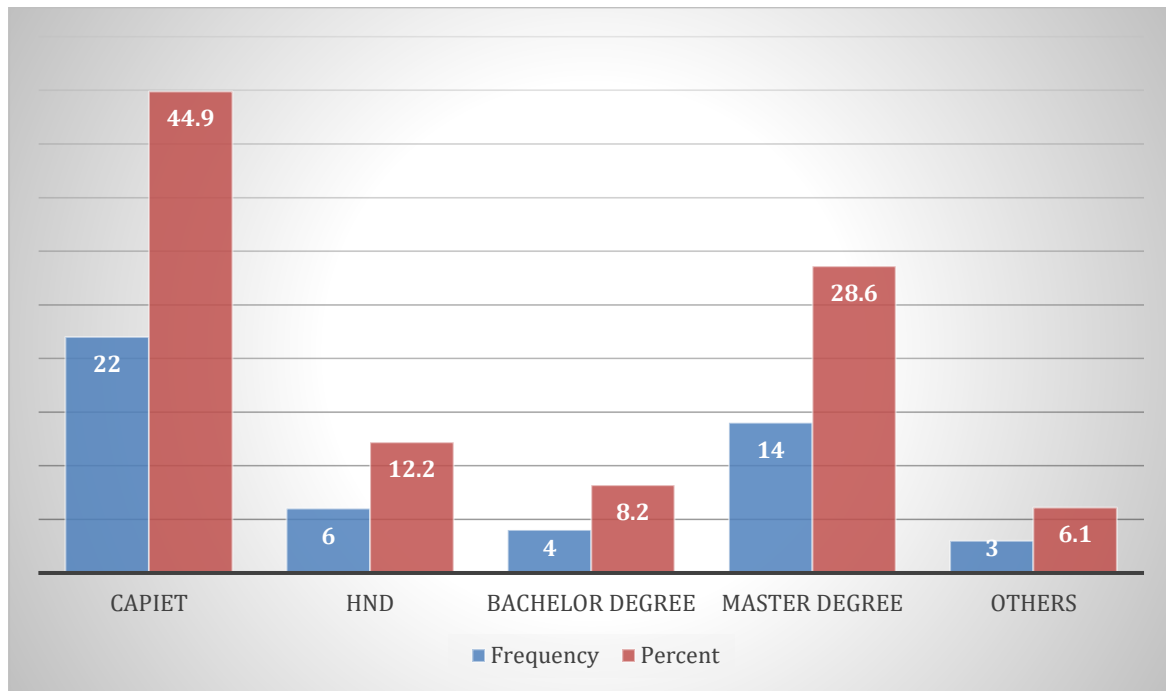


**Table 9: Frequency Distribution and Percentage Distribution based on Professional Qualification**

Professional Qualification	Frequency	Percent
CAPIEMP	22	44.9
HND	6	12.2
Bachelor Degree	4	8.2
Master Degree	14	28.6
others	3	6.1
Total	49	100.0

Concerning professional qualifications, 44.9% of the respondents have CAPIEMP, 12.2% have HND, 8.2% have a Bachelor's degree, 28.6% hold a master's degree, and 6.1% have other qualifications.

**Figure 7: Distribution of Respondents based on Qualification**

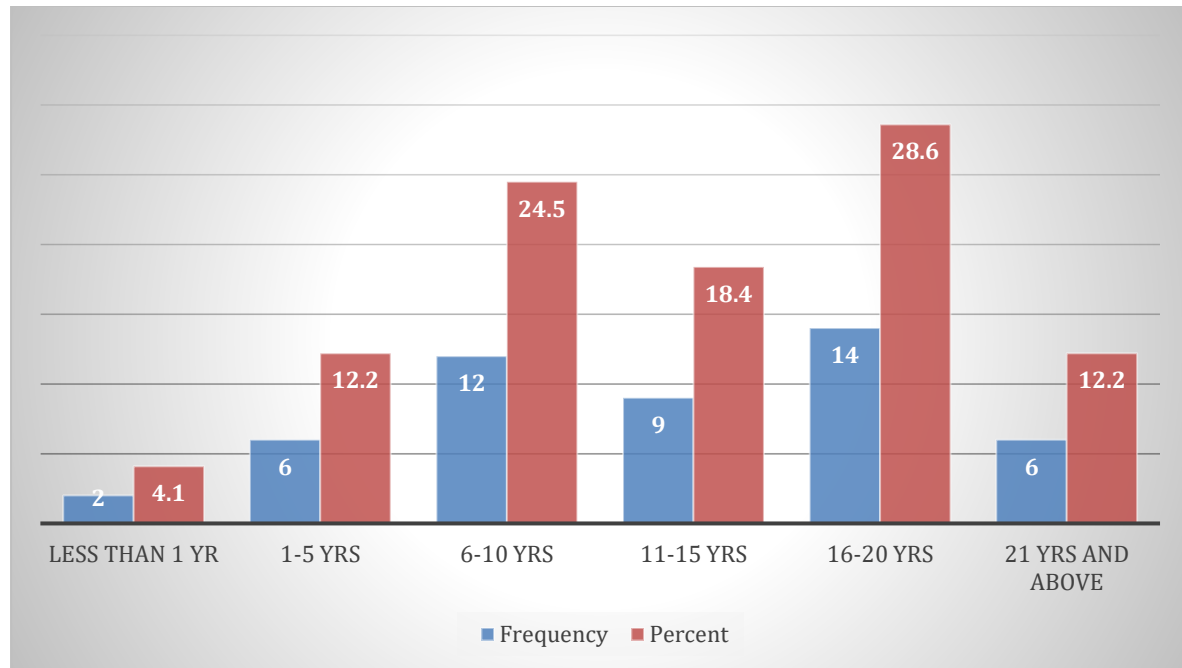


**Table 10: Frequency Distribution and Percentage Distribution based on Teaching Experience**

Teaching Experience	Frequency	Percent
Less than 1 yr	2	4.1
1-5 yrs	6	12.2
6-10 yrs	12	24.5
11-15 yrs	9	18.4
16-20 yrs	14	28.6
21 yrs and above	6	12.2
Total	49	100.0

Based on Teaching Experience, 4.1% of the teachers have less than one year of teaching experience, and 12.2% have taught for 1 to 5 years. 24.5% have taught for 6 to 10 years, 18.4% have taught for 11 to 15 years, and 12.2% have taught for 21 years and above.

**Figure 8: Distribution of Respondents based on Teaching Experience**



**What is the impact of teaching methods on effective learning in inclusive classrooms?**

Eight items were designed to answer this question. All eight items have a mean greater than 2.5, which is the cutoff mean. The majority of the teachers (89.7%) generally agreed that teachers act as facilitator of learning, which was supported by a mean of 3.57. 87.7% also supported the notion that teachers establish a collaborative learning environment. 85.8% of the teachers engage in learning activities that are designed to be cognitively engaging. 89.8% of the teachers also create a learning environment encouraging learners to construct their knowledge through exploration and inquiry. 89.8% of the teachers also facilitate each learner's proximal development zone (guidance and support). 87.8% generally agreed that they promote teamwork among classmates. Finally, 81.6% of the schools often provide professional development on teaching in an inclusive classroom.

**Table 11 : Frequency Distribution and Percentage Distribution based on Teaching methods in inclusive classrooms.**

no	Items	SA		A		D		SD		mean	Std d.
		f	%	f	%	f	%	f	%		
1.	Teachers act as a facilitator of learning	33	67.3	11	22.4	5	10.2	0	0	3.57	.677
2.	Teachers establish a collaborative learning environment	28	57.1	15	30.6	6	12.2	0	0	3.45	.708
3.	Learners are made active participants in their own learning process.	26	53.1	16	32.7	6	12.2	1	2.0	3.37	.782
4.	Engage in learning activities that are designed to be cognitively engaging	19	38.8	25	51.0	3	6.1	2	4.1	3.25	.750
5.	Teachers create a learning environment that encourages learners to construct their own knowledge through exploration and inquiry.	28	57.1	16	32.7	3	6.1	2	4.1	3.43	.790
6.	Teachers facilitate the zone of proximal development for each learner (guidance and support)	30	61.2	14	28.6	4	8.2	1	2.0	3.49	.739
7.	Promoting teamwork among classmates	26	53.1	17	34.7	3	6.1	3	6.1	3.16	.871
8.	The school often provide professional development on teaching in an inclusive classroom	17	34.7	23	46.9	5	10.2	4	8.2	3.08	.885
	<b>Grand Mean</b>									3.37	.604

**To what extent does teachers' professional development have an impact on effective learning in an inclusive classroom?**

Eight items of the questionnaire were designed to answer this research question concerning teachers' professional development. All eight items have a means average greater than the cut of mean average of 2.5. A global mean of 3.37 supported the notion that all three schools used in this study provide professional development to their teachers.

**Table 12: Frequency Distribution and Percentage Distribution based on Teachers' professional development in inclusive classrooms**

no	Items	SA		A		D		SD		mean	Std d.
		f	%	f	%	f	%	f	%		
1.	Inclusive education	29	59.2	14	28.6	6	12.2	0	0	3.47	.710
2.	Classroom management strategies in an inclusive classroom	29	59.2	14	28.6	2	4.1	4	8.2	3.39	.908
3.	Behavioural Management in an inclusive classroom	22	44.9	24	49.0	1	2.0	2	4.1	3.35	.723
4.	Instructional Strategies in an inclusive classroom	19	38.8	23	46.9	6	12.2	1	2.0	3.23	.743
5.	Learning Strategies in an inclusive classroom	23	46.9	21	42.9	4	8.2	1	2.0	3.35	.723
6.	Assessment Methods in an inclusive classroom	28	57.1	15	30.6	1	2.0	5	10.2	3.35	.947
7.	Teachers engage in collaborative research in other to improve teaching in an inclusive classroom	28	57.1	15	30.6	5	10.2	1	2.0	3.43	.763
8.	Professional development plays a central role for teachers to improve the learning of learners with disability in an inclusive setting	27	55.1	16	32.7	5	10.2	1	2.0	3.41	.761
	<b>Grand Mean</b>									<b>3.37</b>	<b>.661</b>

Most of the teachers (93.9%) generally agreed that during professional development, they learn issues concerning Behavioural Management in an inclusive classroom. 85.7% studied Instructional Strategies in an inclusive classroom. 89.8% had learned Learning Strategies in an inclusive classroom. During professional development sessions, 87.7% focused on Assessment Methods in an inclusive classroom. Also, 87.7% of the teachers engage in collaborative research in other to improve teaching in an inclusive classroom. Finally, 87.8% supported the notion that professional development plays a central role for teachers to improve the learning of learners with disability in an inclusive setting.

**What is the impact of classroom management strategies on effective learning in inclusive classrooms?**

To answer this research question six items were designed to answer this question. All six items have a mean greater than 2.5, which is the cut-off mean.

**Table 13: Frequency Distribution and Percentage Distribution based on Classroom management strategies in an inclusive classroom.**

no	Items	SA		A		D		SD		mean	Std d.
		f	%	f	%	f	%	f	%		
1.	Involve learners in establishing rules and procedures.	20	40.8	26	53.1	3	6.1	0	0	3.35	.596
2.	Encourage peer-to-peer instruction and leadership	27	55.1	16	32.7	3	6.1	3	6.1	3.37	.858
3.	All learners feel safe and valued by teachers	25	51.0	18	36.7	5	10.2	1	2.0	3.37	.755
4.	Teachers use gestures and expressions during lessons	25	51.0	19	38.8	4	8.2	1	2.0	3.39	.730
5.	Offer an open and welcoming environment	22	44.9	20	40.8	4	8.2	3	6.1	3.25	.854
6.	Encourage participation	31	63.3	12	24.5	2	4.1	4	8.2	3.43	.912
	<b>Grand Mean</b>									3.36	.657

The table above revealed that most of the teachers (93.9%) Involve learners in establishing rules and procedures. 87.8% of the teachers encourage peer-to-peer instruction and leadership. 87.7% of the respondents think that all learners feel safe and valued by teachers. 89.8% of the teachers use gestures and expressions during lessons. 85.7% of the teachers offer an open and welcoming environment. Finally, 87.8% of the teachers encourage participation in class during the teaching-learning process.

**What is the impact of feedback during instruction on effective learning in an inclusive classroom?**

Five terms of the questionnaire were designed to answer this research question concerning feedback from teachers during instruction. All five items have a mean average greater than the cut-off mean of 2.5.

**Table 14 : Frequency Distribution and Percentage Distribution based on feedback during instruction in inclusive classrooms**

no	Items	SA		A		D		SD		mean	Std d.
		f	%	f	%	f	%	f	%		
1.	Respond to learners' incorrect answers, validating learners' participation.	22	44.9	22	44.9	4	8.2	1	2.0	3.33	.718
2.	Offer learners guidelines and suggestions	19	38.8	24	49.0	5	10.2	1	2.0	3.04	.726
3.	Highlight learners' strengths	14	28.6	30	61.2	4	8.2	1	2.0	3.16	.657
4.	Teachers make factual comments with an explanation	19	38.8	21	42.9	7	14.3	2	4.1	3.16	.825
5.	Involve learners in the feedback process	17	34.7	25	51.0	7	14.3	0	0	3.20	.677
6.	<b>Grand Mean</b>									3.22	.547

The results revealed that 89.8% of the teachers responded to learners' incorrect answers, validating their participation. 87.8% offer learners' guidelines and suggestions. 81.7% of teachers make factual comments with an explanation, and finally, 85.7% Involve learners in the feedback process.

### Effective Learning in Inclusive Classrooms

Effective Learning in Inclusive Classrooms was measured using five items of the questionnaire designed to answer this research question concerning effective learning. All the five items have a mean average greater than the cut-off mean of 2.5.

**Table 15: Frequency Distribution and Percentage Distribution based on Effective Learning in an Inclusive Classroom**

no	Items	SA		A		D		SD		mean	Std d.
		f	%	f	%	f	%	f	%		
1.	Inclusion fosters an understanding of differences	29	59.2	14	28.6	6	12.2	0	0	3.47	.710
2.	Inclusive education leads to social inclusion	34	69.4	10	20.4	3	6.1	2	4.1	3.55	.792
3.	Inclusion facilitates socially appropriate behaviour	25	51.0	18	36.7	4	8.2	2	4.1	3.35	.805
4.	All should be educated in the inclusive classroom	18	36.7	19	38.8	8	16.3	4	8.2	3.04	.935
5.	Inclusion is a valuable experience for all learners	28	57.1	15	30.6	4	8.2	2	4.1	3.40	.814
6.	<b>Grand Mean</b>									3.36	.641

87.8% supported that inclusion fosters an understanding of differences. 89.8% think that Inclusive education leads to social inclusion. 86.7% think that inclusion facilitates socially appropriate behaviour. 75.5% support All should be educated in the inclusive classroom

### Correlation analysis

To test the previously established hypotheses with the help of simple linear regression analyses, Saunders et al. (2016) state that the collected data has to meet the precondition concerned with the linearity of the relationship between the separate IVs (Teaching Methods for effective learning in inclusive classrooms, Teacher professional development, Classroom Management Strategies for effective learning, feedback during instruction for effective learning) and the DV(effective learning in inclusive Classrooms). Therefore, in the first instance, the researchers have produced scatterplots of the relationships between the different IVs, namely Teaching Methods for effective learning in inclusive classrooms, Teacher professional development, Classroom Management Strategies for effective learning, feedback during instruction for effective learning towards effective learning in inclusive Classrooms as DV. Looking at the correlational variable, it can be detected that the relationship between the different IVs and the DV in all cases is linear.

**Table 16: Correlations**

	TM	TPD	CM	FB	EL
Teaching Methods (TM)					
Teacher professional development (TPD)	.899**				
Classroom Management Strategies (CM)	.885**	.896**			
Feedback (FB)	.856**	.868**	.836**		
Effective Learning in Inclusive Classrooms (EL)	.888**	.884**	.831**	.837**	
M	3.37	3.37	3.36	3.22	3.36
SD	.604	.661	.657	.547	.641
N	49	49	49	49	49

\*\* . Correlation is significant at the 0.01 level (2-tailed).

### Regression Analysis

To be more precise and thoroughly test the assumption of the linearity and strengths of relationships between the separate IVs and the DV, the researchers have conducted a correlation analysis whose main results are displayed in Table 15. Outcomes show that the

Teaching Methods, Teacher professional development, Classroom Management Strategies, and Feedback correlate significantly with effective learning in inclusive classrooms.

Concerning the strength of the relationship, the IVs of the nature of the Teaching Methods , and Teacher professional development , (Pearson's  $r(48) = .899, p < .01$ ), Teaching Methods , and Classroom Management Strategies (Pearson's  $r(48) = .885, p < .01$ ), Teaching Methods , and feedback, (Pearson's  $r(48) = .856, p < .01$ ), Teacher professional development , and Classroom Management Strategies , (Pearson's  $r(48) = .896, p < .01$ ), Teacher professional development and Feedback, (Pearson's  $r(48) = .868, p < .01$ ), Classroom Management Strategies , and Feedback, (Pearson's  $r(48) = .836, p < .01$ ). Hence, from the correlation analysis, it can be concluded that all four measured IVs are significantly correlated. Moreover, due to the confirmed linearity of relationships between the separate IVs and the DV, the precondition to run regression analyses to actually test the previously developed hypotheses is met (Saunders et al., 2016).

Since pedagogic practices is the intersection of the contributing constructs, in order to identify which independent variable was the largest predictor of effective learning in inclusive classrooms, a standard simple regression was performed when all the other variables have been considered. Effective learning in inclusive classrooms was the dependent variable, and the Teaching Methods, Teacher professional development, Classroom Management Strategies, and feedback towards were the independent variables.

The various assumptions underlying simple regression were examined. The correlations between the independent and dependent variables were above 0.2 and thus were acceptable for the regression analysis (Tabachnick & Fidell, 2007). Moreover, there were not very high correlations ( $r > 0.9$ ) (Field, 2009) between the independent variables. For further evaluation to check multicollinearity, which indicates a perfect linear relationship between two or more of the independent variables, the tolerance and variance inflation factor (VIF) values were examined. All the tolerance values were above 0.1, and the VIF values were less than 10, thus, the data set did not indicate multicollinearity (Field, 2009; Tabachnick & Fidell, 2007).

The Mahalanobis distance was used to check for outliers. Mahalanobis distance "is the distance of a case from the centroid of the remaining cases where the centroid is the point created at the intersection of the means of all the variables" (Tabachnick & Fidell, 2007, p. 74). It reveals



cases that lie at a distance from the other cases, and such cases are considered outliers. Mahalanobis distance is evaluated using chi-square distribution. "Mahalanobis distance is distributed as a chi-square ( $X^2$ ) variable, with degrees of freedom equal to the number of independent variables" (Tabachnick & Fidell, 2007, p. 166). In order to detect which cases are multivariate outliers, the critical  $X^2$  value of the number of degrees of freedom of the independent variables is compared with the Mahalanobis distance of the cases (Tabachnick & Fidell, 2007). Any case whose Mahalanobis distance value is greater than the critical  $X^2$  is considered an outlier. Tabachnick and Fidell (2007) have produced a table of critical  $X^2$  values with which researchers can compare their Mahalanobis distance values. The data cases of the study were compared with this critical  $X^2$  value. No case with critical values higher than what was prescribed by Tabachnick and Fidell (2007) was detected.

The normality of the data set was checked with the Normal Probability Plot and the Scatterplot of the Standardised Residuals. The Normality Probability Plot produced a fairly straight diagonal plot, indicating that the points did not deviate from normality. Again, the scatterplot produced a rectangular-shaped distribution of the residuals, with most points concentrated around zero (0). This indicated that the data was fairly normally distributed. SPSS produces unusual cases in a table called Case-wise Diagnostics for standard multiple regression. Pallant (2005) alerted that the Case-wise Diagnostics table has information on cases that have values above 3.0 or below -3.0 as their standardised residuals and that in normally distributed data, such cases should not be more than 1% of the total cases. In order to check if such cases have an effect on the results, one should have a look at the Cook's distance value. If the Cook's distance is more than 1, then there is cause for concern (Field, 2009; Pallant, 2005; Tabachnick & Fidell, 2007). Though Case-wise Diagnostics produced a case with a standardised residual above 3 (in this case, it was 5.655), the Cook's distance produced a maximum value of 0.59. Thus, though the standardised residual is above 3, the maximum Cook's distance value was less than 1; therefore, this case can be included in the regression.

The standard regression with each of the four independent predictors (Teaching Methods, Teacher professional development, Classroom Management Strategies and feedback) to predict effective learning in inclusive classrooms was used to verify each research hypothesis. The adjusted  $R^2$  was reported because Tabachnick and Fidell (2007) recommended that the R square tends to overestimate its true value in the population when the sample size is small and

that the adjusted R square corrects the value of R square and thus produces a better predictor of the true population value.

### Research Hypothesis

**H<sub>01</sub>: Teaching methods do not have a statistically significant effect on effective learning in inclusive classrooms.**

Regression was carried out to ascertain the extent to which Teaching Methods scores predict effective learning in inclusive classrooms.

**Table 17: Model Summary of the Effects of Teaching Methods on effective learning in inclusive classrooms**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.899 <sup>a</sup>	.808	.804	.29821

a. Predictors: (Constant), TM

b. Dependent Variable: EL

The correlation showed a strong positive linear relationship between the Teaching Methods and effective learning in inclusive classroom scores, confirmed with a Pearson's correlation coefficient of  $r = .899$ . The regression model predicted 80.4% of the variance. The model was a good fit for the data ( $F(1, 47) = 174.909, p < .000$ ).

**Table 18: ANOVA<sup>a</sup> of the effects of Teaching Methods on Effective learning in inclusive classrooms**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.554	1	15.554	174.909	.000 <sup>b</sup>
	Residual	4.180	47	.089		
	Total	19.734	48			

a. Dependent Variable: EL

b. Predictors: (Constant), TM

The linear regression F test has the null hypothesis that the Teaching Methods does not have a statistically significant influence on Effective learning in inclusive classrooms at  $p = .05$ . In other words,  $R^2 = 0$ , with  $F(1, 47) = 174.909, p = .000$ , the test is highly significant. Thus, we can assume a statistically significant relationship exists between the teachers' Teaching Methods and effective learning in an inclusive classroom.

**Table 19: Coefficients of the effects of Teaching Methods on Effective learning in inclusive classrooms**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.188	.244		.771	.444
	TM	.942	.071	.899	13.225	.000

a. Dependent Variable: EL

The regression results showed a significant relationship between the teachers' Teaching Methods and Effective learning in inclusive classrooms scores ( $t = 13.225$ ,  $p < 0.000$ ). The slope coefficient for Teaching Methods functions of the teachers was .899, so effective learning in inclusive classrooms increases by one unit.

**Ho2: Teacher's professional development does not have a statistically significant effect on effective learning in inclusive classrooms.**

Simple linear regression was carried out to ascertain the extent to which teacher's professional development scores predict effective learning in inclusive classrooms.

**Table 20: Model Summary of the Effects of teacher's professional development on effective learning in inclusive classrooms**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.884 <sup>a</sup>	.781	.776	.30318

a. Predictors: (Constant), TPD

b. Dependent Variable: EL

The correlation showed a strong positive linear relationship between the teacher's professional development and effective learning in inclusive classroom scores, confirmed with a Pearson's correlation coefficient of  $r = .884$ . The regression model predicted 77.6% of the variance. The model was a good fit for the data ( $F(1, 47) = 167.692$ ,  $p < .000$ ).

**Table 21: ANOVA<sup>a</sup> of the effects of teacher's professional development on Effective learning in inclusive classrooms**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.414	1	15.414	167.692	.000 <sup>b</sup>
	Residual	4.320	47	.092		
	Total	19.734	48			

a. Dependent Variable: EL

b. Predictors: (Constant), TPD

The linear regression F test has the null hypothesis that the teacher's professional development does not have a statistically significant influence on effective learning in inclusive classrooms

at  $p=.05$ . In other words,  $R^2= 0$ , with  $F(1, 47) = 167.692$ ,  $p= .000$ , the test is highly significant. Thus we can assume there is a statistically significant relationship between teacher's professional development and effective learning in inclusive classrooms.

**Table 22: Coefficients of the effects of teacher's professional development on Effective learning in inclusive classrooms**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.476	.227		2.096	.041
	TPD	.857	.066	.884	12.950	.000

a. Dependent Variable: EL

The regression results showed a significant relationship between the teacher's professional development and Effective learning in inclusive classrooms scores ( $t = 12.950$ ,  $p < 0.000$ ). The slope coefficient for Teaching Methods functions of the teachers was .884, so Effective learning in inclusive classrooms increases by one unit.

**H<sub>03</sub>: Classroom management strategies do not have a statistically significant effect on effective learning in inclusive classrooms.**

Simple linear regression was carried out to ascertain the extent to which classroom management strategies scores predict effective learning in inclusive classrooms.

**Table 23: Model Summary of the Effects of classroom management strategies on effective learning in inclusive classrooms**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.831 <sup>a</sup>	.691	.684	.36021

a. Predictors: (Constant), CM

b. Dependent Variable: EL

The correlation showed a strong positive linear relationship between the classroom management strategies effective learning in inclusive classrooms scores, which was confirmed with a Pearson's correlation coefficient of  $r = .831$ . The regression model predicted 68.4% of the variance. The model was a good fit for the data ( $F(1, 47) = 105.091$ ,  $p < .000$ ).

**Table 24: ANOVA<sup>a</sup> of the effects of classroom management strategies on Effective learning in inclusive classrooms**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.636	1	13.636	105.091	.000 <sup>b</sup>
	Residual	6.098	47	.130		
	Total	19.734	48			

- a. Dependent Variable: EL
- b. Predictors: (Constant), CM

The linear regression F test has the null hypothesis that the classroom management strategies does not have a statistically significant influence on effective learning in inclusive classrooms at  $p=.05$ . In other words,  $R^2= 0$ , with  $F(1, 47) = 105.091$ ,  $p= .000$ , the test is highly significant. Thus we can assume there is a statistically significant relationship between the teachers' classroom management strategies and effective learning in inclusive classrooms.

**Table 25: Coefficients of the effects of classroom management strategies on Effective learning in inclusive classrooms**

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.640	.271		2.365	.022
	CM	.811	.079	.831	10.251	.000

- a. Dependent Variable: EL

The regression results showed a significant relationship between the teachers' classroom management strategies and Effective learning in inclusive classrooms scores ( $t = 10.251$ ,  $p < 0.000$ ). The slope coefficient for 10.251of the teachers was .831, so effective learning in inclusive classrooms increases by one unit.

**Ho4: Feedback during instruction does not have a statistically significant effect on effective learning in inclusive classrooms.**

Simple linear regression was carried out to ascertain the extent to which teachers' use of feedback during instruction scores predict effective learning in inclusive classrooms.

**Table 26: Model Summary of the Effects of teachers' use of feedback during instruction on effective learning in inclusive classrooms**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.837 <sup>a</sup>	.700	.694	.35476

- a. Predictors: (Constant), FB

- b. Dependent Variable: EL

The correlation showed a strong positive linear relationship between the use of feedback during instruction effective learning in inclusive classrooms scores, which was confirmed with a Pearson's correlation coefficient of  $r = .837$ . The regression model predicted 69.4% of the variance. The model was a good fit for the data ( $F(1, 47) = 109.799$ ,  $p < .000$ ).

**Table 27: ANOVA<sup>a</sup> of the effects of teachers’ use of feedback during instruction on Effective learning in inclusive classrooms**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.819	1	13.819	109.799	.000 <sup>b</sup>
	Residual	5.915	47	.126		
	Total	19.734	48			

a. Dependent Variable: EL

b. Predictors: (Constant), FB

The linear regression F test has the null hypothesis that teachers’ use of feedback during instruction does not have a statistically significant influence on Effective learning in inclusive classrooms at  $p=.05$ . In other words,  $R^2= 0$ , with  $F (1, 47) = 109.799$ ,  $p= .000$ , the test is highly significant. Thus we can assume a statistically significant relationship between teachers’ use of feedback during instruction and effective learning in inclusive classrooms.

**Table 28: Coefficients of the effects of teachers’ use of feedback during instruction on Effective learning in inclusive classrooms**

Model		Unstandardized Coefficients		Standardized Coefficients		t	Sig.
		B	Std. Error	Beta			
1	(Constant)	.202	.306			.660	.513
	FB	.982	.094	.837		10.478	.000

a. Dependent Variable: EL

The regression results showed a significant relationship between teachers’ use of feedback during instruction and Effective learning in inclusive classrooms scores ( $t = 10.478$ ,  $p < 0.000$ ). The slope coefficient for Teaching Methods was .837, so Effective learning in inclusive classrooms increases by a factor of .837.

### **Presentation of Qualitative results**

The results presented in this study are meant to represent the views of teachers and other relevant aspects about teaching methods, classroom management teacher training and feedback during instruction towards inclusive education in primary schools in Mfoundi Division. Seven teachers who agreed to participate voluntarily would be referred to P1, P2, P3, P4, P5, P6 and P7 as their pseudonyms with no relation to any order or significance throughout the study. Ten extensive themes emerged from data analysis collected through interviews of the participating teachers.

**Table 29: Pedagogic Practices for effective learning in an inclusive classroom**

<b>Theme</b>	<b>Sub-Theme</b>
<b>Teaching method</b>	Differential Teaching method
	ABA (Applied Behaviour Analysis) method
	Visual-Auditory-Kinesthetic-Tactile (VAKT) Approach
<b>Classroom management</b>	Setting and implementation
	Cooperative learning
<b>Feedback during instruction</b>	Supportive Behaviour
	Immediate feedback
	Encourage positive motivational beliefs and self-esteem
<b>Teachers training</b>	Trained
	Graduate diploma in special education

**Socio-demographic characteristics of the participants****Table 30: Socio-demographic characteristics of the participants**

<b>Participants</b>	<b>Schools</b>	<b>Gender</b>	<b>Age</b>	<b>Years of Experience</b>	<b>Qualification</b>	<b>Training on inclusion</b>
P1	GPIPS, Centre Administrative	Male	40	7years	CAPIEMP	//
P2	GPIPS, Centre Administrative	Female	34	7years	Bachelor	//
P3	GPPIPS (NkIndongo)	Female	36	10years	CAPIEMP	//
P4	GPIPS of the NCRPD Etug-Ebe	Male	35	12years	CAPIEMP	SN Diploma
P5	GPIPS of the NCRPD Etug-Ebe	Female	35	9years	CAPIEMP	SN Diploma
P6	GPIPS of the NCRPD Etug-Ebe	Female	30	4years	Bsc in education	Special Education
P7	GPIPS of the NCRPD Etug-Ebe	Male	36	10years	Masters	Special Education

A total of 3 different schools were represented by 7 participating teachers. An attempt was made to maintain gender balance among the interviewees. Even so, a majority of the participants were females due to the reality of this professional sector. The age of the participant ranges from 35 to 40 years. Majority of the participant had teaching experience of

more than 5 years. All the participant from Etug-Ebe have undergone training on inclusive education.

**Table 31: Distribution of learners in an inclusive classroom**

Schools	No of learners per class	No of Learner without disability (%)	No of Learner with disability (%)
GPIPS of the NCRPD Etug-Egbe	15 to 25	50%	50%
GPIPS Centre administrative	40	85%	15%
GPPIPS (Nkolndongo)	70 to 80	80%	20%

The table above shows the number of learners in a class from the sample schools. The table shows that Government Pilot Inclusive Primary Schools (GPIPS) of the NCRPD Etug-Ebe has 15 to 25 learners in class with 50% special need learners. Government Pilot Inclusive Primary Schools Centre Administrative have 40 learners in a class with 15% special need learners and Government Pilot Practicing Inclusive Primary School (Nkoldongo) have 70 to 80 learners in a class with 20% special needs learners. From the analysis it shows the Etug-Ebe is more of an inclusive school than Yaounde Administrative Centre and GPPIPS (Nkoldongo).

### Teaching methods

In an inclusive classroom teaching strategy include a wide range of teaching techniques that accommodate the diverse backgrounds, learning styles, and abilities of learners. These techniques aim to create an inclusive learning environment that recognizes and honours the distinct needs and strengths of each learner. Through the use of inclusive teaching strategies, teachers can establish a learning environment that values, supports, and empowers all learners to achieve their goals. The ultimate objective of inclusive teaching strategies is to guarantee that every learner has equitable access to learning and feels a sense of belonging in the classroom.

From the interview teachers were asked on the various teaching strategies they are using in an inclusive classroom and the benefit of these methods for effective learning. Four (4) categories of an inclusive teaching method were derived which are: differentiated teaching method, Applied Behavioural Analysis (ABA), Visual Auditory Kinesthetic-Tactile (VAKT) approach and Child-Centered Approach.



## **Differentiated Teaching Method**

Differentiated teaching method consists of the efforts of teachers to respond to variance among learners in the classroom. Whenever a teacher reaches out to an individual or small group to vary his or her teaching in order to create the best learning experience possible, that teacher is differentiating instruction. Most of the participant stated that there are practicing differential teaching method in their inclusive classroom by stated stating that:

*Some of the differentiated teaching methods I used are flexible-space learning and collaboration (P2, P1, P3, P4, P5, P6)*

*I use differentiation of instruction, cooperative learning among peers, peering tutoring, sign language brail (group of learners with different abilities) (P7)*

Differentiated Instruction involves responding effectively to the differences that exist among learners in the classroom. According to Tomlinson (2004), teachers differentiate when they reach out to an individual or small group by varying their teaching in order to create the best learning experience possible. Differentiated instruction is considered as one of the essential means to effective education for all learners including those with disabilities. As Tomlinson argues (2003), differentiation is not associated with “one size fits all” teaching but mainly with responsive teaching. Thus, when teachers differentiate, they ‘proactively plan varied approaches to what learners need to learn, how they will learn it, and/or how they will show what they have learned in order to increase the likelihood that each learner will learn as much as he or she can, as effectively as possible’ (Tomlinson 2004).

## **Applied Behavioural Analysis (ABA) teaching method**

Applied behavioural analysis (ABA) is a type of therapy that uses an evidence-based approach to managing behavioural disabilities and disorders. ABA works to modify a child’s behaviour when that behaviour becomes disruptive or harmful to the child or others around them. Applied Behavioural Analysis (ABA) has been used to guide a wide variety of successful educational practices in both general and special education programs. ABA has been established as a powerful source of interventions in educational programs for learners with disabilities. ABA has consistently been effective in assisting individuals with disabilities in achieving meaningful and non-trivial progress. Respondent from Government Pilot Inclusive Primary Schools (GPIPS) of the NCRPD Etug-Ebe stated that:

*I used Applied Behavioural Analysis to help children learn to develop positive and productive behaviours (P4)*

In inclusive education, ABA is most often used for children with disabilities that affect their behaviour and, as a result, their learning. ABA therapy has many purposes, and not only for working with behavioural disorders.

*ABA help learners interact with their peers and teachers, as well as give them the support they need to succeed academically (P4).*

The goal of ABA is to help the child live as independently as possible. That means making their own decisions and being responsible for their behaviour and participating in their learning, and meeting curriculum and social goals. In special education specifically, the role of ABA is to help children benefit as much as possible from the general classroom. ABA does not try to change the child's personality or thought process. Instead, it encourages them to use their strengths to create more independence in school and beyond.

### **Visual Auditory Kinesthetic-Tactile (VAKT) approach**

VAKT also known as a multi-sensory approach is a Learning Styles which focus on using learners' senses as input for learning. A multi-sensory approach is one that integrates sensory activities. The learners see, hear, and touch.

*Using all of the senses to teach a child makes learning easier. It also makes learning more interesting. Children learn better if teaching interests them. (P4)*

*All kids can benefit from multi-sensory lessons, including kids who don't have learning and attention issues. If a child learns something using more than one sense, the information is more likely to stay with him. (p4)*

Visual Auditory Kinesthetic-Tactile (VAKT) approach can be particularly helpful for learners with learning and attention issues. For example, these learners may have trouble with visual or auditory processing. That can make it hard for them to learn information through only reading or listening. Multi-sensory instruction can help kids learn information more effectively. All kids can benefit from multi-sensory instruction.

## **Classroom management**

Building a classroom community where all learners feel a sense of belonging is an area most teachers spend weeks of school, especially the first few weeks of school, focused on creating a safe space for different learning styles, genders, religious and ethnic backgrounds goes well beyond the first month back in a classroom. Teachers were asked about classroom management strategies in an inclusive classroom to ensure inclusivity is at the forefront of their daily instruction for effective learning. Three sub-themes were derived from the main theme (classroom management): Setting and implementing rules, Cooperative learning, Corrective measures, and Supportive Behaviour.

### ***Setting and implementing rules***

An aspect of classroom management that is believed to be important to establish during the first few weeks of class is classroom rules and discussions with learners. Design, explain and implement the well-defined classroom rules. Consequences should also be explained if learners do not follow certain rules. Desired behaviour needs to spell out clearly so that while implementing, there should be no chance for biasness. Involve learners in developing as well implementing these rules, which will help you in developing a positive attitude towards the rules. The effective teachers describe the rules more completely and implement them more systematically. They are likely to be more explicit about desirable behaviour (the do's, not just the don'ts).

*It is important to start off creating the class rules together. I've done that and then have them all sign it and post it, just making them aware. (p4, p3, p7)*

### **Cooperative learning strategies**

Cooperative learning strategies are suggested to enhance the team-building and cooperative approach among learners. These strategies help learners in channelizing their energy in peer interaction and discussion. Development of social skills as well as positive leadership is also possible through these techniques.

*I encouraged peer learning, group or workshop learning (p1, p2).*

## **Supportive measures**

Supportive measures are equally important for managing the behavioural problems of learners. These measures are different from preventive in the sense as they are used by teachers when they observe any behavioural problem in the class. Many times, strategies may be same as preventive and supportive measure but their implementation and use are different due to nature of the event. Teachers use these measures to support the positive behaviour in the class. Positive Behaviour Support (PBS) is used as an alternative strategy to avoid punishment. PBS does not support the strategies like withholding reinforcement for the learners with an undesirable behaviour.

*When you notice a learner fall in some conflict and this conflict is the cause of his/her problematic behaviour you have to pay attention there and suggest some conflict management skills. (P4, P5).*

*Little punishment, appreciation, encouragement, motivation and create self-confidence. (P6)*

*Diagnose the different disabilities and then develop accommodation strategies, give feedback indirectly, and allocate part of responsibilities to delinquents. (P7)*

## **Feedback during instruction**

Feedback is an information provided by the teacher during instruction about a learner's learning or performance which they can use in future work. Effective feedback has a powerful influence on learning. Aim to be inclusive through considering the diversity of your pupil cohorts and how feedback is integral to improving their learning journeys and study success.

Teachers were asked on how often they provide feedback to their pupils in an inclusive classroom. All the participant stated that they immediately give feedback to learners during instruction.

*I always give feedback after every answer and after each evaluation. (P4)*

*I give instant feedback and constant positive feedback, no negative feedback. (7)*

### **Encourage positive motivational beliefs and self-esteem**

Effective feedback offers positive, encouraging, critical and constructive commentary on learners' work, whether through formative, summative, or seminar-based learning activities. feedback promotes effective teaching and learning in the sense that:

*It helps the child to learn more i.e., it provides motivation. (P2)*

*It encourages pupils to learn and make them feel motivated. (p3)*

*It helps pupils understand the subject being studied and gives them clear guidance on how to improve their learning. (P4)*

*It strengthens the classroom communication between teachers and learners. (P5)*

*Feedback can improve a learner's confidence, self-awareness and enthusiasm for learning, leading to enhanced retention. (P6)*

*Feedback boost the learner's moral, bring about self-esteem, self-confidence and push the learners to work hard. (P7)*

### **Teachers training**

Training teachers on inclusive education is an important element of teacher's education because it involves ensuring that all teachers are prepared to teach all learners. Inclusion cannot be realized unless teachers are empowered agents of change, with values, knowledge and attitudes that permit every learner to succeed. In this section teachers were asked whether they have undergone training and if the training has changed their teaching strategies. All the respondents agree to the fact that they have undergone training on inclusive education

### **Graduate diploma in special education**

Among seven participants, four participants from government pilot inclusive primary school Etug-Egbe reported that they underwent this graduate diploma in special education course. They explained that it was a three-year course for teachers who wanted to specialized in teaching learners with special needs. They openly revealed that they gained very deep and enriched knowledge as well as skills:

*I got to learn all sorts of things: assess, identify, provide educational plan, teaching and learning strategies for those with special needs, and IEP and IIP. (P4, P5, P6, P7)*

The participants also emphasized that what they learned and gained through the graduate diploma course was much more useful and practical than what they learned and gained through in-service teacher training when it came to teaching in inclusive classrooms in practice.

## CHAPTER FIVE

### DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

This study sought to investigate the impact of pedagogic practices on effective learning in inclusive classrooms in some pilot inclusive primary schools, looking at teachers' ability to teach learners with diverse learning needs, their ability to manage inclusive classrooms and learners' learning outcomes. The research instruments used for the study were a questionnaire and an interview guide. This study posed a set of questions while placing the hypotheses and their relationships within the study variables. It also arrived at several results confirming the problem and hypotheses in chapter one. Data collected were analysed using SPSS statistical product for service solutions as well as content analysis. In this chapter, we shall examine the findings concerning the hypotheses, objectives and the views of others. We shall also give the limitations, some recommendations and suggestions for further study on the phenomenon. Moreover, this study arrived at several results that might add to improving effective learning in inclusive classrooms in the Mfoundi division and why not in Cameroon.

#### Summary of findings

Based on the evaluated data and the study hypotheses examined in Chapter Four, the results can be summed up as follows. The mean of all variables ranges from 3.22 for effective use of feedback in the classroom, 3.36 for Classroom Management Strategies, 3.37 for Teacher professional development, and 3.37 for inclusive teaching methods. Effective use of feedback has the lowest mean of 3.22. Classroom Management Strategies and teacher professional development had the highest average of 3.37. This indicates that the respondents agreed that these different facets were combined to contribute to effective learning in inclusive classrooms in some pilot inclusive primary schools.

Concerning the strength of the relationship, the IVs of the nature of the Teaching Methods, and teacher professional development (Pearson's  $r(48) = .899, p < .01$ ), Teaching Methods, and Classroom Management Strategies (Pearson's  $r(48) = .885, p < .01$ ), Teaching Methods, and feedback, (Pearson's  $r(48) = .856, p < .01$ ), Teacher professional development, and Classroom Management Strategies, (Pearson's  $r(48) = .896, p < .01$ ), Teacher professional development and feedback during instruction, (Pearson's  $r(48) = .868, p < .01$ ), Classroom Management Strategies, and feedback, (Pearson's  $r(48) = .836, p < .01$ ). Hence, from the correlation analysis, it can be concluded that all four measured IVs are significantly correlated. We can conclude

here that all the modalities of pedagogic practices used in this study are interdependent and interrelated.

**Research question one:** What is the impact of teaching methods on effective learning in inclusive classrooms?

**H<sub>01</sub>:** Teaching methods do not have a statistically significant effect on effective learning in inclusive classrooms.

A global mean of 3.37 supported the notion that all three schools used in this study provide professional development to their teachers. During professional development sessions, 87.8% of the respondents generally agreed that inclusive education and Classroom management strategies in an inclusive classroom are the main focus.

The linear regression F test has the null hypothesis that the Teaching Methods do not have a statistically significant influence on Effective learning in inclusive classrooms at  $p=.05$ . In other words,  $R^2= 0$ , with  $F(1, 47) = 174.909$ ,  $p= .000$ , the test is highly significant. Thus, we can assume a statistically significant relationship exists between the teachers' Teaching Methods and effective learning in inclusive classrooms.

**Research question two:** To what extent does a teacher's professional development have an impact on effective learning in inclusive classrooms?

**H<sub>02</sub>:** Teachers' professional development do not statistically affect effective learning in inclusive classrooms.

Most of the teachers generally agreed that during professional development seminars, they learn issues concerning Behavioural Management in an inclusive classroom. 85.7% studied Instructional Strategies in an inclusive classroom. 89.8% had learned Learning Strategies in an inclusive classroom. During professional development sessions, 87.7% focused on Assessment Methods in an inclusive classroom. Also, 87.7% of the teachers engage in collaborative research in order to improve teaching in an inclusive classroom. Finally, 87.8% supported the notion that professional development plays a central role for teachers to improve the learning of learners with disability in an inclusive setting.

The linear regression F test has the null hypothesis that the teacher's professional development does not have a statistically significant influence on effective learning in inclusive classrooms at  $p=.05$ . In other words,  $R^2= 0$ , with  $F(1, 47) = 167.692$ ,  $p= .000$ , the test is highly significant.



Thus we can assume there is a statistically significant relationship between teacher's professional development and effective learning in inclusive classrooms.

**Research question three:** What is the impact of classroom management strategies on effective learning in inclusive classrooms?

**H<sub>03</sub>:** Classroom management strategies do not have a statistically significant effect on effective learning in inclusive classrooms.

The table above revealed that most of the teachers (93.9%) involve learners in establishing rules and procedures. 87.8% of the teachers encourage peer-to-peer instruction and leadership. 87.7% of the respondents think that all learners feel safe and valued by teachers. 89.8% of the teachers use gestures and expressions during lessons. 85.7% of the teachers offer an open and welcoming environment. Finally, 87.8% of the teachers encourage participation in class during the teaching-learning process.

The linear regression F test has the null hypothesis that the classroom management strategies do not have a statistically significant influence on effective learning in inclusive classrooms at  $p=.05$ . In other words,  $R^2= 0$ , with  $F(1, 47) = 105.091$ ,  $p= .000$ , the test is highly significant. Thus, we can assume there is a statistically significant relationship between the teachers' classroom management strategies and effective learning in inclusive classrooms.

**Research question four:** What is the impact of feedback during instruction on effective learning in inclusive classrooms?

**H<sub>04</sub>:** Feedback during instruction does not have a statistically significant effect on effective learning in inclusive classrooms.

The results revealed that 89.8% of the teachers responded to learners' incorrect answers, validating learners' participation. 87.8% offer learners guidelines and suggestions. 81.7% of teacher make factual comments with an explanation, and finally, 85.7% involve learners in the feedback process.

The linear regression F test has the null hypothesis that teachers' use of feedback during instruction does not have a statistically significant influence on effective learning in inclusive classrooms at  $p=.05$ . In other words,  $R^2= 0$ , with  $F(1, 47) = 109.799$ ,  $p= .000$ , the test is highly significant. Thus we can assume a statistically significant relationship between teachers' use of feedback during instruction and effective learning in inclusive classrooms.

## **Discussion**

For successful inclusive education to take place, teachers need to tailor the curriculum to suit the needs of all learners. The curriculum can be modified by using different teaching and learning strategies. Effective classroom management is crucial for creating and maintaining an environment that facilitates learning. Evidence suggests that teachers can use both preventative and responsive strategies to encourage learners to put up appropriate (on task, motivated to learn and prosocial) behaviours and reduce inappropriate (disengaged and disruptive) behaviours (Salkovsky, Romi, & Lewis, 2015). Effective preventative strategies include creating and maintaining a positive classroom climate, using structured instruction to engage and motivate learners in learning, explicitly teaching learners rules and routines, using pre-corrections to remind learners of appropriate behaviours, and actively monitoring the classroom (Shin & Ryan, 2017). Effective, responsive strategies require correcting inappropriate behaviours that address the learner's needs, are understood by the learner, are consistent, expected, calm, and proportionate to the level of inappropriate behaviour displayed (Rucinski, Brown, & Downer, 2018). A whole school approach, access to professional learning, and proactive well-being support for teachers should support classroom management strategies.

Feedback is an essential part of education and training programmes. It helps learners maximise their potentials at different stages of training, raise their awareness of strengths and areas of improvement and identify actions to improve performance (Sullivan, Johnson, Owens, & Conway, 2014). Feedback is about giving information in a way that encourages the recipient to accept it, reflect on it, learn from it, use it, and hopefully make changes for the better. Feedback is a very important aspect of the teaching-learning environment. It enhances the integration of knowledge, skills and behaviours of teachers and learners in the classroom (Thaver & Lim, 2014). Feedback is central to developing the competence and confidence of teachers and learners at all stages of education. It clarifies good performance, helps develop self-assessment and delivers high-quality information to teachers (to improve teaching) and learners (to enhance learning) (Mpu & Adu, 2021). It is a means of dialogue (written and verbal) between the teacher and the learner, which encourages motivational belief and self-esteem, and provides opportunities to close the gap between what is expected to be learned and what is actually learned (Yamani, 2014). Unfortunately, many learners ignore written feedback and only consider their grades. The grades are quite important, but ignoring the written

feedback (and indeed all other forms of feedback) deprives learners of vital opportunities for action and improvement of learning.

According to Brown (2017), feedback is the oil that lubricates the cogs of understanding. As Berger (2016) stated, feedback targets how learners learn to monitor, manage and take responsibility for their own learning. Feedback is not simply the correction of errors and awarding of marks/grades but also the guide for the improvement of learning. Tchombe et al. (2014) claimed that feedback could correct errors, develop understanding through explanations, generate more learning by suggesting further specific study tasks, promote the development of generic skills by focusing on evidence of the use of skills rather than on the content, promote metacognition by encouraging learners' reflection and awareness of learning processes involved in the assignment and encourage learners to continue learning.

Ianes, Demo & Dell'Anna, (2020) posited that feedback exists in all processes, activities, and information that enhance learning. It allows learners to reflect on their marks, understand their strengths, and identify areas requiring improvement (Lipnevich, Murano, Krannich & Goetz, 2021). Feedback can take many forms: a written form of feedback, where learners' responses are marked with comments to improve learning; an oral form of feedback, where teachers provide verbal feedback before, during and after classroom sessions and assignments, seminars, discussions, and consultations; mail form of feedback where teachers provide feedback on assignments by email or other network facilitated means; and self- or peer- a form of feedback where feedback is provided by self and peers talking through their ideas on class discussions, assignments and other experiences.

## **Conclusions**

These findings suggest that teachers in inclusive pilot primary schools are responsible for instructing pupils with special education needs in their inclusive classes. These teachers are more effective overall with all their pupils and are also more effective in working individually with pupils with special education needs. The study's reported results highlight a teaching dimension that is neither typically nor rigorously addressed in teacher education programmes. Yet, this dimension is critically important in developing effective teaching practices. The propensity and skill to engage each pupil in the classroom and develop teacher-pupil relationships that promote learning at each pupil's level of engagement are essential for effective teaching overall and for effective inclusive practices.

Curiously, we argue that teachers' pedagogical skills are appreciably needed for effective teaching in inclusive schools. Such skills counter teachers' concern about inclusion that there is not enough time to address the needs of pupils with disabilities. Effective teachers can allocate generous amounts of time to instruction, which they use to attend to the individual learning characteristics and needs of most pupils in their inclusive classes.

The fear of some teachers that they are not trained in the specialised skills that are essential to work with pupils with special needs is also challenged. Effective practices, in general, may be applicable to the majority of pupils with special needs, especially those with curriculum-related difficulties, since providing instruction geared to each pupil's level of experience and understanding is evidently possible in effective inclusive settings. The difference between effective and ineffective inclusion may lie in teachers' beliefs about who has primary responsibility for pupils with special education needs. Pedagogic practices in the locus of responsibility as belonging to the classroom teacher may be a prerequisite to teachers' development of effective instructional techniques for all their pupils. What may be needed in both teacher education and in-service preparation is to challenge teachers' beliefs about ability and disability as immune to learning, and their resulting beliefs about their roles and responsibilities, as well as their epistemological beliefs about the nature of knowing, knowledge and the process of acquiring knowledge. Opportunities for reflection and discussion of the implications and corollaries of one's perspectives, conducted in a supportive context, may demonstrate for teachers how a change in beliefs and attitudes can lead to more effective teaching practices with all their pupils.

## **Recommendations**

This study sought to investigate the impact of pedagogic practices on effective learning in inclusive classrooms in some pilot inclusive primary schools, looking at teachers' ability to teach learners with diverse learning needs, their ability to manage inclusive classrooms and learners' learning outcomes. For teachers to develop these and ensure that learning is effective in inclusive classrooms, the following recommendations were made:

### **To the Ministry of Basic Education**

From the findings of this study, teaching methods influence effective learning in inclusion classrooms more than the other aspects of pedagogic practices, thus teacher training curriculum in the teacher training colleges needs to be reinforced with teaching methods for special and

inclusive education to a greater degree than inclusive classroom management strategies, special education capacities such as brail, conventional sign language and others.

Access to classrooms and buildings should be made possible for all especially to the physically challenged learners. This can be done through the provision of ramps alongside staircases and also sign posts. This will permit independent displacements to them within the school environment.

In two of the three pilot schools, classrooms were congested, thus more schools need to be transformed to inclusive schools so as to decongest some of the few pilot inclusive schools existing at the moment.

Special schools need to be attached to inclusive schools to better facilitate the preparation of learners with disabilities for a fruitful future inclusion as is the case in government pilot inclusive primary school of the NCRPD – Etug Ebe where, according to our findings, inclusion seems most effective.

Private inclusive schools should also be recognized as pilot schools so that their rich experiences can be shared with public schools for a better inclusion in all schools, the Cameroon Baptist Convention is an example.

### **To Schools**

School heads need to ensure that classrooms are not saturated so as to enable the teachers to be able to take care of the learning needs of each learners, facilitate circulation and organize the classroom in a way that favours all the learners.

In inclusive schools, the ratio of learners with disabilities to learners without disabilities needs to be respected so that peer tutoring, assistance to learners' needs, personal contact with the teacher and knowledge of each learner can be effective. All these work towards effective learning.

### **To Teachers**

Teachers should always endeavour to have an individualized lesson plan that takes care of each learner in their classroom.

Teachers in the field need to undergo some formation in the area of psychology whereby they will reinforce their capacities in personalized relationships with each learner in the classroom for effective learning to take place.

Taking into consideration the uniqueness of each learner, teachers have to program the duration of evaluations according to each learner.

From the correlational analysis, a good inclusive teacher should seek to possess the following qualities at the same time: inclusive teaching and learning methods, inclusive classroom management strategies, special education capacities such as brail, conventional sign language and others.

### **Recommendation for further research**

Despite the challenges of finding relevant research grounded in pedagogic practices and inclusive classrooms, the researcher found information that answers my research questions. More studies and research that extend beyond learners' primary education years need to be conducted to truly understand the impact of inclusive classrooms. Furthermore, more schools need to implement an inclusive school model so that research can be conducted. Many articles have been published about teacher perception of inclusive classrooms, but few have been published about the impact on pupils and their perceptions of inclusive education. In addition to continuing the research of inclusive education for all types of learners, pedagogic practices, specifically research-based pedagogic practices, must also continue to be studied.

With that said, here are my recommendations for research moving forward. Continue studying inclusive classrooms and pupils who are part of such programs. Follow pupils through their educational career from elementary to high school to determine how inclusion and pedagogic practices have impacted their social, emotional, and academic growth.

Study the impact of inclusion for pupils in special education in regard to academic achievement and social-emotional health, and lastly, research the most effective practices, like pedagogic practices, for inclusive classrooms across a wide variety of locations.

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## Appendix

### Questionnaire to the teachers

Dear Respondent,

I would like to thank you for taking part in this survey to enable me to complete my master's thesis entitled "The Impact of Pedagogic Practices on Effective Learning in Inclusive Classrooms in Pilot Inclusive Primary Schools in Mfoundi Division". I am inviting you to participate in the survey below because you are a teacher in the selected schools of this study and can better assess the Impact of Pedagogic Practices on Effective Learning in Inclusive Classrooms. Your responses will remain strictly confidential. You may choose to skip any questions that you are uncomfortable to answer. The survey should take you 10 -15 minutes to complete. Participation is voluntary, and you may choose to discontinue anytime.

Thanks for Understanding

WIRTUM DIVINE BANBOYE

#### SECTION A: DEMOGRAPHIC INFORMATION

##### Instructions

- Tick where appropriate
  - Provide brief information where necessary
1. Gender: Male  Female
  2. Age: Below 24 yrs  25-29 yrs  30-39 yrs  40-49 yrs  50 yrs and above
  3. Your professional qualification: CAPIEMP  HND  Bachelor  Masters   
Others please specify (\_\_\_\_\_)
  4. How long have you been teaching?  
Less than one yr  1-5 yrs  6-10 yrs  11-15yrs  16-20yrs  21 yrs and above

##### Cluster A: Teaching methods in inclusive classrooms.

no	Items	SA	A	D	SD
1.	Teachers act as a facilitator of learning				
2.	Teachers establish a collaborative learning environment				
3.	Learners are made active participants in their own learning process				
4.	Engage in learning activities that are designed to be cognitively engaging				
5.	Teachers create a learning environment that encourages learners to construct their own knowledge through exploration and inquiry				
6.	Teachers facilitate the zone of proximal development for each learner (guidance and support)				
7.	Promoting teamwork among classmates				
8.	The school often provide professional development on teaching in an inclusive classroom				

##### Cluster B: Teacher's professional development in inclusive classrooms

No	During professional development, the flowing topic discussed	SA	A	D	SD
9.	Inclusive education				
10.	Classroom management strategies in an inclusive classroom				

11.	Behavioural Management in an inclusive classroom				
12.	Instructional Strategies in an inclusive classroom				
13.	Learning Strategies in an inclusive classroom				
14.	Assessment Methods in an inclusive classroom				
15.	Teachers engage in collaborative research in other to improve teaching in an inclusive classroom				
16.	Professional development plays a central role for teachers to improve the learning of learners with disability in an inclusive setting				

**Cluster C: Classroom management in inclusive classrooms.**

No	Items	SA	A	D	SD
17	Involve learners in establishing rules and procedures.				
18	Encourage peer-to-peer instruction and leadership				
19	All learners feel safe and valued by teachers				
20	Teachers use gestures and expressions during lessons				
21	Offer an open and welcoming environment				
22	Encourage participation				

**Cluster D: Feedback during instruction in inclusive classrooms**

no	Items	SA	A	D	SD
23	Respond to learners' incorrect answers, validating learners' participation.				
24	Offer learners guidelines and suggestions				
25	Highlight learners' strengths				
26	Teachers make factual comments with an explanation				
27	Involve learners in the feedback process				

**Cluster E: Effective Learning in Inclusive Classrooms**

no	Items	SA	A	D	SD
28	Inclusion fosters an understanding of differences				
29	Inclusive education leads to social inclusion				
30	Inclusion facilitates socially appropriate behaviour				
31	All should be educated in the inclusive classroom				
32	Inclusion is a valuable experience for all children				

## Interview guide

### Instructions

- Tick where appropriate
  - Provide brief information where necessary
1. Gender: Male  Female
  2. Age:
  3. Your professional qualification:
  4. How long have you been teaching?

1. What kind of teaching method are you using in an inclusive classroom?.....  
.....  
.....
  - What is the advantage of these methods to the learners?.....  
.....  
.....
  - How do you create an environment that encourages learners to construct their own knowledge?.....  
.....  
.....
2. What kind of classroom management strategies are you using in an inclusive classroom?  
.....  
.....
  - What is the advantage of these methods to the learners?.....  
.....  
.....
  - How do you to facilitate each learner's zone of proximal development (ZPD)?  
.....  
.....
3. Have you gone training on inclusive education practices?.....  
.....  
.....
  - How has the training change your teaching practices?.....  
.....  
.....
4. How often do you give learner feedback during instruction?.....  
.....
  - What is the advantage of feedback during instruction of learners?.....  
.....  
.....