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**CURRICULUM ADAPTATION AND INCLUSIVE EDUCATION
IN GENERAL ENGLISH SECONDARY SCHOOLS IN YAOUNDE
MUNICIPALITY**

Thesis presented and defended on Thursday, 13th March 2025

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WARNING

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CERTIFICATION

This is to certify that this piece of work entitled: “Curriculum Adaptation and Inclusive Education in General English Secondary Schools in Yaounde Municipality” was carried out in the Department of Curriculum and Evaluation by Martin Bezangwa, registration no14Z3166.



.....

Professor Agborbechehem Peter Tambi

To

To Mbe Tanjufua/ Mami Anyiateu's family

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ABSTRACT

The purpose of this investigation entitled curriculum adaptation and inclusive education in general English secondary schools in Yaounde municipality was to find out the influence of curriculum adaptation on the implementation of inclusive education in general English secondary schools in Yaounde municipality. This is in connection with the increasing number of children with challenges in the Cameroonian society and the problematic existing learning environments where they learn. Three specific objectives guided this investigation notably: 1- To determine the extent to which classroom management adaptation influences the implementation of inclusive education in general English secondary schools in Yaounde municipality. 2- To examine the influence of instructional adaptation on the implementation of inclusive education in secondary schools in Yaounde municipality. 3- To determine the influence of assessment adaptation on the implementation of inclusive education in English secondary schools in Yaounde municipality. Considering this investigation literature review, the *survey cross-section research design was used based on 266 students with and without disabilities in the seven sub division which make up Yaounde municipality*. Data were collected through a mixed method that used a questionnaire and an interview guide and analysed using the Statistical Package for Social Science program (SPSS). These data were analysed hypothesis by hypothesis depending on the kind of data collected at 0.05 level of significance and arrived at the following findings: For hypothesis 1, the calculated r_{xy} – value of 0,15 is higher than the critical r_{xy} -value of 0,113 at 0,05 level of significance with 264 degrees of freedom. Also, the p-value of 0,0120 is lower than 0,05. H_01 is rejected and H_{a1} is maintained. So classroom management adaptation significantly influences the implementation of inclusive education in English Secondary Schools in Yaounde municipality. For hypothesis 2, the calculated r_{xy} – value of 0,191 is higher than the critical r_{xy} – value of 0,131 at 0,05 level of significance with 264 degrees of freedom. The P-value of 0,020 is lower than 0,05. H_01 is rejected and H_{a1} is maintained, hence instructional adaptation significantly influenced the implementation of inclusive education in English Secondary Schools in Yaounde Municipality. For hypothesis 3, the calculated r_{xy} – value of 0,78 is higher than the critical r_{xy} – value of 0,113 at 0,05 level of significance with 264 degrees of freedom. Also, the P-value of 0,000 is lower than 0,05. H_03 is rejected and H_{a3} is maintained. Hence assessment adaptation significantly influences the implementation of inclusive education in English Secondary Schools in Yaounde Municipality. Based on the above findings, the researchers made some recommendations to the educational stakeholders at the local and national levels on the ways of fixing secondary school learning environments for both students with and without disabilities in Cameroon. This calls for financial, human and material resources to be near expectations for proper implementation of inclusive education in secondary schools for the betterment of both students with and without disabilities in Yaounde municipality in particular and in Cameroon in general.

Key words: Curriculum Adaptation-Inclusive Education-Classroom Management Adaptation-Instructional Adaptation-Assessment Adaptation.

RESUME

La raison d'être de cette étude intitulée l'adaptation du curriculum et la mise en œuvre de l'éducation inclusive dans les établissements secondaires d'enseignement général du sous-système éducatif Anglophone dans la municipalité de Yaoundé. Ceci est en relation avec le nombre croissant des enfants handicapés dans la société Camerounaise et la problématique des environnements d'apprentissages existants ou ces derniers apprennent. L'objectif général de cette étude était d'évaluer l'influence de l'adaptation des curricula sur la mise en place de l'éducation inclusive dans les établissements généraux Anglophones dans la municipalité de Yaoundé. Trois objectifs spécifiques ont guidé cette étude notamment : 1. Pour déterminer l'influence de l'adaptation de la gestion de la classe sur la mise en œuvre de l'éducation inclusive dans les établissements secondaires généraux du sous-système éducatif Anglophone dans la municipalité de Yaoundé. 2. Pour examiner l'influence de l'adaptation pédagogique sur la mise en œuvre de l'éducation inclusive dans les établissements secondaires généraux du sous système éducatif Anglophone dans la municipalité de Yaoundé. 3. Pour déterminer l'influence de l'adaptation de l'évaluation sur la mise en œuvre de l'éducation inclusive dans les établissements secondaires généraux du sous-système éducatif Anglophone dans la municipalité de Yaoundé. Le plan de la recherche était l'étude transversale basée sur 266 apprenants avec ou bien sans handicapés dans les sept arrondissements de la municipalité de Yaoundé. Les données étaient collectées à l'aide d'un questionnaire et d'un guide d'entretien. Les données collectées étaient analysées l'hypothèse par l'hypothèse selon le type des données prises au seuil de signification de 0.05 et les résultats suivants étaient obtenus : Ha1 a été retenue avec une valeur p de 0,0120 inférieure à l'alpha 0,05. L'adaptation de la gestion de la classe influence donc énormément la réalisation d'une éducation inclusive dans les établissements secondaires généraux du sous-système éducatif anglophone dans la municipalité de Yaoundé. Ha2 a été conservée avec une valeur P de 0,020 inférieure à l'alpha 0,05. L'adaptation pédagogique a donc une grande influence sur la réalisation d'une éducation inclusive dans les établissements secondaires généraux du sous-système éducatif anglophone dans la municipalité de Yaoundé. Ha3 a été retenue avec une valeur p de 0.000 inférieure à l'alpha 0,05. L'adaptions de l'évaluation influence énormément la réalisation d'une éducation inclusive dans les établissements secondaires généraux du sous-système éducatif anglophone dans la municipalité de Yaoundé. Considérant les résultats obtenus ci-dessus, ces chercheurs ont fait quelques recommandations aux autorités locales et nationales pour une meilleure mise en œuvre de l'éducation inclusive dans la municipalité de Yaoundé en particulier et au Cameroun en général à travers les environnements d'apprentissage plus amicaux, habitants et solidaires pour les enfants avec ou sans handicapes.

Mots Clés : L'adaptation des curricula ; L'Education Inclusive ; l'Adaptation de la gestion de la classe ; L'Adaptation de L'Instruction et l'Adaptation de l'Evaluation.

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LIST OF ABBREVIATION AND ACRONYMS

CBA	:	Competence Based Approach
CCE	:	Continuous Comprehensive Evaluation
DRPI	:	Disability Rights Promotion International
EFA	:	Education For All
GESP	:	Growth and Employment Strategy Paper
IEP	:	Individualized Education Program
ILP	:	Individualized Learning Program
LD	:	Learning Disability
LRE	:	Least Restrictive Environment
NAP	:	New Pedagogic Approach
RCI	:	Rehabilitation Centre of India
RIB	:	Rehabilitation Institute for the Blind
SEN	:	Special Education Needs
SIT	:	School Intervention Team
SPSS	:	Statistical Package for Social Science
STAD	:	Students Teams-Achievement Division
STLD	:	Short Term Learning Disability
UNESCO	:	United Nation Educational, Scientific and Cultural organization
WAP	:	Wide Approach Paper
WHO	:	World Health Organization
YDE	:	Yaounde

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CHAPTER ONE

INTRODUCTION

Chapter one is made up of background to the study, statement of the problem, purpose of the study, objectives of the study, research questions, research hypotheses, justification of the study, significance of the study, delimitation of the study, operational definition of terms and summary.

1.1 Background of the Study

The background of the study consists of historical, contextual conceptual and theoretical backgrounds.

1.1.1 Historical Background

In Cameroon as elsewhere on the African continent, the education of children with learning disabilities and learning difficulties started in informal settings. In some homes, a few parents struggled to teach their challenged children some vital life skills notably showing the visually challenged children how to brush their teeth, how to wash their hands, how to walk in the compound and also teaching sign language to the auditory challenged ones. As Ajose (2008) puts it, some parents taught their challenged children how to buy and sell using the local currency. Most types of disabilities were considered as terrible types of diseases which were very difficult to treat. This explains why parents of some children with disabilities used to put them at popular places to beg for money instead of sending them to the white man school. This is true testimony of the sad and regrettable situation which challenged children suffered of as a result of negative traditions, beliefs and customs put in place by various ethnic groups in Cameroon and elsewhere in Africa. For instance, it was largely believed that the education of such children was a big waste of resources as there was no future for them. According to Adima (1989) cited in Ekema (2006), ‘‘Instead of encouraging such children to go to school, they were escorted to strategic spots each day to beg for alms’’.

For a long time, this unfortunate situation continued in different parts of Cameroon and elsewhere on the African continent and significantly interfered with the basic rights of challenged children to education (Bezagwa, 2019 b). In order to respond correctly to the difficulties the education of all children is faced with in an inclusive education system, it is important to understand the historical roots and the evolution of inclusive education at the

national and international levels. Table 1 below is the summary of some vital declarations and conventions which recognize the right to education for every child, and as such, put in place important milestones in the trip towards inclusive education.

Table 1: Summary of some vital declarations and conventions which recognize the right to education for every child

Year	Milestones Declarations and Convention.
1948	The universal declaration of human rights
1966	The international convention on economics, social and cultural rights
1982	The program of action concerning disabled persons
1989	The convention on the right of the child
1990	The Jomtien World Conference on Education for All (EFA)
1993	Standard Rules on the Equalization of Opportunities for persons with disabilities
1994	The Salamanca Statement Framework Action on Special Needs Education
2000	The World Education Forum, Dakar
2006	The UN Convention on Rights of Peers with disabilities.

Source: Ekema 2012

However, this situation started changing with the arrival of Western Missionaries whose coming brought about Christianity with its doctrine of love your neighbor as yourself. Christianity equally educated people to treat all human beings equal as they are all created in God's image no matter their physical or mental challenges. As a result of this, persons with challenges gained some consideration and acceptance though only a tiny minority of challenged children were admitted in mission schools and were taught in normal classrooms with ordinary children.

In Cameroon, formal education for children and adolescents living with challenges mostly took place in specialized centres as just a tiny minority attended regular schools.(Mbibeh, 2013; Shey, 2014; Endeley, 2015; Fonkoua et al; 2018; Manfouo et al, 2018). However, the situation in Yaounde Municipality changed in the early 1970s as the first specialized centres for the education of the challenged children were created here in 1972. These were the special school for children with hearing impairments (Ecole Spécialisée pour les Enfants Deficients Auditifs) ESEDA and the special school for mental retarded children known in French as l'External Medico-Pedagogue (La COLOMBE). These centres were jointly managed by parents of challenged children and the concerned church groups.

Three years later, the Italians Missionaries put in place another centre known as promhandicam whose principal aim was the vocational training of the physically and mentally challenged children for socialization.

In 1975 the Ministry of Social Affairs was created in Cameroon and one of its departments called department of National Solidarity was established to improve the living conditions of challenged persons and people of very advanced ages. In collaboration with the Ministries of education this department made some efforts to improve the education of persons living with challenges. According to Ajose, (2008) this enhanced and fostered the creation of private special institutions in most parts of Cameroon.

In 1973, the Cameroon government created its first institute for persons with challenges in Buea known as the Rehabilitation Institute for the Blind at Bulu and whose raison d'être is the training of visually impaired young children in Arts and Crafts (MINAS, 1990). Seven years later the adopted law N°83/013 of 21st July, 1983, on the protection of persons with challenges and its enabling decree of application N°90/1516 of 26th November 1990 putting in place the conditions for implementation, children with challenges are henceforth expected to be educated in regular schools as well as in special ones. This law which was like the foundation stone for more government actions on the education of disabled persons, placed emphasis on three options notably integration in normal schools, admission in special classes to prepare the person for possible admission in a normal class and admission in special schools. A child's admission in any of these options is determined by the degree of his/her disability and or, the child parent's choice.

Despite the law N°83/013 of 21st July 1983 on the protection of persons with challenges and its enabling text of application of 1990, the situation of children with challenges in our regular schools still requires more attention. It is in this light that Tanyi, (2016); Bezungwa, (2019); and Chaffi, (2017) hold that large class sizes as well as the in availability of suitable and enough furniture in the school learning environment are real stumbling blocks to the successful implementation of inclusive education in Cameroon.

Based on the above studies, it is evident that the implementation of inclusive education in Cameroon still has a long way to go. This notwithstanding, students with challenges do not pay school fees in government schools and this is a commendable step. However, the President of the Republic is still to mention this group of children in his youth day speech. The problem of inclusive education is as a result of a global movement towards access to the education of all children. It is equally as a result of the universal declaration of human rights (1948) and equally those that came after it namely the world conference on

education for all, the Jomtien, Thailand Conference (1990), the Salamanca conference on special needs education, (1994), the Dakar declaration (2000) and the millennium development goals (2000). Based on these various recommendations, most world nations were asked to improve the education of children with learning disabilities and learning difficulties by not just putting it in place or by not just signing texts and laws to re-enforce it but by making it accessible, effective, efficient and affordable for this group of learners. It is in this perspective that Obanya, (2017) holds that education alone builds good citizens and brings about development. In line with the above opinion and UNESCO (1946), every child no matter the physical or mental situation has the right to education in order to properly fit in a constant changing society (Bezagwa, 2019 b).

Following diverse attitudes towards the rights of challenged children to education and proper education, the world body put forth the following instruments to ensure that their rights are properly respected

Some of them are: Articles 28 and 23 of the United Nations Convention on the rights of the child (1989) that emphasizes on the right of every child to quality education. Equally, the United Nations standard rules on equal opportunities for people with challenges (1993) put an obligation on governments to make sure that the education of children with challenges is made an integral part of the whole educational system. Besides, UNESCO Salamanca statement on inclusive education in 1994 is a way of fighting and abolishing discriminative attitudes, putting in place friendly communities, creating inclusive societies and reaching education for all. Furthermore, the United Nations convention on the rights of people with challenges (2006) puts an obligation on nations to make sure that an inclusive educative system is in place (Article 24) and foster the role of international cooperation in assisting governments to meet their duties, (Article 32). These instruments are real testimonies that the exclusion of children with challenges from education is inadmissible and severely condemnable as education builds good citizens capable of helping themselves and their societies. Besides, according to Afolabi, (2016) education is a tool for social, political and economic development of any society. Education is a tool par excellence for the upbringing of the needed all round citizens, (Cameroon, 2018; Federal Republic of Nigeria, 2004). Above all, if we forget that education is a Human Right, we shall not forget that it is the gateway to economy and desired societal changes and that for every nation to be developed; all its citizens have to be well educated as it is the real anchor on which all other developments count. It is in this perspective that Obanya, (2017) says: “When the leader of a great nation was asked to list the three most important priorities of his administration, he said

‘‘Education, Education and Education’’ and that when the leader of a developing country was asked the same question, he said: ‘‘ Economy, Economy and Economy ‘’ which are wrong answers to the said question. The Bamako sub regional declaration on inclusive component, supported by the implementation of legislation which persuades decision-makers and sponsors to pay special attention to inclusive education in development plans.

Some African countries notably Kenya, Ethiopia, Gambia, Ghana and Cameroon have since 2002 put in place plans and policies that hammer on issues of inclusive education. This is evidenced in texts and decrees put in place in these countries in order to enhance and foster the implementation of inclusive education. Since 1983 in Cameroon, for instance, the law on the protection of persons with challenges exists and holds that education of children with challenges could be done in regular schools. But this notwithstanding, children with learning disabilities and learning difficulties need more friendly and supportable physical, social and pedagogic learning environments in order to function properly because as Afolabi,(2016) holds, education is a tool for social, economic and political development of any society and no child should be left behind as education is the gateway of desired societal changes. It is the real anchor on which all other developments count. It is a tool par excellence for the upbringing of the needed all round citizens (Federal Republic of Nigeria, 2014; Republic of Cameroon, 2018; Bezagwa, 2019 a; The Bamenda Coordinating Center For Studies in Disabilities and Rehabilitation, 2011).

1.1.2 Contextual Background

The situation of challenged children has evolved in Cameroon today and as a result of this, all secondary school-aged children are supposed to be in School in Mfoundi Municipality, in the Centre Region of Cameroon. Following the adoption of law N°83/013 of 21st July, 1983, on the protection of people with challenges and its application decree N°90/1516 of 26th November 1990 laying down the conditions for implementation, challenged children are supposed to be educated in regular and special schools. Beside this law and its enabling decree of application, the Cameroon Government has since then come out with a number of regulations relating to the education of children with challenges in the country’s educational landscape.

Some of these regulations include:

- Joint circular N°34/06/LC/MINESEC/MINAS of 02 August 2006 relating to the admission of challenged children and those born of needy challenged parents into Government Secondary Schools;
- Joint circular N°283/07/LC/MINESEC/MINAS of 14 August 2017 for the identification of challenged children born of needy disabled parents registered in Government Colleges and High Schools, as well as their participation in official examinations;
- Joint circular N°08/0006/JC/MINESUP/MINAS of 8 July 2008, concerning the enhancement and the fostering of accommodation and supervision of conditions of challenged and vulnerable students in the country's state Universities.
- Law N°2010/002 of 13 April 2010 relating to the protection and welfare of challenged persons, the appropriation of the National Employment pact by Cameroon in July 2010, and the enactment law N°2011/018 of July 2011 relating to the organization and promotion of sports and physical activities for children with disabilities.

The above regulations are true testimonies of the government's desire to enhance and foster the education of the challenged children as well as their protection.

However, disability Rights Promotion International (DRPI, 2011) holds that domestic provisions in favor of challenged persons in Cameroon are not sufficient as there is no constitutional definition of disabilities. Law N°3/013/ of 21st July 1983 partially fills in this gap but the definition of disability which it brings forth shows a deficit approach instead of defining disability as a social and human rights problem. Surely, this law prohibits all forms of discriminations against challenges persons but the measure is criticized for its ambiguity and absence of enforcement which bring in un-consistent practice. Despite the fact that challenged persons as citizens are equally entitled following the constitutions to all rights as all other citizens (including that to vote and be voted for instance) and in theory has access to free secondary education and health facilities (through a special disability ID Card), on the field their rights are terribly limited by the absence of physical accessibility, hostility violence, widespread lack of knowledge on disability rights and the non-enforcement of good anti-discrimination laws put in place by the government.

Though since 2004, there is a national institution for the promotion and protection of human rights, and persons living with challenges are no exception, the national Commission on Human Rights and Freedoms, and various organizations of challenged persons, the situation of persons living with disabilities in Cameroon leaves much to be desired. As a matter of fact, Cameroon has not taken disabilities issues seriously in most of her programs

towards her commitment to fulfill the United Nations Millennium Development Goals (MDG) and education for all goals by the set date of 2015. This is why in 2022 we are still running after education for all in Cameroon. For example, in 2022 Cameroon is still at the level of pilot inclusive education in primary and secondary schools. It would be recalled that the sector wide approach paper (WAP 2006) on education and the poverty reduction strategy paper of Cameroon (2003) did not say anything about inclusive education. In a bid to put in place the objectives of the African decade, the Cameroon government in 2006, adopted a National Plan of Action on the promotion and protection of challenged persons. At that time there was no National Steering Committee of the decade but there was a national committee of the rehabilitation of persons with challenges that has been put in place by the President of the Republic.

Furthermore, the Growth and Employment Strategy Paper (GESP), which is a reference framework for government activities between 2010 and 2020, suggests that growth and redistribution of its fruits should reach the most vulnerable groups of the population notably women, youths and individuals with disabilities but this is still to move from theory to practice.. According to Ekema, (2012); Nana et al;(2012); Endeley,(2015),Shey, (2014), Chaffi,(2017); Manfouo et al,(2023) disabilities issues still have a low priority within the government of Cameroon despite the establishment of the National Committee of the Rehabilitation of persons with disabilities on disability challenges. Educating challenged students in normal and special schools in Cameroon calls for changes and requires that the learning environments of the school notably the classroom, instruction and assessment learning environments of the schools be revisited in order to make redress where necessary for a proper implementation of inclusive education. In the context of this study, our focus is on classroom, instructional and assessment environments.

The environment as a platform in which children learn, plays a commendable role in the teaching learning process. It must be peaceful and reflect the nature of the society. Students in general and challenged students in particular, can only learn well in a supportive and enabling environment. Besides, the learning environment influences teaching delivery and learning approaches. According to Turkov, (2008), there is a great need for supportive physical learning environment, equipment, furniture and material capable of facilitating the access of challenged students in normal schools. Furthermore, teachers lack support services as well as personnel resources namely psychologist and teachers trained to take care of students with challenges. Such teachers are likely to provide information and assistance to students with particular challenges(Manfouo et al; 2023).

Persons with disabilities form one of the largest minority groups in the world. Everybody is a potential member of this group because everyone is a potential person with challenges. This is explained by the fact that nobody knows the way his/her going out and coming back will be (Bezangwa, 2019 b). The United Nations convention on the rights of persons with disabilities (2007), says that individuals with challenges make up 15-20% of every country's population. According to WHO/World Bank report (2017) on disability, the world population is around 7 500 000 000 and 15% of this population is 1 125 000 000. As a result of constant aging population and the global increase in chronic health situations related to challenges like mental illness, diabetes and cardiovascular diseases, this number is ever increasing. WHO (2016) estimated that there were 1.8 million persons with challenges in Cameroon that constitutes around 12,7% of the current country's population. Of this, just about 10,5% are students and it is true testimony that inclusive education in Cameroon still has major barriers notably the classroom, instructional and assessment learning environments of the school among others. It is therefore the will of the researcher to find out barriers in the learning environments of the school which interfere with the education of students with disabilities so that appropriate redress will be made for a successful implementation of inclusive education in Cameroon for the goodness of all children as everybody is a potential person with disabilities (Bezangwa, 2019 b). For instance, some passengers of the Eseka train accident (2016) who are now on tricycles, never knew that would be their potions.

1.1.3 Conceptual background

A conceptual background refers to a narrative or graphical presentation of variables and hypothetical relationship of concepts that present a systematic view of a phenomenon to be studied (George, 2007). In the same perspective Amin, (2005) opines that the conceptual background allows the researcher to identify the concepts and variables in the study and shows how these concepts are connected usually with the help of a diagram illustrating how the variables in the study are connected. Based on the study objectives, theory and literature review, the conceptual model for an inclusive classroom is selected for the study. The conceptual model for an inclusive classroom used here is focused on student-learning and organized around four major inter-linked dimensions which can be visualized as a double Venn diagram in the shape of cloverleaf on figure 2. This concept holds that in an inclusive classroom, we find active learning in all participants, students as well as teachers. Learning is meaningful because content has been made relevant and is linked to prior knowledge and previous learning. Besides, while the curriculum may be prescribed, there is equally room to

pursue personal knowledge as well as personal interest. Finally to end up, an inclusive classroom will normally have ongoing dynamical assessments.

“Dynamical” is a term taken from chaos theory (Gleick, 1987) to describe the nonlinear quality of systems. Constant values cannot be assigned to components of nonlinear systems because as one component undergoes changes, making it difficult to predict the end results. In an educational setting, the implications are significant and suggest that the full effects of specific learning cannot be forecast ahead of time. With regard to assessment, it also suggests that the parameters and methods of assessment will change and should change as learners knowledge evolves and matures and equally depending on what the assessment is all about.

Though this model applies to any classroom where quality education takes place, it is true that good teaching is good teaching, but it is worth noting that in the act of rising in order to meet the challenges of educating children with learning disabilities and learning difficulties within the regular classroom setting, education for all children (EFA) is greatly improved. It is also worth noting that the structures and the strategies included within this conceptual map foster and enhance quality education for all, taking into consideration those who are highly capable, those with learning disabilities and learning difficulties and those from minority or marginalized groups.

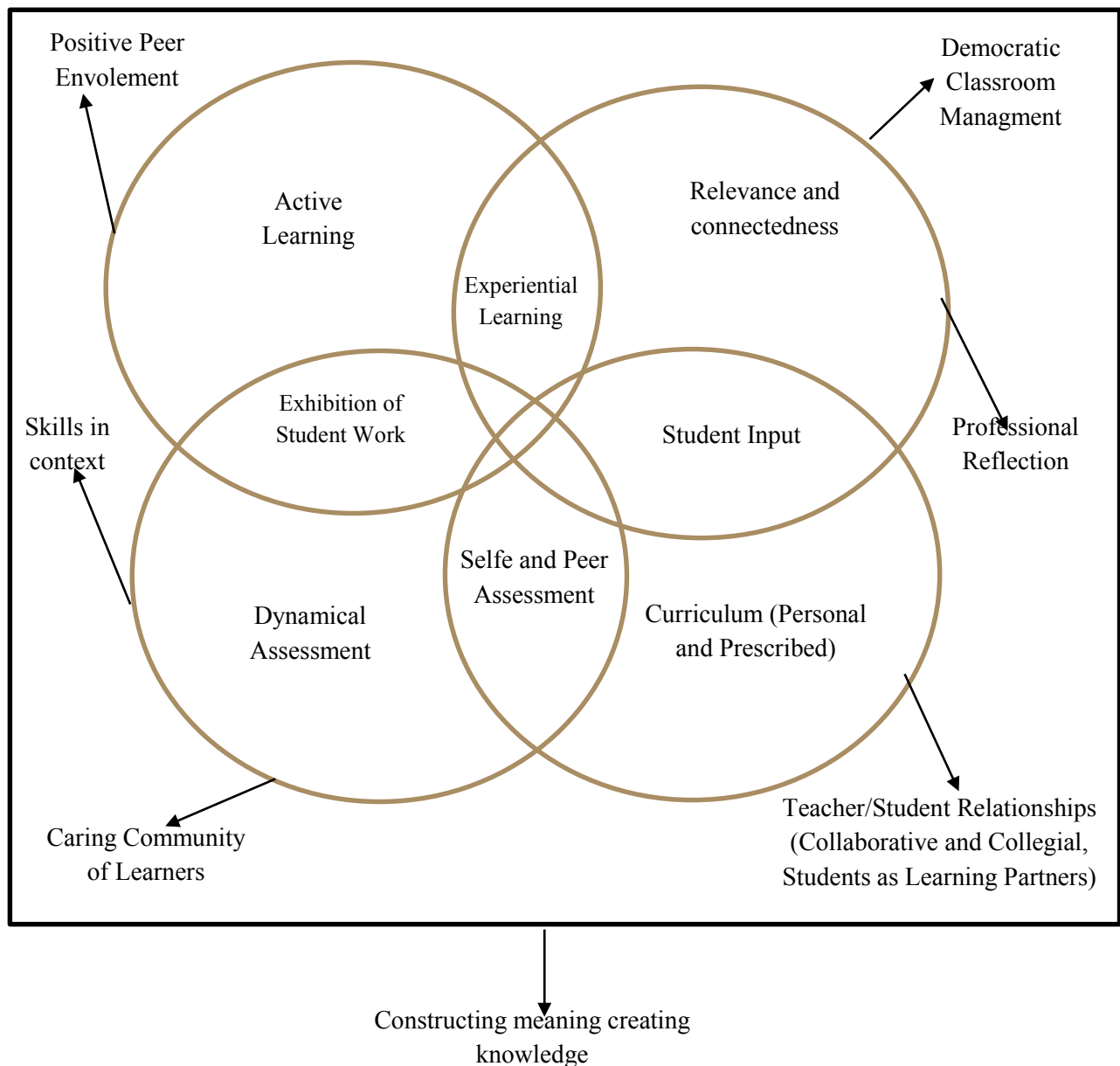


Figure 1 : The four major dimensions of inclusive education

The concept of inclusive education comes as a paradigm shift from the idea of putting or placing children with disabilities in ordinary schools which was a form of isolation to a paradigm which places emphasis on equal opportunities for participation and sharing. Singh,(2010) and Sands et al (2000) argue that historically, education authorities hold that separate education for children with diverse needs was seen to address these needs. This is exemplary of the practice of placing attention on impairments instead of on the forces of the learners. In this connection, Nind et al,(2003) equally argue the move from segregated

special education in special schools to integration and the development of units within schools, the two inclusion of learners in mainstream settings has been fueled by various ideologies and perspectives which marked their times in history.

An international perspective on inclusion can be traced back to the United Nation (UN) Standard Rules on Equalization of Opportunities for persons with Disabilities (1993) and the UN Convention on the Right of the Child (1989). These international strategies set the context to encourage more equitable forms of education. They specifically focused on meeting the needs of those who excluded and marginalized as well as those with learning disabilities and learning difficulties. This has brought about the concept of inclusive education which attracted a lot of interest from thousands of researchers worldwide. UNESCO (2001) agrees that, in some countries, inclusive education is regarded as an approach to serving learners within general education settings. However in many countries, it is seen more broadly as a reform that supports and welcomes diversity amongst all children.

According to Slee (2000) inclusive education means there is no separate special education placement for any learner, and that all learners are placed full time in the regular classrooms with appropriate support within that classroom environment. Inclusive education in a more holistic approach calls on schools to be cognizant of the different learning needs and optimal learning environments for all children, not just those with challenges (Gartner and Lipsky 1990; Muijs et al. 2005). Inclusive education is about listening to the voices in the school community and empowering all members to develop an approach to education which is committed to identifying and dismantling actual and potential sources of exclusion as explained by Gillies et al (2004). In a nutshell, it is about a philosophy of acceptance where everyone is valued and treated with respect (Carrington, 2000). Leitch (2006) holds that while general concepts like acceptance, value and respect are noble when defining inclusion, they are not particularly helpful in defining what actually should be found in an inclusive learning environment. The *raison d'être* of inclusive education is not to leave anyone out of school but giving equal opportunities for all to be full members of school and to be later socialized in constant changing societies (Bezangwa, 2019). This consideration of inclusive education embodies challenges to existing structures and systems which are still contributing to the barriers which learners face. It was in this perspective that Muller, (2002) said that, "Inclusion involves a process of reform and restructuring of the school as a whole, with the aim of ensuring that all learners can have access to the whole range of educational and social opportunities offered by the school". Besides, he said that process of transformation not only

has radical implications for the way we think about the origins of learning and behavioral difficulties, but equally requires “systematic changes and a national policy”.

The concept of inclusive education is really a very complex one and it is multifaceted in the sense that there is no one “inclusion”. Masalela (2008) holds that inclusion can be seen as a government rhetoric, inclusion as seen by schools and teachers within those schools, inclusion according to parents, inclusion according to learners themselves and inclusion as contested by various educationists. Inclusion therefore as a matter of fact is very contentious as it has lots of interpretations and means different things to different groups of people. Its implementation as a result of this will depend on how it is considered and interpreted in a given milieu. No matter how inclusive education is considered and viewed, the bottom line is that inclusive education has to recognize that each child has unique abilities and needs. According to Shanker (1995) there are attitudinal and contextual realities associated with the general education classroom which could affect inclusion success or failure. Another view is from Baker and Zigmond’s (1990) study where it was indicated that the general education classroom was a place where undifferentiated, large group instruction dominated and teachers were more concerned with maintaining routine than meeting individual differences. They continue to explain that teachers cared about children and were conscientious about their jobs, but their mindset was conforming, not accommodation. Any learner who could not conform would most likely be unsuccessful in this educational environment. The emphasis in the wider definition of inclusive education is on the restructuring of schools and systems in order to increase the participation of those with special educational needs and that they be given opportunities and be treated with respectfully. This type of approach encourages those involved to view the need of a person not evaluated as good or bad, but is considered as ordinary. As a result of this, and within inclusion, education and other services are improved to overcome barriers to learning (Ainscow, Booth & Dyson, 2004). According to UNESCO, (2015) inclusive education is:

“ a process of addressing and responding to the diversity of needs of all learners through increasing participation in learning, cultures, and communities and reducing exclusion from within and from education. It involves changes and modifications in content, approaches structures and strategies, with a common vision which covers all children of the appropriate age range and a conviction that it is the responsibility of the regular school system to educate all children” Inclusive education, far from being just a moral imperative, is a real investment in the future of young children. Every country can unlock the potentials of its citizens and build a more stable and prosperous society by making sure that all its citizens have

access to sustainable quality education. Inclusive education enables all governments to build more humane societies.

The crucial issue in our understanding of inclusive education in schools at both national and international level depends on the wider social context. Pijl et al (1997) argue that inclusive education is more than a school problem; it has to do with people's lives outside school, with family and with community. This argument is very true in the sense that schools are limited in the "real life" experiences they can offer to children if they work in isolation and Nind et al ,(2003) support this by pointing out that "schools need to mobilize and utilize the resources which communities can offer by ways of facilities and personnel to further students' learning' "The inclusive school viewed in the greater social context of community building is recognized as one aspect in the development of an inclusive society. According to us inclusive education is more philosophical in nature and Dyson (2000) advocates for the consideration of various kinds of inclusions which can be viewed along a continuum as opposed to competing paradigms. Having pointed that out, it must be noticed that there is no one philosophical paradigm that is more important than the other. While there are those who advocate for inclusive education based on human rights and those who support an efficacy based model, for the field of special needs education this refers to the requirement that adaptations will be necessary in order to for some children to access the general curriculum.

As Burstein et al (2004); Shey, (2018); Bezangwa, (2019) hold, inclusive education refers to an educational practice which is based on the notion of social justice that advocates access to educational opportunities for all learners regardless of their physical or mental state , their sex or their origin.

1.1.4 Theoretical Background

The theoretical background of this study is the justification of the phenomenon in which is being studied here. This explanation is grounded in the theories developed by lots of researchers and prominent theorists. According to Amin, (2005), a theory is a "predisposition which presents a systematic view of specifying the relationship amongst variables with the purpose of explaining and predicting the phenomena. Moreover, a theory could be seen as a set of interrelated concepts which structure a systematic view of a phenomenon for the purpose of explaining and predicting. According to Wujungbuen,(2007) and Zaden (2000), a theory is a set of interrelated statements which provide a justification for a number of events. In order to better explain the occurrences of concepts in this research work, six theories are used. These theories are:

- The theory of Multiple Intelligences by Gardner
- The Facilitation theory by Roger
- The Developmental theory of Learning in African Cultural Circumstances by Nsamenang
- The Hierarchy of Needs/Motivational Theory by Maslow
- The theory of Perception, Intellect and Personality by Willing
- The Social Learning theory: Albert Bandura-1977

These theories are chosen because they focus on how children can learn and learn well especially those with learning disabilities and learning difficulties. With the help of these theories, teaching and learning activities can be designed and implemented by teachers to improve the performance of learners in general and those of learners with challenges in particular in a supportive learning environment. These activities take into consideration individual differences among learners and work toward including all learners in the educational programs in friendly and enabling learning environments. These theories are briefly presented below as they relate to the relationship between classroom management adaptation, instructional adaptation and assessment adaptation learning environments of the school and the implementation of inclusive education.

The theory of Multiple Intelligence by Howard Gardner

This theory of Multiple Intelligence by Howard Gardner (1983-1993) is very suitable in the education of challenged children as it holds that each individual possesses distinct forms of intelligence in varying degrees and that what characterizes an individual is his uniqueness. According Gardner,(1983), this theory has emerged from recent cognitive research and documents the extent to which students possess different kinds of minds and therefore learn, remember, perform, and understand in different ways. Where individual differ is in the strength of these intelligences-the so- called profile of intelligence, and in the ways in which such intelligences are involved and combined to carry out different tasks, solve diverse problems and progress in various domains. Gardner argues that “students learn in ways that are identifiably distinctive so they would be better served if disciplines could be presented in a number of ways and learning could be assessed through a variety of means”. This argument takes us to the issue of good inclusive practices which are vital in inclusive learning environments notably the use of diverse teaching and learning materials as well as diverse teaching and assessment methods. Gardner in his Multiple Intelligence theory cites seven forms of intelligence as follows: Visual-Spatial; body kinesthetic; musical;

intrapersonal; linguistic and logical-mathematical. These forms of intelligence are briefly presented below.

Visual-spatial intelligence

Students who have this type of intelligence think and behave in terms of physical space, as do architects, engineers, sculptors and sailors. They are very aware of their environments. They like to draw, do jigsaw puzzles, read maps, daydream and process information best using pictures, visuals and imagery. They have a sense of direction and ability to think and plan in various dimensions. They have active imagination and ability to use 'mind-maps'. This group of students can be taught using guided imagery, playing with patterns and design. In addition, mind-mapping, taking pictures and photos, drawing, painting, sculpturing, watching and making videos are teaching and learning strategies for them. Besides, chart graphs, changing teaching locations, rearranging the room to suit the subject or project, giving or taking visual/spatial instruction are more effective learning strategies for learners with this type of intelligence. As the result of all these, this form of intelligence is commendable in inclusive learning environments especially that in every disability, there is ability.

Body-kinesthetic intelligence

Children with this kind of intelligence use their body effectively they have a keen sense of body awareness. Such children like movements, making and touching things. They communicate well through body language, through their muscles, sensation and movement. For instance, for athletes, dancers and actors, their bodies are their avenues to learning and understanding any content or subject. They prefer self- expressions. They can be taught through hands-on learning, acting out, role playing, drama, playing sports, playing physical games, miming using physical gestures and exercise. Changing seats and moving to different learning situations, creating new room arrangements, standing or moving while listening, learning a topic or idea with a physical gesture associated, finger writing on palms or back, are some teaching and learning strategies which could improve the performance of learners with this kind of intelligence.

Musical intelligence

Learners who have this kind of intelligence learn best through sound, rhythm and music but are equally sensitive to environmental sounds. They generally enjoy studying with music

at the background. For instance, the entertainers and the musicians. Stories can be used to teach such learners, (Bezangwa, 2019). They can be taught by turning lessons into lyrics, speaking, rhythmically, using recall activities, singing, clapping and memory games. New ideas can be set to familiar tunes, using musical instruments and composing music.

Interpersonal intelligence

This type of students processes information through relatedness to others. It is in relationship to and with others that they best understand themselves and the world. These students learn best through interactions. They generally have lots of friends and empathy for others. For instance, they can be counselors, ministers or teachers. They can best be taught through group activities, seminars, dialogue, creative writing, role-playing, simulation and practicing empathy. They like win/win competition, peer teaching, quizzing and giving feedback.

Linguistic intelligence

Children who have this type of intelligence prefer to process information through words and language as oppose to pictures. They love words for example; orator, the writer and attorney. They have highly developed auditory skills. They like reading, playing word-games making up poetry or stories. They can be taught by encouraging them to read books together, read texts and answer questions, creative writing, writing and reading reports/essays, talking and giving dictation, lecturing, impromptu speaking and keeping a diary or journal.

Logical-mathematical intelligence

Children with logical-mathematical intelligence love reasoning and education. They think conceptually, abstractly and are able to see and explore relationships. They like to experiment, solve puzzles and ask cosmic questions. For instance, the scientific philosopher. They can create order out of chaos by analyzing, grouping and categorizing. They recognize relationships, connections and patterns easily. They can be taught through logic games, investigations, sorting and classifying objects or ideas, comparing and contrasting, using symbols and formulas, use of “what if questions”, and solving mathematical problems. They need to learn and form concepts before they can deal with details.

Kluth et al, (2003) state that a popular teaching mantra in diverse classroom is “ if they can’t learn the way we teach them, let’s teach them the way they learn”, They hold that learners with or without challenges will be more engaged, retain more, learn in deeper way, and use higher –order thinking skills when they have opportunities to investigate course content through different avenues. The philosophy is especially important for today’s inclusive classrooms. Multiple Intelligence theory concept helps in a number of ways in an inclusive learning environment. For instance, it helps to diversify instruction, it empowers students with the skills to learn on their own, it is a skill for understanding self and others, it taps into natural talents and help to create a state” flow” which is highly centered on-task, it helps to validate many teachers’ qualitative and intuitive assessment of students.

The educational popularity of the Multiple Intelligence theory is related to the basic needs of teachers as they try to create more inclusive, affective and effective instruction. Teachers who subscribe to the multiple intelligence theory appear more likely to meet the needs of greater variety of learners. Classrooms that know this theory generally provide a differential curriculum, offer a wide range of activities, allow learners to express knowledge and expertise through multiple modes, and respect a variety of learning styles (Udvari-Solner et al, 1996). For this reason, many of those promoting the education of children with disabilities suggest the use of multiple intelligence theory as a framework for curriculum, instruction and assessment (Flalvey et al, 1996). The teacher uses an understanding of individuals and group motivation and behavior to create a learning environment which fosters and enhances positive social interactions, active engagement in learning, and self-motivation.

For the Multiple intelligence theory implementation strategy, it is important to teach each subject matter through a variety of activities and projects. To this end, to fill the classroom with rich and engaging activities that evokes a range of intelligences. Also, to encourage students to work collaboratively as well as individually in order to support both their “interpersonal” and “ interpersonal intelligence” intelligences. Assessments should be integrated into learning and students, especially those with disabilities, need to play an active role in their assessment. By offering students a number of choice for “ showing what they know” about a topic, teachers create more meaningful projects and authentic presentations. Simulations are powerful models of teaching because they teach students how to master concepts and learn to be effective while pursuing goals. In presentations, the student must not

only understand what is being presented, but to whom it's being presented, and apply different presentations strategies.

Helping teachers, students, and parents realize that there are multiple ways to learn and those they pose multiple types of intellectual strengths and life skills is but one reason to consider the theory of multiple intelligence for teaching students with disabilities. Rather than defining intelligence in terms of IQ scores, Gartner offered an alternative view. He suggested that intelligence be described as the combinations of psychological and biological characteristics that enable individuals to solve problems or create products that are valued in one or more cultures. (Gartner, 1999). This suggests that thinking, problem-solving and creating are valued differently depending on the family or community in which individuals live, learn and work. Not only can multiple intelligence theory increase confidence and enthusiasm for learning, it can also increase students' academic achievement and change teachers' perceptions of the learning abilities of the students. Multiple intelligence theory unveils academic strengths and honors alternative ways of learning, which can be highly helpful when educating all learners, including those with special education needs.

The multiple intelligence theory fit in this study on curriculum adaptation of the learning environment and the implementation of inclusive education in general English secondary schools in Yaounde municipality because teachers who use it can create more inclusive, affective and appealing instruction. This theory equally fits into a multicultural curriculum not only because it teaches a variety of learners but also because it is sensitive to cross-cultural interpretations of intelligences. Educators need to increase the opportunity to maximize the individual potential of every student in all social and cultural settings and create classrooms where learners experience a sense of love and belonging. It can enable teachers to achieve more diversified instructional techniques and meet the needs of many different types of learners easily. It can also be helpful in reinforcing teachers' recognition that students have differing aptitudes in different subject areas.

The Facilitation Theory by Carl Rogers (1965)

Carl Rogers and others have developed the theory of facilitative learning, for instance the humanistic approach. The *raison d'être* of this theory is that learning will occur by the teacher acting like a facilitator, that is, by establishing an atmosphere in which learners feel comfortable to consider new ideas and are not threatened by external factors (Laird, 1985).

Rogers believes that'' the most significant learning is changing one's concept of one self. Facilitation fits well in the education of learners with disabilities as both teachers and the learners participate for maximum learning to take place. Facilitative teachers are: abler to listen to learners, especially to their feelings, inclined to pay much attention to their relationship with learners as to the content of the course; apt to accept feedback both positive and negative and to use it as a constructive insight into themselves and their behavior.

On the other hand, following the facilitation theory, learners are encouraged to take responsibility for their own learning and also provide much of the input for the learning which occurs through their insight and experiences. Both facilitation and experiential theories believe learning is viewed as a personal act to fulfill one's potential. The goal is to develop self-actualized people in a corporative supportive environment. Facilitation occurs through the teacher's attitudes in his personal relationship with learners. Rogers suggests three attitudinal qualities necessary for facilitative practice of learners by teachers. They include: realness, prizing, acceptance, trust and empathy.

Realness

This means that the teacher is being himself, not denying himself. The teacher has to be a real person aware of his feelings and able to communicate them appropriately, no matter how exactly he feels. He should not just be a role in the play of education, '' a faceless embodiment of a curricular requirement or sterile tube through which knowledge is passed from one generation to another. The attitudes being expressed in being real must be attitudes of respect, warmth, caring, liking and understanding''. The teacher must not pretend to be all knowing and perfect, since the students that cannot be the truth.

Prizing, acceptance and trust

This refers to teachers caring about learners' feelings. For instance, those that support learning as well as those that do not support it. It is the trust and prizing of his capacity and ability as a human being. Teachers should prize all learners not for their positive or negative characteristics, but because they are all valuable human beings. This prizing can manifest as listening to what students are saying, but not necessary as listening to evaluate, but listening to learn ideas, thoughts and feelings. Prizing can also manifest through responding to what the learners say.

Empathy

This refers to the ability to walk in others' shoes. This means that the teacher can understand the learners' perspective on the process on learning and his reaction from the inside. The accent here is to understand, not judge or evaluate. Empathy enables teachers to understand the reasons that led the student to a certain behavior or answer, but also to understand his emotional situation that needs to be solved in order to enable significant learning. The theory fits in this story because students with challenges greatly need a facilitator to scaffold their learning. When facilitators are real or genuine persons, entering into a relationship with learners without presenting a front or façade, they are more likely to be effective. It means that they come into direct personal encounter with learners, meeting them on a person-to-person basis. The facilitator prizing or acceptance or acceptance of the learner is an operational expression of his confidence and trust in the capacity of human organism. In a classroom with learners with disabilities, if the teacher has the ability to understand the learners' reaction from the inside, has a sensitive awareness of the way the process of education and learning seems to the learner, there is the likelihood that significant learning and emphatic understanding would occur. Reported positive results of Rogers' theory in practice include: fewer disciplinary problems as it is usually the case with inclusive classrooms, better knowledge and IQ test scores, usage of higher levels of thinking, fewer acts of vandalism, positive self regard, and increase in creativity.

The Developmental Theory of Learning in African Cultural Circumstances by Nsamenang (2011)

A Bame Nsamenang single handedly developed this developmental theory in African cultural circumstances in 2011. He knows that as a cradle of humanity, Africa has successfully practiced child bearing and education within the framework of Africa culture for centuries. Nsamenang insists that education in African traditional family traditions is one in which older generations, especially parents, sought and still seek to pass on what they have learned or inherited to their off-springs. They also put in place culturally appropriates strategies for children to acquire it by themselves. Learning here according to him translates 'coming into possession of'. This process of acquiring knowledge and skills occurs everywhere. Much learning happens without the notion of 'passing on' or 'imparting' as when an infant comes into an awareness of a specific woman as his own mother; a girl and boy realize themselves as sister and brother or toddler cherishes one food item and not others. Another example is when somebody experienced a friend as being more helpful to her or him

than a relative. The western-type of education especially schooling which is adopted difficultly in Africa applies narrowly to “deliberately passing on” or imparting of knowledge and skills.

African view education broadly as a process and an outcome that seeks to and actually orient children to the universe and into gradual and systematic learning of the art and science of living and the responsibilities linked to developmental social status and their livelihoods. For instance, a preadolescent is expected to show more responsibility, ability, maturity and evidence of accumulated learning than a toddler. These kinds of learning are cast in the social history, culture; language, institutions, and daily family routines and ethnic policy

Developmental Processes and Outcomes

Processes are series of operations, events or steps which lead to the attainment of specific outcomes or results. Developmental processes are defined as the combination of forces (notably genes and maturation) and factors (namely nutrition, mother’s health status, exposure to new knowledge or experiences, child’s living condition, etc.) which are put in place or initiated at conception or thereafter or which operates in the course of a child’s life to produce observable and assessable changes in the child at various developmental stages by both caregivers and experts. One of the examples developmental processes outcomes is learning. Nsamenang,(2011) concludes that the interaction between the aforementioned forces bring about or produces developmental change in the child.

There are two important developmental forces notably maturation and sociocultural forces. Maturation is built into heredity or the genetic make-up that is endowed by or inherited from the father and mother when a baby is conceived. This means that genes prepare every child to grow and develop at a certain rate and to a certain body size, but this largely depends on environmental inputs, like diet quality, physical safety, care, social and emotional security, play materials or simulation in general and most importantly the nature of the learning experiences to which the child is exposed.

What is Developmental Learning?

Developmental learning is defined as knowledge and skills acquisition which is crucial in children survival and development, that they do not possess at birth(Nsamenang, 2008). It means that children are not born with knowledge and competences that they will use in order

to make sense of life and cope with the world but they are ready to learn. Heredity, 50% of which every child inherits from each parent, prepares children to learn and transmit culture and to acquire knowledge and to acquire knowledge and competences during their development. Typical examples here are those of Nso people in the North West and the Bangwas in the South West regions of Cameroon where parents prepare their next generations from the positioning of keen awareness of children maturation to grow into or to learn knowledge and skills. In the above-mentioned lieux, they like the vast majority of other African parents, actualize this belief in their parenting practices that assign household and other livelihood tasks to children from an early age (Nsamenang, 2008a). The Nso and the Bangwas believe that children possess inborn and natural force, capability or ability to learn by imitation or imagination. The Nso people like the Bangwas, use storytelling and riddles to awake their children's imagination and learning of calculations and moral values. The definite strategies and mechanism through which the children are reared into the acceptable ways of their societies or educate themselves and their children or peers the cultural ways of their societies or communities and of the world differ throughout ethnic communities. And what about our classroom learning environments which are communities in miniature? And so developmental learning advocates for differentiated instruction in school learning environments especially inclusive ones. In this light, the role of parents, teachers, school administrators, and peers in developmental education of the school of life is to:

- Guide children to understand and accept the rightful adult identity and the models toward which they are being prepared. This ties with the implementation of inclusive education as in every inclusive classroom, learners need to know themselves, their, their origins, values and traditions and the reasons why they are in school so that they can be motivated to learn.
- Communicate standards of valued behavior and virtue. It is in line with inclusive education practices which require that rules and regulations ensure peaceful co-existence of all learners in inclusive schools so that learners with disabilities feel safe, happy and willing to learn.
- Alert and sensitize children to pro-social attitudes and virtues and to guider and ensure their socialization (Nsamenang,2004).An inclusive classroom is a typical society in miniature. It is therefore important for learners to note and understand that their classroom is the reflection of the in which they are going to live upon

completion of their studies. In this situation, they have the obligation of love and respect for themselves especially that everyone is a potential person with disabilities.

The Theory of Perception, Intellect and Personality by Willing(1988)

While dealing with various spectrums of the learning environment, Willing developed the theory of perception, intellect and personality. The ideas in this theory of perception, intellect and personality are proposed by Willing (1988). This theory holds that learners are classified into two categories which are field independent (analytical) and field dependent (concrete). Willing discovered that people differ from each other in the way they ‘perceive both their environment and themselves’ (1993). People who are either field dependent or field independent differ in human relations, learning styles and information processing. For example, field independent or analytical people in processing information find it relatively easy to detach an experience(perceived) item from its background, have a tendency to show traits of introversion, and left hemisphere strengths, while the field dependent or concrete people experience items as fused with its context, show traits of extraversion and right hemisphere strengths. People choose to discover new ideas and opinion through their own learning styles. A person’s learning style is developed through how the person feels that he learns best.

Educators should develop strategies for learners with disabilities that allow the students to interact with rest of the class (York, 2008). Some strategies may be as simple as standing directly in front of the learner who is going to be next for an exercise. Simple strategies such as these can provide a better learning environment for students with disabilities, which allow them to express their personality in the learning choices they make. Students with autism, visual or physical disabilities, for example, thrive in environments that provide structure. The language learning classroom may be structured a certain way, but the structure of language itself is ambiguous and may be the cause disability in language learning for the students. Teaching learners with disabilities to communicate is often done through prompting, which involves the teacher saying something and the learner repeating it after him. This type of structured learning may work well for beginning language and communication skills, but educators should strive to take students out of prompting and teach them to speak at their own will. Along with difficulty in communicating, students with these disabilities also have problems with social activities and events. The ambiguity of language may pose more problems in social events because learners are unable to decide now

to act and respond to the language of others. Providing these students with social stories especially animal stories (Bezangwa, 2019) will make them attentive, receptive and active during class activities. Willing holds that using stories to present lessons makes learners with disabilities learn to react to events happening in the stories.

The Hierarchy of Needs/Motivational Theory by Maslow (1943)

Abraham Maslow(1943) developed appositive theory of motivation which argues that while people seek to meet basic needs, they seek to meet successfully higher needs in the form of a pyramid. The hierarchy of needs theory is a main concept for guiding this investigation in connection with the effects of the environment on education especially inclusive education. Maslow motivational theory(1970) is a hierarchy of needs, which includes a)physical needs, b) safety needs, c) belongingness and love needs)esteem needs, e) self-actualization needs and f) transcendence.

The physical necessities are : oxygen, food, water, and constant body temperature. Clothing and shelter also provide necessary protection. They are the strongest needs because if a person were deprived of them, the physiological needs would be primary in the person's search for satisfaction. When satisfied in the environment, the learner's perceptions about the lieu secured and established.

When students with disabilities are present in a learning environment, they often display the signs of insecurity and the need to be safe. This is why safety needs are commendable conditions for the implementation of inclusive education in a learning environment. When learners with challenges are together with their peers, it enables them to feel and have the intellect of belongingness. They learn well when they feel a sense of belongingness and security. When love and affection are present in the environment, these overcome the feelings of fear, loneliness and alienation which usually scarce challenged children away from inclusive classroom environments.

Self-actualization as described by Maslow is, 'a person's need to be and do that which the person was born to do'' (Simons et al,1987). It is when for instance, a teacher must teach, a doctor must help the sick, and a coach must guide his players to play well. The person has a direction to use the skill he has in order to promote that particular talent. Maslow(1970) identifies fifteen necessary characteristics to become self-actualizer. They include they perceive reality efficiently and can tolerate uncertainty, accept themselves and others for what they are; Spontaneous in thought and action; problem-centered not self-centered; unusual sense of humor; able to look at life objectively; highly creative; resistant to

enculturation; but not purposely unconditional; concerned for the welfare of humanity; capable of deep appreciation of basic life experience; establish deep satisfying interpersonal relationships with few people's experiences; need for privacy; demonstrate attitudes; strong/ethical standards. Maslow however adds that self-actualization is a matter of degree "there are no perfect human beings".

The hierarchy of needs by Maslow highlights the complexity of human needs and serves as the framework for learners' feelings in the classrooms especially in those classrooms where challenged learners are found. Besides, learners need to be motivated (Maslow, 1970; Morano et al, 2003; Reutzler et al, 2004). Maslow holds that teachers must learn about their learners' interests, hobbies, likes and dislikes in a classroom. As children learn differently in the classroom environment, teachers have to utilize various teaching methods in order to meet the needs of all the learners especially those of the challenged learners.

More specifically, Maslow's third and fourth levels of the hierarchy, belonging and esteem are addressed in the classroom learning environment. The hierarchy of needs serves as the framework for learners' feelings in the classroom. When learners with disabilities are present in a learning environment they usually display the signs of fear and insecurity and the need to be safe. Love and affection can overcome all these negative aspects of the learning environment and install confidence and the desire to learn in them.

Maslow stated that the causes that prevent people from upward in the direction of self-actualization are the obstacles put in their way by society and one of which is education. Maslow makes suggestions concerning how the customs of education can change from its normal person stunting methods to a person's growing plan. Maslow states that each individual needs to have the appropriate education in order to become the mature self-actualizing person of his own kind. Maslow suggests that learners must be shown that they are valued and respected in the classroom and the teacher should create a supportive environment. The application of the hierarchy of needs in school learning environments will support learners in general and those with challenges in particular and especially the way in which they adjust to the learning environment and the society at large.

The Social Learning Theory : Albert Bandura (1977)

Observational learning is also vicarious learning (Bandura, 1977). Bandura calls the process of social learning, modeling and provided four conditions, namely, attention, retention, motor reproduction, and motivation. This theory ties squarely with our study, because the learner's attention is an indispensable condition for learning to take place

especially in inclusive classrooms where it is not easy at all to get all learners attentive. The theory's central concept is reciprocal determinism, whereby the interacting factors in learning are both cognitive and environmental, acting on learners' behavior (Bandura, 1977). These determine not only the learner's emotional reactions but equally the learner's beliefs, expectations and behavioral manifestations. According to Bandura, learning is copying, modeling, observing and imitating but with some awareness of what is involved. Bandura, (1977) holds that observational learning requires continuous reciprocal interaction between cognitive, behavioral and environmental factors. It is worth noting here that observation is very important in childhood/adolescent hood and is crucial for children's stimulation especially in inclusive classrooms where lots of educational media are used. Generally, short stories, charts, near-real/real objects make learners attentive and receptive in almost all learning environments (Bezangwa, 2019).

Bandura, (1977) opines that in observational learning, the learner learns by observing others' behaviors. The potentials and power of observational learning were advocated by Dewey (1997).

As we observe the external, we also engage in self-observation which is internal to us.

Bandura,(1997) refers to this, self-efficacy appraisal if this is done against set standards or established goals, such as lesson objectives. Two sources of self-efficacy appraisal are common among students; awareness of one's actual performance and when students are influence vicariously as they see peers reinforced in their successful task performance. Social learning theory demands teacher-guided facilitation of learners' interaction in cooperative learning. In this way students' ability to retain information through social interaction is reinforced as they engage in cooperative learning with peers. In this perspective, the teacher should capitalize on the commonplace expression of " I am poor or good in this or that subject" to set learners on interactive learning from peers (Tchombe, 2006).

'Take for instance a learner is asked to go up to the board and correct an identified problem in an assignment, whereas the rest of the class observes. Teachers should highlight when the learner uses the rules and steps to be followed correctly. If necessary, the teacher can increase the difficult level of the problem. In doing this and encouraging the learner, the teacher s shaping the learner's ability to solve for instance, a mathematical problem whereas the rest of the class learns by observing, following and perhaps interacting with the learner and teacher. The apparent lesson here is that the teacher is making the learners responsible for their own learning and encouraging peer tutoring. Observational learning is a commendable

way of teaching most learners especially in inclusive classrooms as it generally enables the teacher to easily sustain learners' attention which is vital for retention. The teacher should therefore always sustain pupils/students attention, focus on the specific behavior for retention and put in place strategies to help learners perform what they observed. Learners, especially those with disabilities and difficulties expect motivation. Teachers should motivate them in order to successfully meet set goals.

1.2 Statement of the Problem

In Cameroon as elsewhere on the African Continent, inclusive education is not properly implemented and as a result of this, students with challenges are usually victims of discrimination and marginalization. This is evidenced by the report of Disability Rights Promotion International (2011) on the situation of Human Rights of persons with disabilities in Cameroon which holds that 73% of persons with disabilities interviewed reported experiences where their sense of dignity as human beings had been eroded; another 25% of the respondents reported having received unequal treatment by non-disabled persons in the family, at school, at the job side, and in some cases by public authorities, and that finally, more than 53% of the respondents reported having been labeled and given terrible nicknames on the basis of their disabilities.

Most primary societies in Africa talk of inclusive education and even put in place regulations to enhance and foster its implementation but the real situation on the field leaves much to be desired. Cameroon is no exception as most secondary schools in the country are not accessible to the physically challenged students. Besides, the social learning environment of the school is not better. This is evidenced by the incident that took place in Lycée Deido Douala Cameroon on Friday 29/03/2019 where a Christian student stabbed his school Muslim mate to death, among other bitter cases elsewhere in Cameroon secondary schools. Students with challenges as well as their normal mate can only receive quality education in a peaceful, accessible and conducive learning environment.

Generally because of inadequate school learning environments notably the classroom, instructional and assessment environments, learners with challenges hardly receive sustainable quality education that would enable them to successfully stand on their own feet and exercise their full participation in the family, society and the nation as a whole on the same basis with others. In Cameroon, the exclusion of students with disabilities from our schools is largely justified by the hostile learning environments of the school notably the

classroom, instructional and assessments environments. This is testified by Tanyi, (2016); Chaffi, (2016) and Bezagwa, (2019 b) who hold that the biggest barriers to the effective implementation of inclusive education in Cameroon remain the school learning environments

Despite this reality, the implementation of inclusive education in Cameroon is gradually moving on. This is visible in the various laws and regulations which the government has put in place in the past years notably, (1983, 1990, 2006, 2007 and 2010) for sustainable inclusive education. However, a proper examination of these regulations and laws shows that very little or no consideration is given to curriculum adaptations of the learning environments of secondary schools namely, the classroom, instructional and assessment environments which might most probably solve the issue of the implementation of inclusive education in secondary schools in Cameroon. Another big weakness of these regulations and laws is the absence of follow-up and punishment of defaulters. These texts would have really enhanced and fostered the implementation of inclusive education in Cameroon if they had been properly implemented and defaulters punished to the letter.

A conducive learning environment refers to a place of learning in which various groups of children with or without challenges interact and learn together. It is a peaceful setting in which different groups of children with or without challenges are admitted, assisted and educated together. According to Bezagwa, (2019 b), a conducive learning environment is the one with round holes ready to happily accept pegs of different shapes (squares, circles, rectangles, triangles, etc.). Such an environment has a great role to play in the search for sustainable quality education for every learner notable a learner's positive perception of the learning environment. As a matter of fact, a positive perception of the learning environment leads to happiness, attention and reception. It brings forth high achievement while a negative perception of the learning environment constitutes a great barrier to education especially inclusive education. A conducive learning environment is a major prerequisite for the implementation of quality inclusive education.

In line with the above, a negative learning environment is a great barrier to learning as it is a source of academic failure, truancy, stress, dependence on mates and the culture of unwanted behavior and habits. The advantages of a peaceful, calm and supporting inclusive learning environment include: confidence, comfort, responsibility, expected academic results, skills, knowledge, reinforcement, remediation and quality learning outcomes. According to UNESCO, (2016) a quality curriculum for quality education puts great expectations on students teachers, learning environments, parents, employers, and on

education systems and authorities. It is against this background that an investigation was proposed on curriculum adaptation and inclusive education in general English secondary schools in Yaounde municipality.

1.3 Objectives of the Study

The main objective of this study was to evaluate the influence of curriculum adaptation on inclusive education in General English secondary schools in Yaounde municipality. This has brought about three specific objectives namely.

- 1) To evaluate the extent to which classroom management adaptation influences the inclusive education in English secondary schools in Yaounde municipality.
- 2) To evaluate the influence of instructional adaptation of on inclusive education in English secondary schools in Yaounde municipality.
- 3) To evaluate the influence of the assessment adaptation on inclusive education in English secondary schools Yaounde municipality.

1.4 Research Questions

The Main Research Question

What is the extent to which curriculum adaptations significantly influence inclusive education in General English secondary schools in Yaounde municipality?

The study was guided by the following research questions:

- 1) To what extent does classroom management adaptation significantly influences inclusive education in General English secondary schools in Yaounde municipality?
- 2) How does instructional adaptation significantly influence inclusive education in English secondary schools in Yaounde municipality?
- 3) How does assessment adaptation significantly interferes with inclusive education in General English secondary schools in Yaounde municipality?

1.5 Research Hypotheses

From the above research questions and in line with the review of literature, the general research hypothesis for the study is: There is a significant relationship between curriculum adaptation and inclusive education in General English Secondary Schools in Yaounde Municipality. This general research hypothesis gave rise to three specific hypotheses below:.

1.5.1 Specific Hypotheses

Hypothesis One

Null hypothesis (Ho1): There is no significant relationship between classroom management adaptation and inclusive education in General English secondary schools in Yaounde municipality.

Alternative hypothesis (Ha1)

There is a significant relationship between classroom management adaptation and inclusive education in General English secondary schools in Yaounde municipality.

Hypothesis Two

Null hypothesis (Ho2)

There is no significant influence of instructional adaptation on inclusive education in General English secondary schools Yaounde municipality.

Alternative hypothesis (Ha2)

There is a significant influence of instructional adaptation on inclusive education in General English secondary schools in Yaounde municipality.

Hypothesis Three

Null hypothesis (Ho3)

There is no significant influence of the assessment adaptation on inclusive education in General English secondary schools in Yaounde municipality.

Alternative hypothesis (Ha3)

There is a significant influence of assessment adaptation on inclusive education in General English secondary schools in Yaounde municipality.

1.6 Justification of the Study

In Cameroon, there are domestic provisions in place for the institution and implementation of inclusive education in order to educate every Cameroonian child no matter his or her physical or mental challenge. These provisions were made in 1983, 1990, 2006, 2007 and 2010 for sustainable inclusive education in Cameroon. Beside the government, some NGOs, churches and associations are also fighting for a successful implementation of

inclusive education in Cameroon in collaboration with government authorities in the Ministries of Education and Social Affairs. However, a close examination of these domestic provisions shows that very little or no consideration is given to the learning environment of the school. It is in this light that Ekema, (2012) holds that most classrooms, libraries and latrines in elementary and secondary schools in Cameroon are not accessible to the physically challenged learners. The learning environment is generally not friendly.

The learning environment is the setting of the teaching learning process and determines the quality of educational activities that go on there. For it to enhance and foster quality educational activities for both children with or without challenges, it has to be freely accessible, peaceful, friendly and enjoyable. The learning environment of secondary schools in Cameroon constitutes the biggest obstacles to the successful implementation of inclusive education in Cameroon (Tanyi, 2016; Chaffi, 2016; Bezangwa, 2017). It is on the basis of the above that the researcher intends to study the influence of some adapted learning environments of secondary schools in Yaounde Municipality notably classroom management, instructional adaptation, and assessment adaptation the implementation of inclusive education so that necessary measures would be put in place for sustainable quality education for all students. It is the researcher's desire to limit or completely stop the parasite of accessibility, discipline, happiness, peaceful co-existence and enjoyment in our school learning environments in order to promote a successful implementation of inclusive education. Students with challenges can learn well only in a friendly and assessable learning milieu that will enable them to improve their academic out comes, have better self-esteem and limit or stop dependence on others.

1.7 Significance of the Study

The research findings on curriculum adaptations and inclusive education in General English Secondary will be useful to educational authorities at the local and national levels. This could be very helpful to policy makers in Cameroon as they make laws that relate to the implementation of inclusive education. Such findings may also encourage curriculum developers to carry out curriculum design, innovation, and implementation which are more friendly and supportive of inclusive education practices in special and normal schools in Cameroon. Besides, these findings would enable teachers to identify the ways in which their schools may become more inclusive and better manage diversity so that at the end of the day every learner, challenged or unchallenged has something to proudly go home with. Findings gathered from this study would provide a commendable basis for strategic planning and use

of resources in our secondary schools. Furthermore, the study will equally have the ability to usher in new insights to the Ministry of Secondary Education to examine the gap between policy and practice in connection with secondary schools learning environments, and thus find ways of closing it so that inclusive education will be smoothly implemented in Cameroon secondary schools.

1.8 Scope of the Study

The scope of the study is the delimitation that researchers put in place prior to the inception of the investigation to narrow the job at hands. The present investigation was delimited to general education secondary schools in Yaounde municipally. Though it focused on regular schools, some special schools were also used. The study will involve secondary school students of regular and specialized schools in the English sub systems of education in Cameroon. At the level of content, it will be limited to the exploration and evaluation of the school environments and the implementation of inclusive education in secondary schools in Cameroon. It will not handle issues pertaining to causes of learning difficulties or disabilities and will not discuss other types of curriculum adaptations.

1.9 Operational Definition of Terms

Disability

The word disability refers to a limitation of the opportunities of a person with impairment to fully take part in an activity in a given milieu. It is a condition or function judged to be significantly impaired relative to the usual standard of an individual or group (Hallahan, Kauffman and Pullen, 2012). It is an inability to do something. For the purpose of this study, disability refers to a limitation on an individual functioning which limits the person's own attitude, the society or the physical or mental impairment; or a record of such an impairment, or and who is considered as having such impairment (Mullen, 2001). Some characteristics of a person with a disability include the inability to care for his or herself; perform manual tasks; walk; see or hear and learn. Disability according to Ansley (2000) refers to a person having a physical or mental impairment that substantially limit one or more of the life activities, having a record of such impairment, or being regarded as having such an impairment.

Inclusion

The word inclusion is generally used to refer to the act of including something or somebody into a whole, or the state of being included. For the purpose of this study it means

integrating children with challenges into normal schools in order to enable them take part in all educational activities on the same footing with their mates without challenges. UNISCO,(2007) defines inclusion as a process addressing and responding to the diversity of needs of all learners through increasing participation in learning, cultures and communities and reducing exclusion within and from education. Inclusion involves changes and modifications in content, structures, approaches and strategies, with the same vision that covers all children of the same age range and a conviction that it is the responsibility of the regular school to educate every child. Adeniyi and Kuku,(2017) define inclusion as a process which gives children with challenges the opportunity to interact with age-appropriate peers without challenges, and a process that permits children with challenges to take part in all aspects of school life and better prepares learners with challenges for life within the constant changing society.

Learning Disability and Inclusion

In the course of learning, a number of learning factors could impede the acquisition, organization, retention, and understanding of information passed across by the teacher. These disorders affect learning in individuals who otherwise demonstrate at least average abilities essential for thinking and/or reasoning. Learning disabilities result from impairments in one or more processes related to perceiving, thinking, remembering or learning. These include, but are not limited to language processing, phonological processing, visual spatial processing, processing speed, memory, attention and executive functions (e.g. planning and decision making). The Colombia Ministry of Education (2011) defined learning disabilities as a number of conditions that might affect the acquisition, organization, retention, understanding or use of verbal or nonverbal information. The Federal Register of Nigeria (2013) defined Specific Learning Disability (SLD) as a disorder in one or more basic psychological processes involved in using language, spoken or written, which manifest itself in an imperfect ability to listen, think, write, spell or to do mathematical calculations. The term includes such conditions as perceptual handicap, brain injury, minimal brain dysfunction, dyslexia and developmental aphasia. However, the term does not include children whose learning problems are primarily occasioned by visual, hearing, or motor disability, mental retardation, and emotional disturbance, cultural and environmental influence.

The definition brought forward by the Federal Register of Nigeria has four criteria which conventional classroom teachers must consider and bear in mind when identifying and

teaching students who demonstrate learning problems resulting from learning disabilities.

They are:

- 1) Academic difficulties: Children with learning disabilities have difficulties learning how to read, write, spell, organize thought or do mathematical calculation compared with other children of the same age.
- 2) Discrepancy between potential and achievement: Children with learning disabilities experience serious discrepancies between intellectual ability and achievement at school; this is known as aptitude achievement discrepancy.
- 3) Exclusion of other factors: A person may not be classified as having learning disabilities if the learning problem is caused by impairment of vision, hearing, motor, intellectual and emotion cum environment.
- 4) Neuropsychological disorders: Basic learning is the result of some types of neuropsychological disorder.

According to the National Joint Committee on Learning Disabilities, learning disabilities is a general term which refers to heterogeneous group of disorders that manifest by significant difficulties in the acquisition and use of listening, speaking, writing, reasoning or Mathematical abilities. These disorders are intrinsic to the individual presumed to be due to central nervous system dysfunction and may occur across lifespan. Kavale and Forness (1987) held that persons with learning disabilities belonged to a group of very diverse individuals but they do not have a common problem. They do not learn in the same way or as efficiently as their non-disabled mates. However, many of those individuals possess normal intelligence but their achievement cannot match their potentials. Teachers should master all of these to finger tips in order to properly take care of an inclusive classroom for the betterment of inclusive education. This is why in a modern classroom, where assessment is done before placement, the use of intelligent quotient with other comprehensive processes must be combined if learning will be meaningful and learners will be assisted according to their areas of needs.

In some classroom, learners with similar trait learn together. One example of such is a special education classroom where learners with special needs learn with learners with similar exceptional attention. However, with the term inclusion, it embraces all forms of learners and teachers work together for a common goal. Inclusive education is geared towards including all learners, not considering the degree of variance in strength and abilities. In a setting like this, conventional teachers may face a variety of challenges in the classroom (Mark, Lamport, Graves and Ward, 2012). Hence, the inclusive classroom is a general

classroom in which students with disabilities learn alongside their peers without challenges. In an inclusive classroom setting, general education teachers and special education teachers work together in order to achieve desired learning outcomes. Learning problems occasioned by learning disabilities are broadly divided into two notably:

1) Developmental Learning Disabilities

Developmental learning disabilities refer to a group of conditions caused by damage in language, behavior or learning areas as the child grows. This group of conditions perturbs the child day-to-day functioning and lasts through the individual's lifetime. Some of them include autism, behavior disorder, brain injury, fetal alcohol syndrome and spinal bifida

2) Academic and Achievement Learning Disabilities.

Some examples of academic and learning disabilities include dyslexia, dysgraphia and dyscalculia.

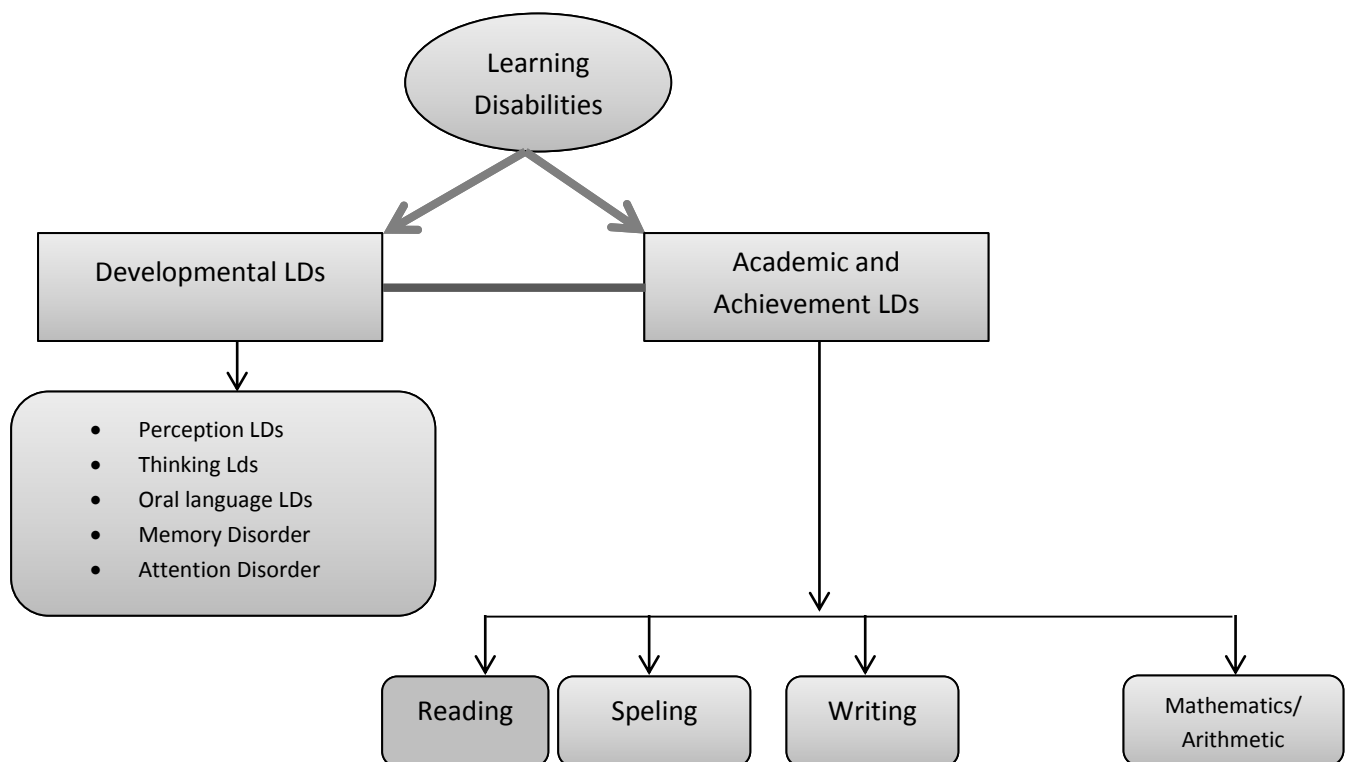


Figure 2: A model of classification of learning disabilities.

Source: Adeniyi &Kuku, (2016)

Inclusive Education

Inclusive education is an educational program in which challenged and unchallenged learners are jointly educated in the same learning environment and it is the responsibility of

the school to make changes in structure and content in order to welcome and educate every child no matter his or her physical or mental situation ,(Bezangwa, 2019 b). According to Friend,(2006) inclusive education refers to the belief system shared by every member of a school as a learning community, often based on a mission statement or vision emphasizing the commitment to educate all children so that they can reach their potentials. According to Endeley,(2015); Shey, (2018b); Khamari et al; (2019) inclusive education refers to the provision of justification and services to learners with disabilities and difficulties in their nearest community schools with appropriate support services and additional educational media for both learners and teachers. Inclusive education is a system in which all children from a particular locality learn together at the same community school including those with learning disabilities, difficulties or special needs. Provision for this system of education calls for some feelings of confidence and belonging in the minds of challenged children and provides them appropriate opportunities to ordinary system of education. According to Khamari et al; (2019); Manfouo et al, (2023) inclusive education enables children with challenges to attend the same local school with their friends and neighbors while they require for successful academic performances. The common promise here is that schools should meet the educational needs of all learners. In a nutshell, inclusive education is children's right to learn and the school's responsibility to accept them and properly educate them in the same classrooms irrespective of their physical or mental challenges. At the core of inclusive education is the human right to education pronounced in the Universal Declaration of Human Rights in 1948, which asserted that:

Everyone has the right to education...Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Education shall be directed to the full development of human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and Friendship among all nations, racial or religious and shall further the activities of the United Nations for the maintenance of peace (article 26).

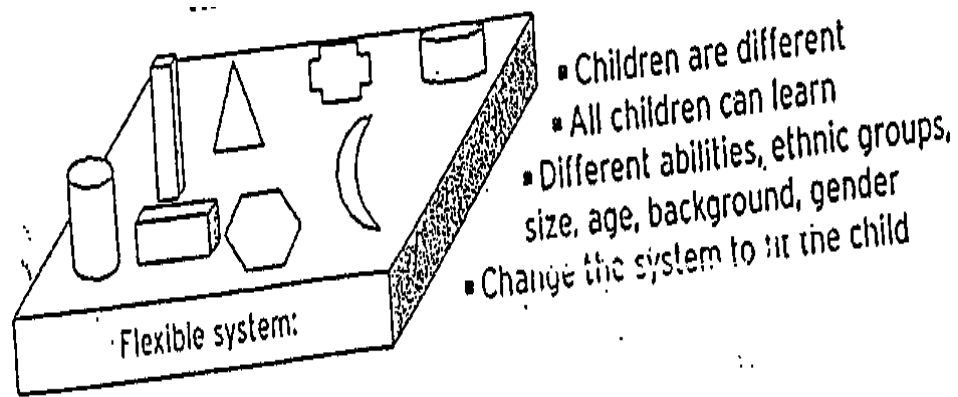


Figure 3: Inclusive Education

Source: Researcher initiative

Impairment

Impairment as used in this study refers to any abnormality or loss of a function of a psychological, physiological or anatomical structure of the body. It might either be physique or mental or both. Physical impairment refers to a partial or total loss of bodily functions or part of the body. It concerns sensory impairments like deafness and blindness. Mental impairment means a clinically identified condition or sickness which touches the person's thinking process, judgment or emotions. If one's capacity to hear, speak or see is damaged but not completely destroyed, he or she has impaired hearing, speech, sight or vision. He or she can be described as visually, hearing impaired or partially sighted.

Integration

The term integration refers to the assimilation of different groups together in order to let them function like one for sometimes or permanently. In this study it refers to the actual assimilation of children with and without challenges instead of the fascination of physical proximity.

Integration in the commonest sense means addition, mixing incorporation, combination, amalgamation and assimilation. Integration in work is actual the removal of all sorts of barriers to education in the classroom and the school instead of moving the children themselves as stated by Mark et al ,(2012).Integration needs more than simple modifications. It's role is to bring both children with and without challenges together but they may be separated into different classes and rooms during educational activities. Integration is an evolution towards inclusive education.

Mainstreaming

Mainstreaming refers to the movement of learners from separate schools classes for part or all of the school day or year (Rudd 2002). Mainstreaming means the inclusion of children with challenges and special education needs into regular classrooms for some time and it is the responsibility of such children to meet up with the existing conditions of the learning environment.

Children with Challenges (Disabilities).

Children with challenges are persons with physical, sensory or mental impairments which make them perform daily tasks with difficulties. Some of these challenges include visual, hearing and physical difficulties. These children are unable to ensure by themselves all or part of the necessities of normal persons or social life. According to Nkegoa (2015), some challenges like a broken hip may be temporary, others are relatively minor, such as vision impairments that can be modified by correctives lenses. Other challenges classified as severe may not represent a handicap, that is, the inability to take part in community life on an equal level with others. For example, a person who uses a wheelchair be able to live independently if physical and social barriers to mobility have been removed. According to Endeley, (2015); Chaffi, (2017); Shey, (2018b);Khamari et al ; (2019); Shey,(2020) a child with a disability or disabilities is he/she who deviates socially, physically, intellectually or emotionally so much from what is considered as normal growth and development. Such a child cannot acquire maximum benefit from normal school program and needs a special class or additional services or teachings.

Most behaviors towards children with challenges are influenced by the culture of observers, with culture often playing a great role in shaping societal beliefs and behaviors towards them. Smith, (1996) holds that attitudes towards disability on a societal level have changed very little if at all. However, despite the predominantly poor attitudes towards disability, a growing a growing body of literature is beginning to see disability in good terms. Some parents have expressed feelings “empowered” by raising challenged children, as well as viewing the children’s challenges as little concern. Encouraging attitudes towards persons with challenges can also be expressed in terms of supporting them in self-determination. Persons with challenges are human beings as any other person and have responsibilities to perform their citizenship duties like voting, obeying laws, directing their own lives, and participating in community life by using supports in ways that are convenient to them.

Special Needs Education

Special needs education refers to the type of education that is particularly put in place in order to meet the specific needs of children with challenges. It means that this kind of education is individually developed to address children's individual or specific needs resulting from their challenges.

In this piece of work special needs education means the education of children who have learning disabilities and difficulties. As each child is unique, it is difficult to provide an overall example of special need education. However, special need education is individualized for each learner. Special needs education for each learner may consist of :

An individualized curriculum that is different from that of same age, non-challenged mates (for instance, educating a blind student to read and write using Braille). The same (general curriculum) as that for non-disabled mates, with adaptations or modifications made for the students, for instance, teaching form three mathematics but adding the use of local tools and assistive technology for the students.

According to Mark et al. (2012), special needs education is the education of children and adults who have learning challenges. Such challenge blindness, partial sightedness, deafness, hardness of hearing, mental retardation social maladjustment, physical handicap, etc. due to problems of birth, inheritance, social position, mental or physical health pattern or accident in later life. As a result, a number of children as well as adults are unfit to cope with the regular school, class organization and methods. Besides, the Federal Republic of Nigeria, (1981) holds that there are also the specially gifted children who are also the especially gifted children who are intellectually precocious and find themselves insufficiently challenged by the program of the regular schools and those who may take the challenges and apathy in special needs education are resistance to it. In a nutshell, special needs education is an educational system whose *raison d'être* is the provision of a more suitable form of education for challenge individuals whose challenges make ordinary teaching methods and strategies inappropriate for them.

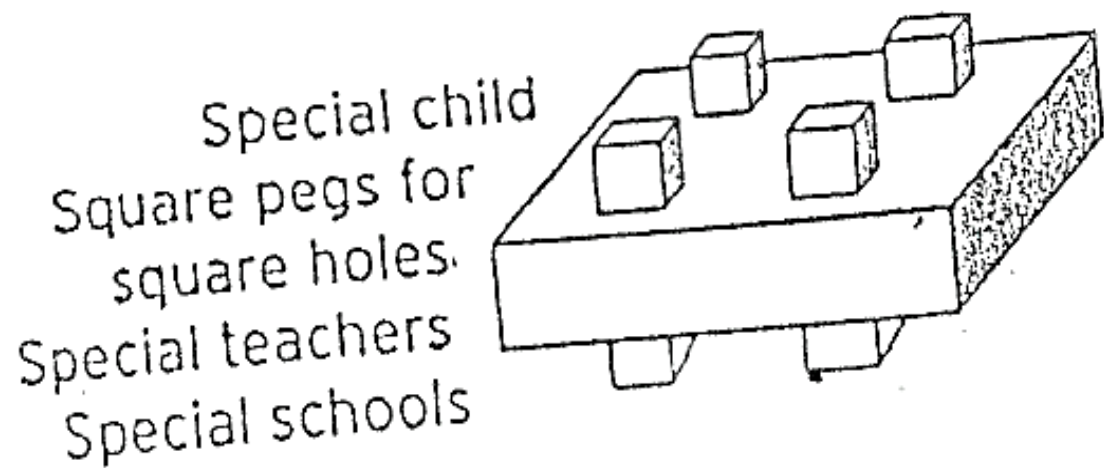


Figure 4: Special Education

Source: Researcher initiative

Learning Environment

According to Rusticus et al,(2020,Tharani et al,2017) the learning environment refers to the psychological, social, cultural and physical setting in which learning occurs and in which experiences and expectations are co-created among its participants. The learning environment of the school is the environment in which the teaching learning process takes place. It is the setting of educational activities and it is made up of the physical, social, psychological and cultural aspects (Ekema,2012). The learning environment is also the condition of the setting of educational activities. It is the atmosphere in the setting of educational activities. The learning environment is the condition of the environment of the school experienced or perceived by both teachers and students. The climate or atmosphere of a school environment is intangible, unreal and insubstantial but in its effects, it is pervasive, substantial and very real and influential, particularly to children with challenges. Students with challenges have to learn in a least restrictive environment (LRE) which offers commendable assistance to them.

According to Tanyi, (2016); chaffi (2017); and Bezangwa (2019 b) a learning environment is one of the greatest determinants for effective curriculum implementation as the school as a learning environment, is a habitat, a society, a community, and an ecosystem that cannot prosper or survive in chaos. For the purpose of this study, a conducive learning environment is one in which all students are able to learn despite their physical, mental or other difficulties. Warren, (1998) holds that each child brings into the learning environment habits, attitudes and experience that are completely different, but similar. Generally

differences among learners may or may not be obvious. Some common differences include creativity, physical or psychological challenge, educational background, sexual orientation, socio-economic status, class, life experience, language, culture, gender, ability to problem solving or use of ICT tool, race, age, religion, marital and parental status, teaching and learning style and parental status, teaching and learning, style and academic subject. In the context of this study, the following adapted learning environments of the school have been identified:

- The classroom management adaptation learning environment,
- The instructional adaptation learning environment,
- The assessment adaptation learning environment.

In general, the learning environment of the school includes the physical, administrative, pedagogic, psychological, and social learning environments. But in the context of this study it is the classroom management adaptation, instructional adaptation and assessment adaptation - which is our concern.

Regular (Normal) Education

Regular or normal education is the education of children as a homogenous group in a regular classroom by a regular or ordinary class teacher. The learners are believed to be normal (without disabilities) and of average intelligence. According to Ekema, (2012) the grouping of the children is done on the basis of chronological age or class teacher or subject master or group competition and comparison are accepted. Regular or normal education in the light of this study is the education of normal children in normal schools by normal or regular teachers.

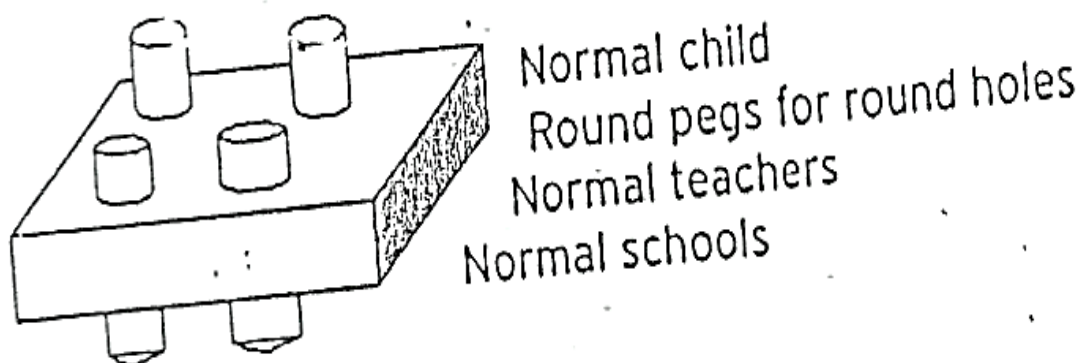


Figure 5: Normal Education

Source: Researcher initiative

Regular or Normal School

A regular school is any learning institution where ordinary or normal children are admitted for their education if they meet the recruitment requirements and are able to follow the school program.

Education

The term education in Cameroon as elsewhere in the world is generally the transmission of knowledge, skills, values and moral standards from the society to its children. In this activity, education is seen as nurturing the human personality, or an investment in human capital (Tambo, 2012). Such education should mold and transform the child from immaturity to maturity so as to ensure his holistic development (Nsamenang, 2004; Biya, 2011). This is why Stubbs (2002) holds that education as a human right for all children has been enshrined in international instruments since the Universal Declaration of Human Rights in 1948. She goes further to explain that many instruments pointed out that particular groups including disabled children were especially very vulnerable, notably stating that:

The right to be educated within the mainstream system and not to be discriminated against was highlighted in more detailed instruments such as the Jomtien Declaration and the U N Convention on the Right of the Child. However the right to education does not automatically imply inclusion. The right to inclusive education is most clearly stated in the Salamanca Statement and framework for action which emphasizes that Schools need to change and adapt inclusive practices and the Importance of proper resourcing for inclusion is highlighted in the U N Standard Rules (Stubbs, 2007).

Etymologically, the word "education" refers to two Latin words: "educare" which means to rear, to form or fill in and "educere" which means to bring out, lead or pull out (Schofield, 1982).

Educare

Educare is the formalists view of education and according to them, education means to rear or form the children as at birth their minds are empty and contain no information (University of Buea, 2008). Those who believe that education is educare hold that children are empty vessels which need to be filled in with knowledge and skills. These educators say that education presupposes a blank slate on which the teacher has to write whatever he/she

considers appropriate. This is in line with John Locke's principle of "Tabula Rasa" which holds that at birth the mind contains nothing. Education in this context means children should learn just what teacher, parents and the society think it is good for them.

Educere

Educere is the naturalist view of education that sees education as the process of pulling out or bringing out the natural potential of the children (Tambo, 2012). Education here suggests that at birth, contrary to the formalists, view, the children possess information data that can contribute to the teaching learning process. In this situation, what the teachers, parents and the society have to do is to fully equip the children with adequate materials and provide a friendly and enjoyable environment to enable those hidden potentials in the children to unfold (university of Buea, 2008). The naturalists hold that children are at the centre of their education and teachers as well as parents just need to observe, guide and facilitate their learning. According to Ibebuike and Ebe, (2014) this can be made possible through adequate educator lesson preparation on which proper strategies and methods required are utilized.

Curriculum

According (Tambo; 2012) curriculum is all learning opportunities that are planned and guided by the school either they are carried out in groups or individually, inside or outside of the school compound. On the basis of the above, we define curriculum as a plan for the education of learners during their stay in educational institutions. It is a general plan which is to be used by educators as a starting point for developing teaching strategies or techniques to be used with special classroom groups of learners or children. In a nutshell, curriculum is the qualification or description of what, why, how and when children or adults have to learn. Curriculum development process varies from society to society and from country to country as its *raison d'être* are to meet societal needs and national policies. It is in this perspective that UNESCO (2016) holds that curriculum is not an end in itself. Rather, it tries at the same time to achieve commendable learning outcomes for learners, and realize a number of societal demands and government policies. UNESCO (2006) further emphasizes that it is in and through the curriculum that major economic, political, social and cultural questions about the aims, purposes, content and processes of education are solved. According to Khamari et al,(2019) curriculum is a commendable tool for enhancing and fostering a broaden concept of inclusive education. In this light inclusive curriculum development should be considered as a continuous process and closely intertwined with social inclusion. It is in this connection that Bezagwa, (2019b) holds that inclusive education should mold more humane citizens in general and more humane teachers in particular so that persons with

challenges should be looked upon as persons also created by the same God who created all human beings.

Curriculum adaptation

For the sake of consistency in this study curriculum adaptations will be used referring to efforts to modify the way in which content is represented or presented or the way in which the student engages with and responds to the curriculum (Lee et al 2006). According to Maghuve (2006:2) curriculum adaptations are modifications that relate specifically to instruction or contents of the curriculum. Curriculum adaptation, according to Sawyer (2000:345), ‘involves both content and the enactment of curriculum, ideally creating a process of dynamics interaction among teachers, learners, subject matter and multiple settings’. Content can be described as the shape and matter of teaching and learning, Hernandez (1989:7) points out that ‘the context in which the curricular content is transmitted, and the processes involved in doing so may involve the less formal and visible aspects of classroom life’. Further, these could be adjustments or modifications to teaching and learning environment, teaching and learning techniques, teaching and learning support material that enhances a learners’ performance or allows at least partial participation in a learning activity, learning programs and assessment. Our great concern here is how to adapt curriculum, when to adapt it, and on whom to do the adaptation. Janney and Snell (2000) suggest adaptation can be in four faces the *what, how, where and when* of curriculum adaptations and they particularly focus on these factors: a) curricular-adapt what is taught b) instructional-adapt how it is taught c) how learning is demonstrated and d) ecological-adapt the setting (where, when and with whom).

Despite many educators’ reservations regarding curriculum adaptations, Labon (in Pijl et al 1997) Lewis and Norwich in (Corbett, 2001:24) point out that ‘curriculum adaptation is nothing more than good teaching’, thereby implying that strategies that work for learners without barriers to learning will similarly work for learners with barriers to learning. Amrbruster at al (2001) agree that for many students with disabilities and for many without, the key to success in the classroom activities. Curriculum adaptations are therefore about recognizing individuals learning styles and finding ways to employ the style most effectively in the learning situation (Corbett, 2001). Looking into the kind of diversity in our schools today, teachers are compelled to take analytic approaches when dealing with these learners. Prichard (2005) supports this by alluding to the view that ‘we learn in different ways to each other and we often choose to use a ‘preferred learning style’ Curriculum adaption must provide the setting and climate in which learners can grow and develop their capacity, and criteria for selecting curricular content should be based on an understanding of the learners’

disability and needs' (Taylor & Harrington, 2003:204). Evans (1997) explains it simply means that the greater the learner's learning difficulties, the more the educator would need to act as a mediator between the learner, the learning environment and the learning content. In relation in the above definitions, we define curriculum adaptation as a careful modification of elements of the school curriculum in order to meet the diverse needs in the learning environment.

1.10 Chapter Summary

In Cameroon, inclusive education started from 1983 when the first presidential decree to this effect came in. This presidential decree in favor of the education of children with challenges states that the education of challenged children could be done in regular school. This commendable decree came in as a response to a global cry towards the education of all children no matter their physical or mental challenges. The voices behind this cry for inclusive education were those of the universal declaration of Human Rights (1948), later ones like Jomtien, Thailand Conference (1990), the Salamanca Conference on special Needs Education, Spain (1994), the Dakar Declaration (2000) and the Millennium Goals (2000). The Cameroon government has put in place the education of challenged children in ordinary schools. Such regulations lack reinforcement and in most cases fail to take into consideration factors related to the school learning environment notably the physical, social, pedagogic, psychological and administrative barriers. We are in a constant changing society where every citizen has to adapt his or herself and contribute towards its development.

This is why Obanya, (2017) calls on African countries to move from education for all (EFA) to education above (EAA) by creating enjoyable, friendly, and supportive learning environments so that the education of children with challenges will no longer be considered a mystery partly because of darkness and insecurity that reign in our schools. The *raison d'être* of this study is to identify the relationship between classroom management adaptation, instructional adaptation, assessment adaptation and the implementation of inclusive education in secondary schools in Yaounde municipality in the center region of Cameroon so that on the basis of the result of these findings, some recommendations could be made to the educational community for successful implementation of inclusive education in Cameroon. Three research objectives gave rise to three research questions and hypotheses. Some key terms namely disability, inclusion, inclusive education, impairment, children with challenges, special education, special needs education, regular education, learning environment, curriculum and curriculum adaptation were operationally defined.

CHAPTER TWO

REVIEW OF LITERATURE

2.0 Introduction

The literature review for this study is made up of three parts notably conceptual review, theoretical review and empirical review. The conceptual review discusses variables that influence the implementation of inclusive education in secondary schools in Mfoundi division and other related concepts. The theoretical review will be consisted of six theories of learning in favor of the implementation of inclusive education.

Thereafter, the empirical review is done, followed by a conceptual diagram linking identified variables in the study together. A summary ends this chapter.

2.1 Conceptual Review

The conceptual review discusses the following variables and concepts: curriculum; curriculum adaptation; classroom management adaptation; instructional adaptation; assessment adaptation; inclusive education; mainstreaming versus inclusion; special education needs (SEN)-global perspective; perspectives on inclusive education in Cameroon; barriers to inclusive education; curriculum and curriculum adaptation.

2.1.1- Curriculum:

According to Tambo, (2012) curriculum is all the learning opportunities that are planned and guided by the school and which are either carried out in groups or individually, inside or outside the school compound. According to Khamari et al., (2019) curriculum is a commendable tool for enhancing and fostering a broaden concept of inclusive education. In this light inclusive curriculum development should be considered as a continuous process closely intertwined with social inclusion.. This is why Bezangwa,(2019b) holds that inclusive education should mold more humane citizens in general and more humane teachers in particular so that persons with challenges should be looked upon as persons also created by the same God who created us.

On the basis of the above and our own personal experiences, we define curriculum as a plan for the education of learners during their stay in educational institutions.. It is a general plan which is to be used by educators as a starting point for developing teaching strategies or techniques to be used with special classroom groups of learners or children. In a nutshell,

curriculum is the qualification or description of what, why, and when children or adults have to learn. Curriculum development process varies from society to society and from country to country as its *raison d'être* are to meet societal needs and national policies. It is in this perspective that UNESCO, (2016) holds that curriculum is not an end in itself. Rather it tries at the same time to achieve commendable learning outcomes for learners and realize a number of societal demands and government policies. UNESCO, (2006) also emphasizes that it is in and through the curriculum that major economics, political, cultural and social questions about the aims, purposes, content and processes of education are solved. Besides, we hold that it is the curriculum which is the gateway to adequate implementation of inclusive education.

2.1.2- Curriculum Adaptation

For the sake of consistency in this study curriculum adaptation will be used referring to efforts to modify the way in which content is represented or presented or the way in which the learners engage with and respond to the curriculum(Lee et al.,2006). According to Maghuve,(2006) curriculum adaptation are modifications that relate specifically to instructions or contents of the curriculum. On his part, Sawyer,(2000) holds that curriculum adaptation “ involves both content and the enactment of curriculum, ideally creating a process of dynamics interaction among teachers, learners, subject master and multiple settings.” Content can be described as the shape and matter of teaching and learning. Hernandez, (1989) points out that the “ context in which the curricular content is transmitted, and the processes involved in doing so may involve the less formal and visible aspect of classroom life”. Further, these could be adjustments or modifications to teaching and learning environments, teaching and learning techniques, teaching and learning support material that enhances and fosters learner’s performance or allows at least partial participation in a learning activity, learning programs and assessment. Our great concern here is how to adapt curriculum, when to adapt it, and on whom to do the adaptation. Janner & Snell (2000) suggest adaptations can be in four faces notably the what, how, where and when of curriculum adaptations and they particularly focus on these factors:

- a) Curricular-adapt what is taught?
- b) Instructional-adapt how it is taught
- c) Adapt how learning is demonstrated
- d) Ecological-adapt the setting (where, when and with whom)

According to Guha, (2016) curriculum adaptation refers to accommodations that are adaptations which do not alter all the work standards or reduce expectations at either the instructional or assessment levels of a given course of subject, and modifications which are adaptations that alter or lower standards or lower expectations but call for a careful selection of content and assessment components in order to achieve accountability of performances. According to NCERT,(2015); Endeley,(2015); Shey, (2020) adaptation means to adjust content, assessments, material, curriculum, or classroom setting in order to accommodate learners' needs so that they can participate in, and achieve the teaching-learning goals. Accommodations in the form of adaptation call for teachers to differentiate instruction, assessment as well as materials in order to create flexible learning environments. For instance, a student could be working on below grade level learning outcomes in French language Arts and at the grade level in all other subjects, some of which need reading materials at the lower reading level.

Guha, (2015) holds that curriculum adaptation is an on going process which changes the regular prescribed curriculum by modifying or adapting it at the content or delivery of instruction levels in order to meet the learning needs of children with challenges. The content, the teaching process, assessment and evaluation as well as the physical environment have to be modified or adapted and learning activities should be flexible so that all learners benefit and achieve success in classrooms. It is the teachers' duties to adapt the curriculum so that they will provide equity and thus meet the needs of diverse learners so that all students benefit and can totally take part in learning activities in the classroom.

Despite many educators' reservations regarding curriculum adaptations, Labon (in Piji et al., 1997); Lewis and Norwich in (Corbett,2001) point out that 'curriculum adaptation is nothing more than good teaching' thereby implying that strategies that work for learners without barriers to learning will equally work for learners with barriers to learning. Armbruster et al., (2001) agree that for many students with challenges and for many without, the key to success is in classroom activities. Curriculum adaptations are therefore about recognizing individuals learning styles and finding ways to employ the style most effective in the learning situation (Corbett, 2001). Focusing into the kind of diversity in our schools today, teachers have got to take analytic approaches when dealing with such learners. Prichard (2005) supports this by adding that 'we learn in different ways to each other and we often choose to use a ' preferred learning style'. Curriculum adaptation should provide the setting and climate in which learners can grow and develop their capacity, and criteria for selecting curricular content should be based on an understanding of the learners' disabilities

and needs (Taylor& Harrington, 2003). According to Evans,(1997) curriculum adaptation simply means that the greater learner's learning difficulties, the more the educator would have to act as a mediator between the learner, the learning environment and the learning content. In connection with the above reviewed of curriculum adaptation, we define it as a careful modification and accommodation of elements of the school curriculum in order to meet the diverse needs of learners in the learning environment for the betterment of education for all. We hold that the *raison d'être* of curriculum adaptation is to make sure that education is accessible to all learners and to ensure that no student is unfairly treated and excluded from it.

2.1.1- Classroom management adaptation:

Discussions here will focus on the following concepts: Classroom management approaches, group learning, peer tutoring, nicknaming, instructional materials, and bullying.

Classroom management refers to what the teacher does in the classroom in order to create and maintain a friendly learning environment that enhances and fosters the teaching learning process for all types of learners in the classroom so that each and every one of them can actively take part in class activities(Tambo,2003). Since the advent of inclusive education, adaptation of the curriculum or its components has become inevitable. Classrooms can no longer be managed as they were managed before the advent of inclusive education. There is therefore the need for classroom management adaptation in order to attain the need of every type of learner in the inclusive classroom. Classroom management adaptation refers to the modifications of decisions and actions the teacher takes to create and maintain a friendly, supportive and welcoming classroom environment that motivates every type of child to learn (Bezangwa,2019). This includes group learning, peer tutoring, instructional materials, nicknaming and bullying.

According to the University of Buea, (2008),classroom management adaptation refers to the modification of sets of decisions and actions which the teacher and the school authorities undertake to establish order and discipline in order to maintain conditions that facilitate effective teaching and learning in the classroom or during an out-door learning activity. A classroom is a habitat for many a diverse learner and as a result of this, calls for flexible managerial techniques so that everyone feels a sense of belonging to it. Students in general and those with challenges in particular perform well in class when their mates consider them as full members of the class or when they themselves feel a sense of belonging

to the group (Shey,2018a). Tambo,(2012) holds that a chaotic classroom is not an ideal place for the teaching learning process. It is a jungle where stronger students or students from rich family backgrounds oppress or bully weaker ones or those that they hate and do not intend to see around them, especially children with disabilities. If this type of classroom scares away ordinary students then what about those with challenges who are generally fragile as a result of their disabilities? This ties with the idea of Rotimi(1971) about the law of the jungle that: ‘‘if crocodiles can eat their own eggs then what can they not do with the eggs of others’’?

According to UNESCO, (2004) and Schubert, (1986) inclusive education calls for supportive, friendly, welcoming and enabling classrooms where every learner is at ease and ready to learn. And that it is now up to ordinary teachers to adapt their classroom management techniques in order to welcome and assist every student with disabilities or disability. According to Bezangwa,(2019a), all the goodness of inclusive education will disappear in a violent, noisy and disrespectful classroom and darkness and enemies of inclusive education will pack their bags in. Therefore the teacher as the head of the classroom has to create and maintain an orderly and effective learning environment which promotes inclusive education. It is in this light that Taneyo et al, (2018) hold that the teacher’s inability to master different characteristics of children development in general and those of children with disabilities in particular constitute a great barrier to the effective implementation of inclusive education.

According to Cameroon- Word Bank Cooperation, (2022) classroom management is the ability to sustain learners’ attention and assist them to take part in learning activities within or without the classroom. Teachers use techniques and tacks to make learners to be interested in their learning activities without any agitation. In this light, in order to ensure good classroom management, the teacher should first of all organize the resources, time, space and groups. Besides, the teacher should know his or her learners by name; be observant and see the whole class at a glance; pay attention to all learners; give clear and firm instructions and make sure that learners respond willingly without being forced to do so; assign learners to take turns in group tasks; make sure that as they work in groups , they identify group leaders; use exit cards for movements in and out of the classroom; use a variety of educational media; make sure that activities embody all the learning styles notably visual, audio and kinesthetic ; always use a soft and loud voice.

Apart from this, the teacher should use the following ground rules for dealing with students:

- Do not discriminate among students
- Love all learners genuinely
- Pay close attention to students' activities
- Mark students' assignments
- Pay close attention to learners' temperaments.
- Warning should be gentle but firm
- Be a model for learners to imitate
- Talk less but use other signs and gestures to capture them.

According to Philip (2016); University of Buea, (2008); Tambo, (2012); Santrock,(2001);Shey, (2020) classroom management adaptation is very important because of the following points:

- Classroom management adaptation and instruction

Without a calm, friendly, welcoming and supportive classroom the objectives of the lesson can hardly be achieved. It is therefore in this perspective that the teacher has to plan his management strategies while planning his lesson. For instance, creating learning groups like cooperative or peer groups; writing in bold; using real objects or pictures; paying special attention to some learners etc.,

- Attitude and character reform of the learners

In order to create and maintain a friendly classroom, the teacher has the task of building and reshaping the characters of his learners and these calls for tact and good managerial skills. In this light, he makes sure that every learner is called by his or her name rather than being called by nicknames on the basis of their disabilities. Besides, he should prescribe bullying. Games are commendable methods for reforming learners' behaviors, previewing and reinforcing learning because active learning formats that are concerned with movements and manipulations are really motivating and engage learners in discussions, exploration, respect of self and others, and repeated practice.

-Differences in learners' abilities, aptitudes and dispositions

From our knowledge of psychology, we know that children are different and learn at different paces. They learn differently and react differently to different situations. Taking

cognizance of this, the teacher needs to add more time to some learners in order to allow them complete their own tasks. Besides, he has to reduce test items for some learners

-Effective classroom management helps student spend more time on learning.

An effectively managed classroom motivates children to spend more time on their school work and less time on non-school activities or non-goal directed activities. For example, when students work in groups, especially in mixed abilities ones, they are not idle and as a result of this, use their school time well.

-Effective classroom management adaptation prevents learners from developing academic and emotional problems.

When a class is properly managed, learners are occupied with one learning activity or the other and as a result of this, have no time left to quarrel, discuss their adventures and tell love stories.

-Learners' responsibility and habit of taking initiative and self-discipline

Classroom management adaptation approach teaches students the act of responsibility and thereby increases their habits of taking initiative and self-discipline. Established norms in the classroom, enables learners to take more responsibilities towards themselves and thereafter to others and this creates a responsible classroom suitable for inclusive learning activities.

-Tasks are completed in time

Effective classroom management adaptation enables the teacher to know that he has diverse learners who work at different paces and who cannot for instance, solve the same number of problems like others.

-Intensification of positive peer relationship

The DOs and DON'Ts contain in the actions and decisions taken by the teacher for effective classroom management intensify positive learners' relationships and teacher student relationship.

According to Snowman and Bichler,(2001), classroom management adaptation is indispensable in inclusive classrooms as it sets flexible working conditions that guide and protect everyone's interest in the classroom especially those with learning disabilities and

difficulties. As a result of the important role play by classroom management adaptation in the implementation of inclusive education, Arends, (1990); Tambo, (2003) propose some classroom management approaches discussed below. It would be recalled that different teachers have different ways of looking at classroom management and this depends on the beliefs that they have as far as maintaining order, discipline and effective learning processes are concerned. Some of these classroom management approaches are: The Authoritarian Approach; Instructional Management Approach; Behavior Modification Approach; The Social and Emotional Climate Approach and the Group Processes Approach.

The Authoritarian Approach:

It is an approach whereby the teacher strictly controls learners' behavior by establishing rules and regulations and making sure that they are respected to the letter. He achieves this by:

a) Making and enforcing laws; the teacher tells the students rules and guidelines which spell out what is acceptable and what is not attitude. Students have to participate actively in making classroom rules and regulations which must be:

-Realistic

-Reasonable and necessary

Clear and comprehensible

-Consistent with instructional and learning goals

Compatible with school rules and must not be too many-

b) Giving directives: They are statements or commands the teacher uses to tell the learner what he or she should do. They should be simple and describe in a non –threatening way what the learner is expected to do. The learners should see and understand the need for the teacher's instructions.

c) Using soft reprimands: The teacher and the learners will benefit considerably if the teacher has effective speaking skills. A soft reprimand refers to a mild or soft kind of punishment, which is expected to make students desist from bad habits to effective classroom management. Following this approach, it is the teacher's ability to prepare and conduct lessons. These lessons should gain students' attention. They should motivate the students and prevent boredom and misbehavior.

d) Managing the flow of classroom activities: The teacher should be able to move students smoothly from one activity to the next one. He or she should be capable of maintaining smoothness and continuity in learning activities. Besides, the teacher should avoid ‘slowdown’ as it produces students misbehavior in the classroom.

e) Establishing classroom routine: A routine refers to a fixed and regular way of doing things. At the first meeting with his or her learners, the teacher let them know what they have to do. For instance, being punctual to class

f) Giving clear directives: The teacher should give clear directives which are understood by all members of the class. For instance, answer two questions from section A and one from section B.

g) Boosting students’ interest: The teacher should pay extra attention to motivate students with learning disabilities and learning difficulties and those who may show signs of bareness and restlessness. Monitors progress actively by moving round the classroom and asking probing questions and praising students on their efforts or improvements.

h) Providing hurdle help: A hurdle refers to a difficulty or an obstacle to overcome. The teacher has to help learners when they are in difficulties as difficult tasks generally lead to frustration and disorder in the class.

i) Using proximity control: This kind of control requires that the teacher moves quietly closer to a disruptive learner and redress the situation without the other learners being aware of it. It makes the disturbing learner understand that the teacher has noticed his or her disorder practice. For example, a student knocking another one’s back.

j) Using isolation and exclusion: The teacher can isolate or exclude a student because of his serious misconduct.

The Instructional Management Approach:

This approach holds that classroom management depends on teachers’ ways of planning and delivering lessons. Here it is believed that if teachers take good care of their planning and teaching, then classroom management will take care of itself. Teachers therefore have to make their lessons interesting so that learners will find pleasure and interest in them and thus learn without knowing that they are learning. It is a key approach in

classroom management as it keeps students occupied with their learning activities. Strategies for using the instructional management approach include:

- a) Providing relevant and interesting content
- b) Planning for environmental changes
- c) Avoiding unnecessary interruptions
- d) Handling overlapping situations tactfully. For instance, if a student is suddenly ill and needs to be taken to the hospital.
- e) Planning the classroom environment: The classroom environment has to be orderly, friendly and supportive.
- f) Paying attention to students' placement in class: Serious and careful attention need to be given to the way students are placed in class as some of them have hearing and sight difficulties and as a result of this, cannot be placed anyhow in class. Others too have movement problems and require special attention. And still, some disruptive learners should be placed where the teacher will have a close eye on them.

The Social-Emotional Climate Approach:

The social and emotional climate approach takes precedence over other aspects in this approach. This approach was derived from counseling and clinical psychology. It holds that the best way to achieve successful classroom management is by taking care of interpersonal relationship. Classroom management adaptation will be achieved where there is a positive teacher-student relationship and student-student relationship. It is therefore the teacher's duty to encourage friendly relationships among students in order to promote happiness which makes every child feels at ease and eager to learn. According to Tchombe,(2012);Tambo, (2012); Adewale,(2016); Philip, (2016);Obanya,(2017) there are pre-conditions for effective learning. Such interpersonal relationships and positive socio-emotional climate can be attained by:

- a) Communicating effectively with students by making sure that every person or directive is clear and understood.
- b) Trying to understand a student from his or her point of view. This enhances and fosters the spirit of social acceptance in the student.
- c) Accepting students as they are with all their bad and good qualities.

d) Teachers must always endeavor to be themselves other than trying to be what they are not.

e) Becoming personally involved with the students.

f) Establishing democracy in the class by treating students as responsible individuals capable of intelligence, decision-making and problem solving.

g) Boost students' interest (motivate them)

h) Providing hurdle assistance to learners.

i) Planning for changes that may be required

j) Planning the classroom environment notably sitting positions.

The sitting environment will improve classroom management adaptation when :

- the congestion in higher traffic areas (where students are found most of the time) is removed or reduced. Distractions and disruptions usually occurred when those places are congested.
- the teacher can easily see all the students from a glance
- the often used material is easily available to avoid distraction and loss of concentration.
- Teachers usually shout: "where is the duster" and this in the middle of the class.
- the teacher makes sure that students can easily observe whole class presentations or can see the board well from whatever position they are sitting or working by writing in bold letters or figures.

Group-process approach

Proponents of this approach hold that classroom management problems will be solved if teachers establish proper classroom groups and ensure their proper functioning. This includes:

- Setting group rules and procedures and following them strictly.
- Expectations: This has to do with the view about one another and it is very important in inclusive classrooms where some of them fear they are not full members of the class. According to Santrock,(2001); Shey, (2020) if the students feel that the teacher wants them to misbehave, they will do so. On the contrary, if he clarifies what he expects from the task, the students will work hard on the task and concentrate less time on non-task activities.

- Leadership: If the leadership role in a group are well distributed and not monopolizes by the teacher or one student, the students will work well on the group tasks.
- Attractions: This refers to the friendship patterns or arrangements in classrooms groups. Once people tend to be attracted by others, they develop positive interpersonal relationships and concentrate on tasks and this greatly facilitates the implementation of inclusive education. As a matter of facts, this helps to maintain effective classroom management for the good of inclusive education.
- Norms: These are standards that the group has established for itself. Productive group norms are essential to group effectiveness. Such norms like being punctual, obedient, focused, less noisy and active all help to improve classroom management for the goodness of all learners especially learners with challenges, for the goodness of inclusive education.
- Communication: Effective communication means that the receiver correctly interprets the message which the sender wants to send across. Effective classroom management will be achieved if communication is successful in the classroom learning environment. For this to be done, the teacher has to go an extra mile to get to that other category of learners notably special education needs learners, learners with auditory or visual problems. This calls for modifications of traditional communication methods in the classroom in order to reach out to learners with challenges so that they too feel a sense of belonging to the class and thus work happily.
- Cohesiveness: The collective feeling with each other in class is a sign of togetherness, oneness and friendship among learners. When learners are cohesive, there are little classroom management problems and the milieu is peaceful and suitable for the implementation of inclusive education.

Key Concepts of Classroom Management Adaptations

1) Group work

Group work is an effective method to motivate students, encourage active learning, and develop essential or key critical-thinking, communication, and decision-making skills. But without proper planning and careful facilitation, group work can be frustrating to students

and teachers and look like a waste of time. But whatever the case, group work is a commendable inclusive practice that enhances and fosters the implementation of inclusive education (Ekema, 2012; Nana et al; 2012; Bezangwa,2018).

Strategies for Designing Group Activity

-Identify the instructional objectives.

Determine what you want to achieve via the small group activity, both academically (e.g., knowledge of a topic) and socially (e.g., listening skills). The activities should be closely related to the lesson objectives as well as class content and should be designed to help learners to become effective as students need a clear sense that group work is serving the stated learning goals of the curriculum. Before a teacher decides whether to use group work for a particular activity or not, he/she has to consider the following questions:

- a) What are the objectives of the activity?
- b) How will these objectives be attained by asking learners to work in groups?
- c) Is the activity really challenging or complex enough that it needs group work?
- d) Will it require honest collaboration?
- e) Is there any reason why the activity should not be done in group?

-Make the Task Challenging.

It is worthwhile giving a relatively easy task at the beginning of the term in order to arouse learners' interest in group work and encourage their progress. Generally, collaborative activities should be really stimulating and challenging. As they pool their resources and deal with differences of opinion which arise, groups of learners can come out with more beautiful products than they could as individuals.

-Assign Group Tasks that Encourage Involvement, Interdependence, and a fair division of Labor.

According to Bezangwa,(2017) all group members should feel a sense of sympathy and personal responsibility for the success of their group mates and acknowledge that their personal success depends on the group's success. Johnson et al.,(2014) refers to this way of learning as positive interdependence and argues that this type of learning tends to result in students enhancing and fostering each other's success at school.

-Decide on Group Size

The size the teacher chooses should depend on the number of students, the size of the classroom, the variety of voices needed within a group, and the assigned task. Usually groups of four- five tend to balance the needs for diversity and inclusion, productivity and active participation as well as cohesion (Gross, 1933). He insists that groups of lower achievers should be smaller in order to encourage active participation of all members.

-Decide How You Will Divide Students into Groups

Dividing students based on their choices is easier especially for large and crowded classes but this usually shows that learners end up working together with friends or with the same people. In order to vary group composition and increase diversity within the groups, teachers should randomly assign learners to groups by counting off and grouping them according to number.

Cooperative Learning: Cooperative learning also known as collaborative learning refers to an educational approach that aims to organize classroom activities into academic and social learning experiences (Meyer et al., 2005). There is much more to cooperative learning than just structuring students into groups, and it has been described as arranging positive interdependence. According to Johnson et al., (1994) cooperative learning is an organized and structured way to use small groups to enhance and foster students' learning and interdependence which is very important in inclusive classrooms where we find not just ordinary but extra-ordinary differences. For instance, learners are given a task, otherwise known as an assignment, and these students work together to do this assignment. Each of them has responsibilities and is held responsible for helping in the completion of the task; hence, success is dependent on the work of all or everyone in the group. Besides, apart from learning from each other, students equally learn how to work as part of a group or a team and have others depend on them. According to Tambo, (2012) cooperative learning refers to a successful teaching strategy in which small teams, each with learners of varying abilities, use various learning activities to ameliorate their understanding of a subject. Cooperative learning uses different teaching-centered and learner-centered activities for effective learning. Besides, it provides the opportunity to practice appropriate communication, leadership and conflict management skills. In a nutshell, cooperative learning refers to a teaching and learning strategy that consists of organizing learners in small mixed abilities teams whose reason d'être is to interact, discuss and solve learning tasks as well as learn from one another.

Benefits of Cooperative Learning

Cooperative learning embodies various benefits and some of which are listed below:

Cooperative learning is fun, so learners enjoy it and as a result of this are more motivated especially those with learning disabilities who need a joyful and friendly environment in order to learn well (Tomilnson,2001; Tchombe, 1997; and Tanyi,2016). Other benefits of cooperative learning include and not limited to:

- 1) Cooperative learning is interactive, so learners are engaged, active participants in the learning environment.
- 2) Cooperative learning allows discussions, and critical thinking, so students learn more and remember what they have learned for a longer period of time.
- 3) Cooperative learning demands that students learn to work together, which is the skill of oneness or togetherness, necessary for their socialization in their future societies.
- 4) Cooperative learning creates positive interdependence among the learners.
- 5) Working in mixed ability groups enables the weaker ones especially those with disabilities to be pulled on.
- 6) The students learn to be responsible as individuals or as a group
- 7) Children learn social acceptance and respect for one another's opinion which is very necessary for challenged children to learn as this gives them the sense of belonging in the classroom and the willingness to school like others.
- 8) The teacher's role moves from that of 'the know all' to that of a facilitator.

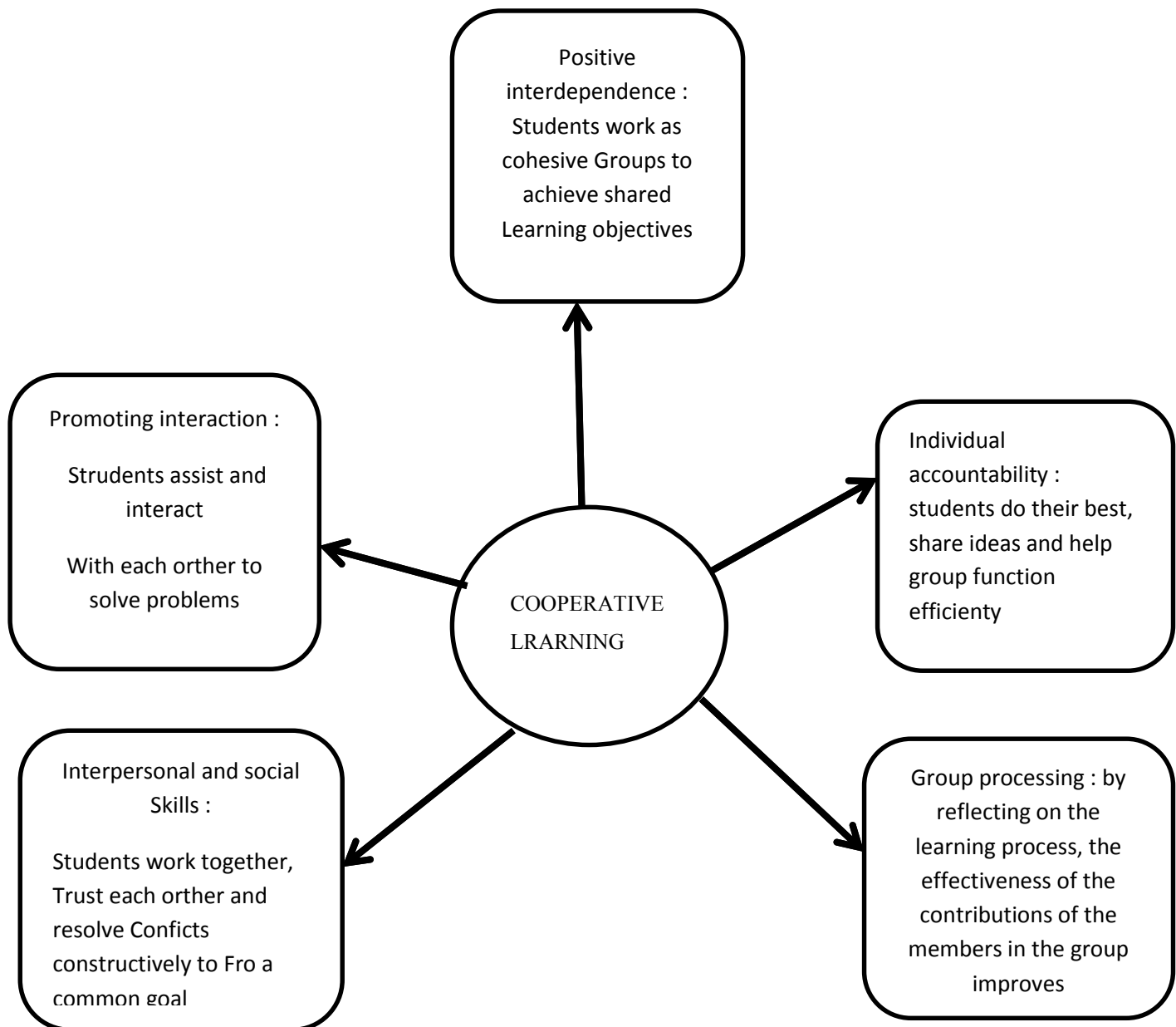


Figure 6: Benefits of Cooperative Learning

Source: Rehabilitation Council of India (RCI, OF INDIA). www.rehabcouncil.nic.in

How to Group Students for Cooperative Learning

For teachers and learners, cooperative requires more time and willingness to make adjustments before they are used to it. Cooperative groups are generally comprised of mixed students based on ability level. Besides, different groups are set up based on the skill level of the students. For instance, groups may be made up of three, four or five students, which will include two or three average students, one below average student, and one student who is above average.

Generally, students should not be allowed to create their own groups or have the policy of moving from one group to the other. Once groups have been put in place, the teacher may wish to arrange desks in his classroom in groups of 4 or 5. Groups have got to change every two months. As much as possible, students should only work with the same students once a year, but class size is a determinant factor. In order to ease test tasks, learners can be attributed numbers notably one, two, three, and four and keep the very number for all tests, or numbers can be drawn each time before each assignment or test. A common number system can reduce or eliminate confusion and help determine students role for all given assignments.

Cooperative Learning Strategies

1) Think-Pair-Share:

It is a method that enables learners to engage in individual and small-group thinking before being asked to answer questions in front of the whole class. This method has four steps namely:

- a) Step one-groups of four learners listen to the posed question by the instructor.
- b) Step two-individual learners are given time to think and thereafter write their answers
- c) Step three-pairs of learners read and discuss their answers
- d) Finally-two or three learners are called up by the instructor to share their experiences with the whole class.

This method is very useful and works well in the science classroom because of the continual demand of science teachers that learners formulate hypotheses about the outcome of an experiment before it is done.

2) Three-Step Interview:

Three-Step Interview is a strategy which is effective when students are solving problems that are ambiguous. Three problem solving steps are concerned in this process. They are:

- a) Step one-The teacher presents an ambiguous problem and poses different questions for the students to discuss.
- b) Step two-Students, in pairs become the interviewer and the interviewee. It is a commendable learning method in inclusive classrooms.

c) Step three-After the first interview has been done, the students' roles are changed. Once each student has had a turn, the pairs read their answers to the whole class. After all interviews have been done, the class writes a summary report of the interview results that have just taken place.

3) Round Table:

A round table is a simple cooperative learning structure which covers much content, builds team spirit, and incorporates writing. It has three steps. The first step is concerned with the teacher's ambiguous question having many answers. In step two, the first student in each group writes an answer on a paper and passes it counter clock wise to the next student. Then, in step three, groups with the highest number of correct answers gain some kind of recognition. This kind of cooperative learning can be easily practiced during science lessons. For instance, the students may be asked to write as many as reptile names as they can. At the end the group that has more reptile names written down is praised.

4) Group Investigations:

They are structured to emphasize real thinking skills such as analysis and evaluation. Learners work to produce group projects, that they may have a hand in selecting.

5) Student Teams-Achievement Division (STAD):

Here students with different academic abilities are assigned to four or five member teams in a way to study what has been initially taught by the teacher and to help each learner reach his or her higher level of achievement. Thereafter, learners are tested individually. Usually, teams testify based on the degree to which every team member has progressed in their passed records. This greatly helps students with learning disabilities as no learner is left behind in the group.

6) Three-Minutes Review:

It is used to keep students attentive and receptive. For instance, the teacher stops at any time during lecture or discussion and allows teams three minutes to review what has been said within their groups (Cooper et al, 1990). Students in their groups can ask a clarifying question to the other members or answer others' questions.

Typical Examples of Cooperative Learning Situations

In an elementary Science weather unit, where bar graphs were the desired product, one student gathered data, one chose the type of graph to use for reporting data, all the students discussed data and prepare the graph cooperatively and another student with severe disabilities colored it (Johnson and Johnson, 1989). In another lesson, a visually impaired student was part of the group. The lesson was a measuring task that involved measuring items in the classroom. These students decided that, their visually impaired mate would hold the measuring tape and repeat measurements for the recorder which she did very well and happily (Slavin,1991).During subsequent discussions, the group talked about relative concepts of length and size; larger, smaller, longer, shorter; and assisted their mate with challenges in her reporting about the objects' sizes and lengths.

According to Stainback et al., (1992); Fulk,(2004); Impecoven-Lind,(2010), Maheady, (1991) and Mastropieri et al., (2007) the context of cooperative learning itself facilitates the inclusion of all students, and was reported by survey respondents as leading to reduced needs for multiple adaptations for the students with disabilities. Besides, it is interesting to note that teachers in inclusive classrooms reported that they adhere to cooperative principles and a process-oriented perspective. It is equally very interesting that teachers describe themselves in this way, and this underscores the fact that cooperative learning structures usually occur in concert with other instructional support strategies, notably multi-level instruction, activity -based or thematic instruction, peer participation. For instance, in rural Northern California, cooperative groups, formed on multiple dimensions at the junior high level, were involved in a science unit about animals' habitats and breeding practices. This group developed a simulation to illustrate salmon spawning, where students assumed a variety of roles such as currents, predator fish, etc. Ropes were used for the currents, and the learners themselves developed the adaptations for the mate with severe disabilities, including fewer predator fish and slower -moving currents when he was taking the salmon role. This activity equally provided ample opportunities for the disabled mate to play other roles, while allowing for multi-level outcomes across learners.

3) Peer Tutoring

Peer tutoring is a soft, flexible peer-mediated technique that involves learners serving as academic tutors and tutees. Usually, a high performing learner is paired with a lower performing one in order to review critical academic or behavioral concepts. Most of the time,

peer tutoring is regarded as peer teaching (a learner teaching another one). According to Bezangwa, (2019) peer tutoring refers to a situation whereby a student (high achiever) teaches another one (a low achiever) generally within or without the classroom. Rose et al, (2005) define peer tutoring as a method by which a student instructs another student in material on which the first is an expert and the second is a novice.

Peer Tutoring in the Classroom

Peer tutoring is an organized learning experience in which one student serves as then teacher or tutor, and one is the learner or tutee. Peer tutoring provides students with opportunities to use their knowledge in a meaningful, social experience (Conrad,1974; Okilwa et al.,2010; Ramsey et al.2007; Strickland and Maccini, 2010).It is the process between two or more students in a group where one of the students acts as a tutor for the other group mate(s). Peer tutoring can be applied among students of the same age or students belonging to different age groups. The encouragement of peer tutoring is a wonderful strategy that can be applied effectively by teachers in many cases especially in inclusive classroom. According to Campbell,(1988), there are two types of peer tutoring notably:

- incidental peer tutoring which usually takes place at school or when learners are playing after school or when they are socializing, as well as when they are cooperating, playing or studying, and one is guiding the others. For instance, when a learner asks his/her classmate to help him or her in French language or asks for some tips on how to improve his/ her performance when playing a new video game, we talk of incidental peer tutoring.

- structured peer tutoring which refers to peer tutoring implemented in specific cases and for particular subjects, following experienced teachers who are able to plan well on time and familiar on how to combine tutors and tutees correctly in a way to obtain excellent results especially when learners with disabilities and or difficulties are concerned.

Models of Peer Tutoring (Maheady, Harper and Mallette, 2001)

According to Maheady et al, (2001) there are five models of peer tutoring notably:

- Class wide Peer Tutoring: Class wide Peer Tutoring refers to the division of the whole class into 2or 5 learners having different ability levels. Learners act as tutors, tutees or both. It involves highly structure procedures, direct rehearsal, competitive teams and posting of scores.
- Cross Age Peer Tutoring: This model is concerned with the pairing of older learners with younger ones in order to teach or review skills. The position of tutor and tutees

do no change. The older and younger students can have similar or different skill levels, with the relationship being that of cooperative or that of an expert in interactions.

- Peer Assisted Learning Strategies: Groups are generally flexible and usually change across a variety of subject areas or skills. Every student has the opportunity to function as a tutor or tutee at different times. Learners are typically paired up with other learners who are at the same skill level or around the same skill level, without a big discrepancy between abilities and this is very much productive in inclusive classrooms which are embodiments of various types of learners, and all of this, for the betterment of inclusive education.
- Reciprocal Peer Tutoring: Reciprocal peer tutoring refers to the situation whereby two or more learners alternate between acting like a tutor and tutee during each session with the same time in each role. Generally, higher performing learners are paired up with lower performing ones. This is a commendable model which enhances and fosters the implementation of inclusive education in our secondary schools as it utilized structured formats that encourage teaching materials, monitoring responses and evaluating and encouraging peers to make a little more efforts to learn.
- Same Age Peer Tutoring: In this peer tutoring model, peers who are within twelve or thirteen years of age are paired to review some key concepts. Students may have similar ability levels or more advanced students can be paired up with less advanced ones. Same age peer tutoring as well as Class wide peer tutoring can be completed within learners' classroom or tutoring can be completed across different classes. But procedures are more flexible than traditional Class wide peer tutoring configurations.

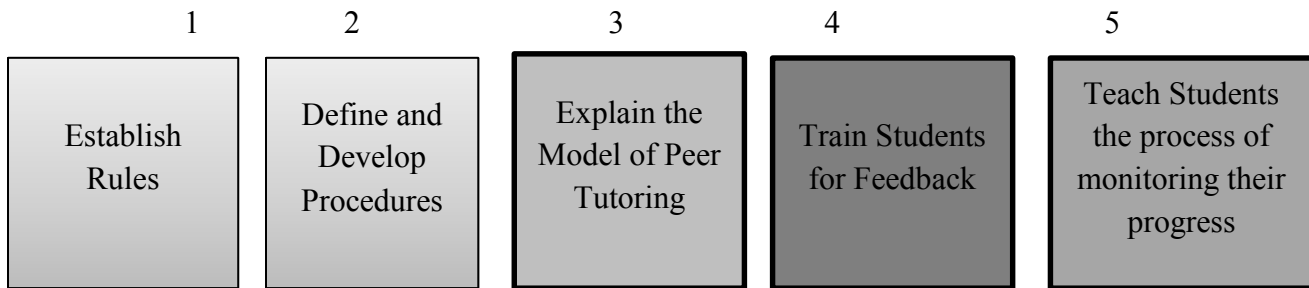


Figure 7: Process of Peer Tutoring

Source: Adapted from Carol 1999

Advantages of Peer Tutoring

The main reasons for peer tutoring are:

- a) Children easily understand tutors who are children, since they are cognitively closer to each other. Generally, children find their own ways of communicating with other children and many a times they can present a subject to other children better than adults. Children-tutors usually give to their classmates their own models of understanding a subject, using popular communicating symbols that facilitate learning.
- b) Peer tutoring does not only ensure a better level of effective and efficient communication and communication in favor of tutees who are most of the times learners with challenges but equally acts at the benefit learner-tutors as well. According to Perner, (1994), the tutors' benefits in these transactions are:
 - By taking much time to revise the subject matters they have got to teach to other learners, they acquire deeper and clearer knowledge on the specific subjects they are dealing with. According to Lemlech et al, (2017), teachers learn at least 95% of what they teach.
 - While tutoring, students tutors develop their ability and skill to teach and guide other learners.
 - Students tutors enjoy a considerable rise in their self-esteem, feeling that they do something useful and seeing their tutees improve. They equally enjoy respect from tutees. Many a time, the ambition of older students to be selected as tutors increases competitiveness and results by improving the older groups' standards. Whatever the

case, the teacher should try as much as possible to limit discrimination in favor of some students -tutors.

- Structured peer tutoring enhances and fosters communication, cooperation, team spirit and socialization among students.

Peer Tutoring in a Multi-grade Class

According to Lester, (2002) there is no research evidence for peer tutoring in a multi-grade classroom. But the effectiveness of this strategy is higher in such classes. More specifically it is well-known that in a mono-grade class the teacher has to manage teaching time in such a way that he succeeds in a rational sharing among different groups. This implies that for significant time interval, during which the teacher teaches one group, he/she is not available for all the other groups, the exact time of the interval depending on the number of groups which belong to the same mono-grade class. According to Perner, (1997), allowing young tutors in multi-grade classes to handle teaching roles, offer support in managing teaching time.

Perner (1997) holds that the teacher should respect the following roles in order to successfully structure peer tutoring in a multi-grade class:

- a) a)It is required that teachers master grouping techniques and be used to the grouping of mixed ability-mixed age grouping in their classrooms.
- b) It is necessary for teachers to encourage peer tutoring, preparing tutors as well as tutees long in advance.
- c) It is equally necessary for teachers to select in an informal, but clear way the tutors, usually among the older learners.
- d) It is recommended that there is a good preparation of the tutoring structure in respect to both time and cognitive material.
- e) It is important for teachers to give the appropriate guidance to the tutors, long in advance.
- f) It is very important for the teacher to supervise the tutors discreetly while they tutor and making sure that learners with disabilities or difficulties are actively involved in the process.

Bullying

Bullying is a kind of violence that exists in most schools and which generally prevents some learners from learning in ordinary, integrated and inclusive classroom environments (Bezangwa, 2019a). According to UNESCO, (2006) bullying is usually some form of aggressive behavior that is harmful and deliberate. It can continue for weeks, months or even years. In most societies those who are different are usually bullied. Their differences are usually due to sex, ethnicity, a disability, or other personal characteristics. Although boys are usually involved in physical bullying activities, girls may use more subtle, indirect forms of bullying such as teasing and they may bully in groups rather than individually. The effects of bullying usually influence how well the abused child or children learn in the classroom or classrooms. Teachers need to take bullying seriously and find ways of knowing the extent of bullying in the classrooms. Observation is a key skill and teachers need to observe students during play as well as in the classroom. Children who are usually alone, who are always on their own, who have no friends or fewer friends and who are different in some ways could be targets for bullying. It is worth noting that bullying often takes place outside of the classroom, like on the way to school or at the playground. Signs of bullying are: Children who suddenly lose confidence; Children who avoid eye contact and become quiet, those who achieve poorly but were previously learning well and those who begin to attend school irregularly or begin to have unexplained headaches or stomachaches.

Discussions with parents and other caregivers are necessary. It is also necessary to undertake a survey to gain a picture of the relationship within the class or school. Teachers can also use drama or puppets to explore the extent of bullying, its causes, and solutions to it when it occurs in or outside the school. For instance, teachers in Guyana made puppets and developed short plays to illustrate aspects of racial bullying. They then developed action steps which they could take to help children caught in these situations. Discussions or debates on sensitive issues can also be used along with stories or role playing to allow children to try to say “No ” assertively as well as to find the right language to use against bullies and abusers.

There are many types of bullying which may affect inclusive pedagogic environments as follows:

Intellectual bullying where children where children’s areas are ignored or not valued; Emotionally bullying due to low self-esteem, harassment, embarrassing moments in school, or rewards withdrawn, which may be related to intellectual threats; Verbal bullying, such as

nicknaming or name-calling; Indirect bullying like spreading rumors or excluding someone from social groups; Cultural or social bullying that come from prejudice or discrimination due to differences in class, ethnic cast, sex and so on.

According to Nsamenang, (2005) when we think of bullying, usually we think of a child or group of children (the offender) threatening another child or children (the victim or victims) often because the victim or victims are different in some way, for example, in terms of grade , cultural group, religion, disabled or poverty. Classroom management adaptation in a nutshell refers to the activities the teacher carries out in the classroom environment in order to create suitable and friendly conditions which make every learner feels the sense of belonging, happy, attentive, active and receptive in class. A chaotic classroom environment is a barrier to the implementation of inclusive education in secondary schools

2.1.2 Instructional adaptation.

Instructional adaptation refers to modifications that relate particularly to instruction or teaching. Teachers sometimes readily have good material to teach but they get anxious about the best way to present the material so that all the students will effectively assimilate it especially in the context of inclusive education. Teaching does not refer to having materials in a lesson note book, copying it and reading it out to the learners to recopy. It is just more than explaining notes to the learners in front of the teacher or asking them questions. It is more than simply explaining notes to the students in front of the students or asking them questions especially in inclusive classrooms. It is a whole complex process of well thought out plans and procedures which guides every stage of the teacher interaction with the students. According to New Brunswick Department of Education, (1994) instructional adaptation simply means tailoring instruction in order to meet the needs of individual learners within or without the classroom. This calls for the use of a variety of strategies in function to various learning styles. Instructional adaptation enables the teacher to properly respond to children learning needs as children learn differently in diverse ways. Instructional adaptation calls for teachers, according to Cameroon-World Bank Cooperation, (2022) to explain issues to their learners rather than telling them such issues. For instance, in a Geography lesson, a teacher can discuss causes of erosion with his or her students instead of just telling them what erosion and its causes are. In this perspective we agree like Ward, (2012) that the mediocre teacher tells whereas the good teacher explains.

Today, the advent of inclusive education, calls for innovation and adaptation of instructional methods in order to meet the diverse needs of learners with challenges for a suitable implementation of inclusive education. Instructional adaptations calls for the modification and adaptation of instructional or teaching methods in order to meet the needs of every learner in the classroom especially those of learners with learning disabilities or learning difficulties. The rationale here is that some students with challenges may be reluctant or too reluctant to engage or persist in school activities. This reluctance may be as a result of difficulties in coping with task demands and probably discouragement from unsuccessful learning experiences despite their initial efforts and desires to learn. This is one of the key reasons for instructional adaptations which are changes made to instruction in a bit to enable learners get the same access to the curriculum and provide them the opportunity to process and displace what has been taught. Instructional adaptations are both modifications and accommodations. Instructional adaptations can be very beneficial for the implementation of inclusive education.

It is in this perspective that Corno and Snow, (1986); Reis et al.,(1992); Adewale,(2016); Manfouo et al;(2023) hold that successful educational outcomes depend on adapting teaching to individual differences among learners as students with disabilities demonstrate a broad range of learning, cognitive, communication, physical, sensory, and social/emotional differences which are capable of calling for adaptations of the general education curriculum. Generally in this situation, each student displaces his or her learning abilities, learning style, and learning preferences in a unique manner. As a result of this, the type of adaptations needed or required and the program in which the adaptations will be carried out are determined individually within the school curriculum. In this light, instructional adaptation refers to any adjustment or modification to the general education program to enable students with challenges to participate in and benefit from learning activities and experiences based on the core curriculum content standards; and demonstrate understanding and application of the content standards. However, as Reis et al., (1992) puts it, for these activities to be meaningful for learners with challenges, adaptation to certain aspects of these activities may be called for.

They may take a variety of forms. For instance, some adaptations structure students learning in a more explicit, systematic way than some unchallenged students may require. While other adaptations provide alternative ways to students to acquire or demonstrate their knowledge while they are developing related language arts proficiencies like listening to a

text on tape, using software to read a text aloud or to dictate responses, using a graphic organizer to structure thinking and writing. It is therefore clear that the effective implementation of inclusion which according to UNESCO (2005) is “ a process of addressing and responding to the diversity of needs of all learners through increasing participation in learning, cultures and communities and from education. It involves changes and modifications in content, approaches, structures and strategies, with a common vision which covers all children with the appropriate age range and a conviction that the responsibility of the regular system to educate all children depends largely on instructional adaptations of the regular curriculum.

In the same line, Jane,(2001) holds that many students with or without disabilities cannot succeed without instructional adaptations and that the key to success in the classroom lies in having appropriate adaptations. He holds that some adaptations are simple as moving a distractible learner to the front of the class or away from the window. Some other adaptations may be concerned with changing the way the material is presented to the learners or the way learners respond to show their learning. He further insists that instructional adaptations need to be individualized for students depending on their needs and personal learning styles and interests. This enables students to benefit from general education curriculum and other learning materials and activities and to show what they have learned. As the learners experience success in the classroom, motivation and learning increase, and the overall learner's outcomes improve.

According to Jane, (2001) some examples of adaptation concern group work where the teacher can teach learners how to be effective peer tutors, how to work in group in cooperative learning groups, and organize the group well so that students learn, from each other; proper use of wheelchair mobility where the teacher should find out the chair width and turning radius in order to create space between rows, furniture and centers that are wide enough for the learners to walk well and comfortably. In regular classroom, there are students with or without disabilities and in order to provide learners with disabilities significant access to curriculum and instruction based on the content, standards, instructional adaptation may be needed but adaptations are not always intended to alter or compromise the content and standards. Instead, adaptations are intended to provide learners with disabilities opportunities to maximize their strengths and compensate for their differences, (Jane, 2001). In the context of this investigation, the relationship between instructional adaptations and the implementation of inclusive education will be discussed through some instructional methods

and the way they could be modified in order to meet the diverse needs of diverse learners in inclusive classrooms today. An instructional method refers to a ‘ ‘ pattern of teacher behavior that is recurrent and applicable to various subjects matters’ ’ (Tchombe,2004).

According to Tambo, (2003) an instructional method refers to ‘ ‘a standard procedure for presenting subject matter and organizing teacher-learner interaction during learning’ ’. No matter the definition one takes two things are crystal clear as standard procedure as described by Tambo would also mean a pattern of teacher behavior that is recurrent all in a bit to present subject matter. Whatever definition a teacher takes, it is worth noting that the worth of a method lies in its extent to facilitate the achievement of objectives. These instructional methods are inherent in two main teaching approaches notably teacher centered approach which refers to a more traditional teaching method that focuses on the teacher as instructor and guide and it is usually referred to as direct instruction, deductive teaching or expository teaching and the learner centered approach usually called discovery learning, inductive learning or inquiring learning which places stronger emphasis on the learner’s role in the teaching learning process. In order to provide students with disabilities or challenges meaningful and effective access to curriculum and instruction based on expected content standards, adaptations are called for.

These adaptations, according to Renzulli et al.,(1992) are not intended to change or compromise the content standards. On the contrary, adaptations are intended to provide students with disabilities or challenge the opportunity to maximize their strengths and compensate for their learning difficulties.

This is why Renzulli et al., (1992) holds that consistence with the expectations that learners with challenges take part in general education curriculum is the requirement that the Individualized Education Programs(IEPs) of learners with challenges reflect the core, content standards and the general education curriculum as shown on figure (8 below).

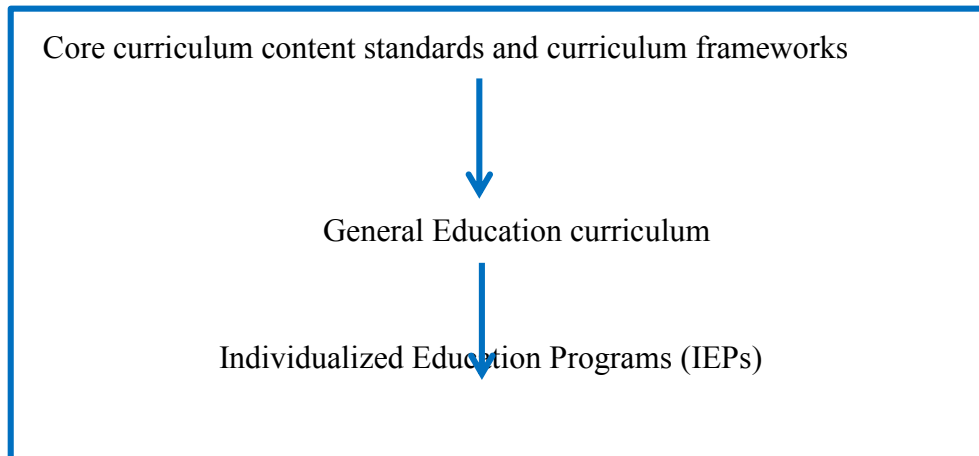


Figure 8: construction of individualized education program (IEPs)

Source: Renzulli, 1992

Children with challenges demonstrate a broad range of learning, cognitive, communication, physical, sensory, and social/emotional differences which may require adaptations to the general education program as each learner manifests his or her learning disabilities or challenges, learning style, as well as learning preferences in a unique way and so therefore, the kind of adaptation required and the program in which the adaptation will be implemented are determined individually within the individualized Education Program (IEP) or planning processes as shown on figure (9) below (Renzulli,1992)

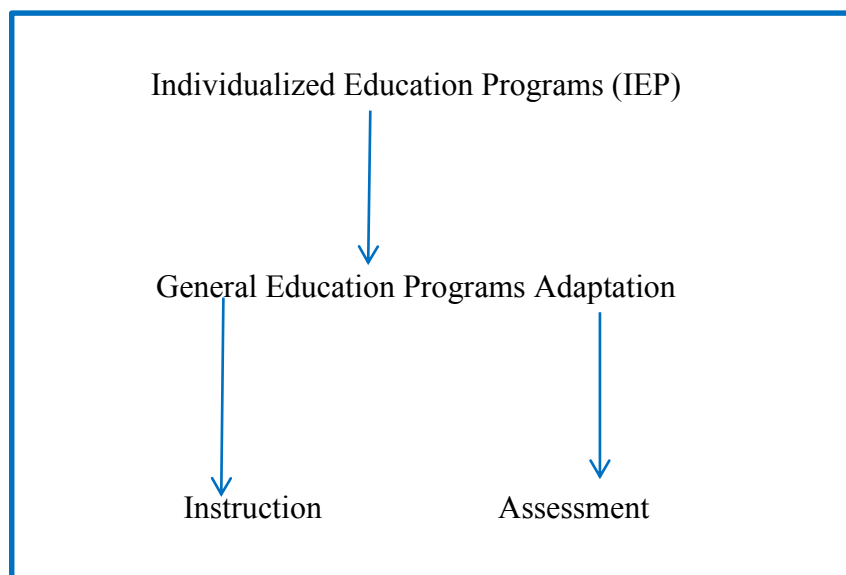


Figure 9: Required adaptation and programs for IEPs

Source: Renzulli, 1992

Based on the above figure (9), adaptation is any adjustment or modification to the general program in order to enable students with challenges to participate in and gain from learning activities and experiences based on the core curriculum content standards; and show understanding and application of the content standards. Adaptations to teaching enable learners with challenges to learn the general education curriculum, participate actively and effectively in learning activities, acquire and demonstrate essential knowledge as well as skills. These adaptations usually take various forms notably structuring students' learning in a more and explicit, systematic way than some non- challenged students may require; other adaptations bring in alternative means for students to acquire or show their knowledge while they are developing related language arts literacy proficiencies like listening to text on tape, using a graphic organizer to structure or organize thinking.

According to the Association for Supervision and Curriculum Development,(1994) and Renzulli et al.,(1992) some adaptation based on effective instructional practices for all students that enhance and foster the implementation of inclusive education are:

-Student motivation

Some learners with challenges may be reluctant to engage or persist in their studies because of difficulties in coping up with task demands and discouragements from unsuccessful learning experiences despite their initial efforts and desire to learn. As a result of these difficulties, motivational strategies are worthwhile to assist this category of children to become successfully involved in a variety of ways in the teaching learning process and thus develop proficiency, confidence, love and enjoyment in learning. For instance, give doable tasks, use hands-on activities strategy, accept oral or written answers from learners, allow students to choose their learning groups.

-Instructional presentation

Students with challenges require adaptations to instructional presentation which will enable them to acquire, comprehend, recall and apply school activities content and related processes. Besides, instructional presentation adaptations can really enhance and foster learners' attention and ability to focus on instruction or to remain attentive and receptive especially if the teacher uses a good animal story to present the lesson (Bezangwa,2019). The principal purpose of these instructional presentation adaptations is to provide students with challenges with teacher-initiated and teacher-directed interventions which prepare them for learning and engage them in the learning process(instructional preparation); structure and

organize information to help comprehension and remembering(instructional prompts); and enhance and foster understanding of new concepts and processes(instructional application) addressed in their studies framework activities. For example, use of games or stories to present and teach lessons, pre-teach vocabulary, use of real objects and especially pictures.



Figure 10: Some advantages of using pictures to present and teach lessons

Source: Researcher initiative

-Instructional monitoring

The raison d'être of instructional monitoring is that frequent checking and of the performance and progress of students with challenges is very important in order to ensure that they are actually understanding and gaining from learning activities. Instructional monitoring provides teachers with ways of getting information related to students and their ability to take part effectively in learning activities. Besides, it enables teachers to determine when and how to adjust learning activities and instructional assistances or supports to promote learners' development. Also essential is learner self-monitoring, self-evaluation and self-management to promote children self-reflection and self-direction in connection with tasks demands, goal attainment, and performance accuracy. For instance, use assignment books to check learners' performances.

-Instructional organization

Learners with challenges sometimes need special adaptations to classroom organization in order for them to actively engage in the concepts and processes addressed in school learning activities framework. The main purpose of instructional organization adaptations is to maximize learners' attention, participation, independence, mobility and comfort; to promote peer and teacher communication and interaction, and to provide access to information, material and equipment. Some common examples of instructional organization adaptations are: cooperative learning, peer partner, teams, group roles(timekeeper, recorder, material messenger, illustrator) .

-Student response

Learners with challenges sometimes need specific adaptations in order to showcase acquisition, remembering, understanding, and application of learning activities in various situations with diverse materials as they are developing proficiencies in these areas. The aim of learners' performance response is to provide learners with challenges, ways of showcasing progress towards the lesson objectives to the learning activities framework (De-Vrocy, 2016).Some Basic Concepts of Instructional Adaptations

-Cooperative learning

- 1) Cooperative Learning: Cooperative learning also known as collaborative learning refers to an educational approach that aims to organize classroom activities into academic and social learning experiences (Meyer et al., 2005). There is much more

to cooperative learning than just structuring students into groups, and it has been described as arranging positive interdependence. According to Johnson et al., (1994) cooperative learning is an organized and structured way to use small groups to enhance and foster students' learning and interdependence which is very important in inclusive classrooms where we find not just ordinary but extraordinary differences. For instance, learners are given a task, otherwise known as an assignment, and these students work together to do this assignment. Each of them has responsibilities and is held responsible for helping in the completion of the task; hence, success is dependent on the work of all or everyone in the group. Besides, apart from learning from each other, students equally learn how to work as part of a group or a team and have others depend on them. According to Tambo, (2012) cooperative learning refers to a successful teaching strategy in which small teams, each with learners of varying abilities; use various learning activities to ameliorate their understanding of a subject. Cooperative learning uses different teaching-centered and learner-centered activities for effective learning. Besides, it provides the opportunity to practice appropriate communication, leadership and conflict management skills. In a nutshell, cooperative learning refers to a teaching and learning strategy that consists of organizing learners in small mixed abilities teams whose reason d'être is to interact, discuss and solve learning tasks as well as learn from one another.

Benefits of Cooperative Learning

Cooperative learning embodies various benefits and some of which are listed below:

Cooperative learning is fun, so learners enjoy it and as a result of this are more motivated especially those with learning disabilities who need a joyful and friendly environment in order to learn well (Tomilnson,2001; Tchombe, 1997; and Tanyi,2016). Other benefits of cooperative learning include and not limited to:

- 1) Cooperative learning is interactive, so learners are engaged, active participants in the learning environment.
- 2) Cooperative learning allows discussions, and critical thinking, so students learn more and remember what they have learned for a longer period of time.

- 3) Cooperative learning demands that students learn to work together, which is the skill of oneness or togetherness, necessary for their socialization in their future societies.
- 4) Cooperative learning creates positive interdependence among the learners.
- 5) Working in mixed ability groups enables the weaker ones especially those with disabilities to be pulled on.
- 6) The students learn to be responsible as individuals or as a group
- 7) Children learn social acceptance and respect for one another's opinion which is very necessary for challenged children to learn as this gives them the sense of belonging in the classroom and the willingness to school like others.
- 8) The teacher's role moves from that of "the know all" to that of a facilitator.

How to Group Students for Cooperative Learning

For teachers and learners, cooperative learning requires more time and willingness to make adjustments before they are used to it. Cooperative groups are generally comprised of mixed students based on ability level. Besides, different groups are set up based on the skill level of the students. For instance, groups may be made up of three, four or five students, which will include two or three average students, one below average student, and one student who is above average.

Generally, students should not be allowed to create their own groups or have the policy of moving from one group to the other. Once groups have been put in place, the teacher may wish to arrange desks in his classroom in groups of 4 or 5. Groups have got to change every two months. As much as possible, students should only work with the same students once a year, but class size is a determinant factor. In order to ease test tasks, learners can be attributed numbers notably one, two, three, and four and keep the very number for all tests, or numbers can be drawn each time before each assignment or test. A common number system can reduce or eliminate confusion and help determine students role for all given assignments.

Cooperative Learning Strategies

1) **Think-Pair-Share:** It is a method that enables learners to engage in individual and small-group thinking before being asked to answer questions in front of the whole class. This method has four steps namely:

- a) Step one-groups of four learners listen to the posed question by the instructor.
- b) Step two-individual learners are given time to think and thereafter write their answers
- c) Step three-pairs of learners read and discuss their answers
- d) Finally-two or three learners are called up by the instructor to share their experiences with the whole class.

This method is very useful and works well in the science classroom because of the continual demand of science teachers that learners formulate hypotheses about the outcome of an experiment before it is done.

2) **Three-Step Interview:** Three-Step Interview is a strategy which is effective when students are solving problems that are ambiguous. Three problem solving steps are concerned in this process. They are:

- a) Step one-The teacher presents an ambiguous problem and poses different questions for the students to discuss.
- b) Step two-Students, in pairs become the interviewer and the interviewee. It is a commendable learning method in inclusive classrooms.
- c) Step three-After the first interview has been done, the students' roles are changed. Once each student has had a turn, the pairs read their answers to the whole class. After all interviews have been done, the class writes a summary report of the interview results that have just taken place.

3) **Round Table:** A round table is a simple cooperative learning structure which covers much content, builds team spirit, and incorporates writing. It has three steps. The first step is concerned with the teacher's ambiguous question having many answers. In step two, the first student in each group writes an answer on a paper and passes it counter clock wise to the next student. Then, in step three, groups with the highest number of correct answers gain some kind of recognition.

This kind of cooperative learning can be easily practiced during science lessons. For instance, the students may be asked to write as many as reptile names as they can. At the end the group that has more reptile names written down is praised.

4) Group Investigations: They are structured to emphasize real thinking skills such as analysis and evaluation. Learners work to produce group projects, that they may have a hand in selecting.

5) Student Teams-Achievement Division (STAD): Here students with different academic abilities are assigned to four or five member teams in a way to study what has been initially taught by the teacher and to help each learner reach his or her higher level of achievement. Thereafter, learners are tested individually. Usually, teams testify based on the degree to which every team member has progressed in their passed records. This greatly helps students with learning disabilities as no learner is left behind in the group.

6) Three-Minutes Review: It is used to keep students attentive and receptive. For instance, the teacher stops at any time during lecture or discussion and allows teams three minutes to review what has been said with their groups (Cooper et al, 1990). Students in their groups can ask a clarifying question to the other members or answer others' questions.

Typical Examples of Cooperative Learning Situations

In an elementary Science weather unit, where bar graphs were the desired product, one student gathered data, one chose the type of graph to use for reporting data, all the students discussed data and prepare the graph cooperatively and another student with severe disabilities colored it (Johnson and Johnson, 1989). In another lesson, a visually impaired student was part of the group. The lesson was a measuring task that involved measuring items in the classroom. These students decided that, their visually impaired mate would hold the measuring tape and repeat measurements to the recorder which she did very well and happily (Slavin,1991). During subsequent discussions, the group talked about relative concepts of length and size; larger, smaller, longer, shorter; and assisted their mate with challenges in her reporting about the objects' sizes and lengths.

According to Stainback et al., (1992); Fulk,(2004); Impecoven-Lind,(2010), Maheady, (1991), Mastropieri et al., (2007);Endeley,(2015);Shey,(2020); and Nana et al.,(2012) the context of cooperative learning itself facilitates the inclusion of all students, and was reported by survey respondents as leading to reduced needs for multiple adaptations

for the students with disabilities. Besides, it is interesting to note that teachers in inclusive classrooms reported that they adhere to cooperative principles and a process-oriented perspective. It is equally very interesting that teachers describe themselves in this way, and this underscores the fact that cooperative learning structures usually occur in concert with other instructional support strategies, notably multi-level instruction, activity -based or thematic instruction, peer participation. For instance, in rural Northern California, cooperative groups, formed on multiple dimensions at the junior high level, were involved in a science unit about animals' habitats and breeding practices. This group developed a simulation to illustrate salmon spawning, where students assumed a variety of roles such as currents, predator fish, etc. Ropes were used for the currents, and the learners themselves developed the adaptations for the mate with severe disabilities, including fewer predator fish and slower -moving currents when he was taking the salmon role. This activity equally provided ample opportunities for the disabled mate to play other roles, while allowing for multi-level outcomes across learners.

-Differentiated instruction

According to Bezangwa, (2019 a) differentiated instruction refers to a teaching method that consists of planning and delivering instruction in a way to properly meet each learner's needs. Differentiated instruction is not a program. It is simply a way of teaching that enables the teacher to best meet the diversity of needs of his/her learners. It is a commendable inclusive teaching practice that facilitates the implementation of inclusive education in learning environments. According to Carol (1999), differentiated instruction means giving learners various options for taking in information. In a nutshell, differentiated instruction means that, the teacher observes and understands the differences and similarities among learners and thereafter uses these pieces of information to plan teaching activities. According to Manfouo et al;(2023) differentiating instructions calls for proper training of teachers so that they do not confuse and unteach children. According to (Tomlinson,1995,1999; Winebrenner, 1992, 1996), the key principles that form the foundation of differentiated instruction are:

-Ongoing formative assessment: Teachers continually assess learners in order to identify their strength and areas of need so that they can meet learners where they are and help them move forward.

- Recognition of diverse learners:

Learners have diverse levels of experience and experience with reading, writing and thinking, problem solving and speaking. Ongoing assessments enable teachers to develop differentiated lessons that meet every learner's.

-Group Work:

Learners collaborate in pairs and small groups whose membership changes as needs arise. Learning in groups enables learners to engage in meaningful discussions and to observe and learn from one another..

-Problem Solving:

The focus in classrooms that differentiate instruction is on issues and concepts rather than the book or the chapter. This encourages all learners to explore big ideas and improve their understanding of key concepts.

-Choice:

Teachers offer students choices in their reading and writing experiences and in the task and projects they complete. By negotiating with learners, teachers can come up with motivating assignments that meet learners' diverse needs and varied interest.

Different ways of Differentiating Instruction

According to Basu, (2017) teachers can differentiate instruction through four ways notably:

-Content: Teachers may differentiate the content they teach by designing some activities for groups of learners that cover most levels of Bloom's taxonomy namely remembering, understanding, applying, analyzing, evaluating and creating). Learners who are unfamiliar with a lesson may be required to complete tasks on the lower levels like remembering and understanding. Other students with some mastery may be asked to apply and analyze the content and those who have high levels of mastery may be asked to complete tasks in the areas of evaluating and creating like matching vocabulary words to definitions.

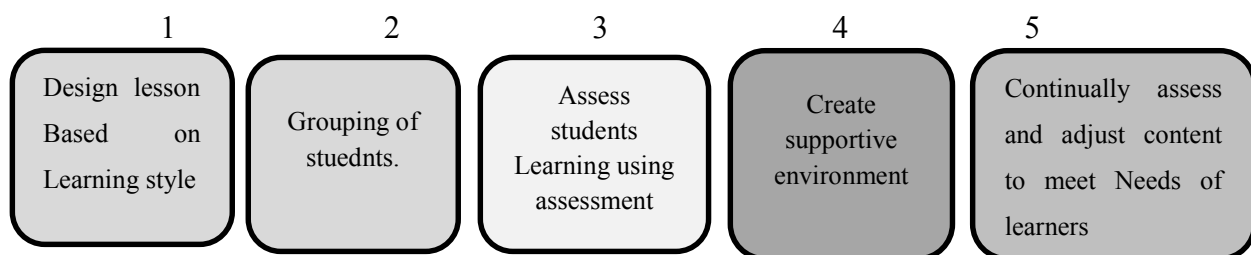
-Process: Learners have preferred learning styles and successful differentiation includes delivering the material to every style; visual; auditory; and kinesthetic and through words. Generally, not all learners require the same amount of support from the teacher and learners have the choice to work either in pairs, petit groups or

individually. Whereas some learners may benefit from one to two interactions with the teacher or classroom side, others may be capable of progressing by themselves. Sometimes teachers can enhance and foster students' learning by offering support based on individual needs like allowing auditory learners to listen to audio books.

- Product: It is what learners create at the end of the learning activities in order to demonstrate the mastery of the content. This is usually in the form of tests, reports or other activities. Teachers may have to assign learners to complex activities that show mastery of educational concept in a way the learner prefers based on his/her learning style.
- Learning Environment: Conditions for successful learning include both physical and psychological elements. A flexible classroom layout is very important, incorporating different kinds of furniture and arrangements to support both individual and group work. Psychologically, teachers have got to use classroom management techniques that support a safe, friendly and joyful learning environment like grouping learners to discuss assignment.

The researchers hold that, to differentiate instruction is to acknowledge learners varying background knowledge, readiness, language, preferences in learning and interests; and to thereafter react responsively. Differentiated instruction is likely to provide teachers with both theory and practice to appropriately challenge the broad scope of students in classrooms today especially inclusive ones (Gartin et al.,2002).

Figure 11: Differentiation in the classroom



Source: Adopted from Carol, 1999

According to Vroey (2016); Nana et al.,(2012); Shey,(2020); Manfouo et al.,(2023) teachers have to plan their lessons in a way to enhance and foster participation and learning of their students. An example of how group activities and individualized work is presented below. In this example, the group goals of a lesson to be taught to the whole class are written down and those for students who require adaptations are fitted against the common group

goals in the next column. This is the same for selected instructional materials. This way the individual needs of students in general and those with learning disabilities in particular are made and proper participation in learning is ensured for the betterment of inclusive education.

Table 2: Planning , participation and learning in an inclusive classroom

Group Goals	Individual Goals
Activities/learning Sequence	Participation of students with extra support
-Group Instruction	-Group instruction, peer support
-Group discussion	-Group discussion, explicitly invited to join
-Individual work	-Small group work, co-teacher support and ending with Peer support
Presentation of individual	-Presentation of individual work with peer support

Source: De Vroey (2016)-Inclusive Education

- Games:

These researchers define games as fun methods of previewing and reinforcing learning activities through active learning formats involving movements and manipulations which greatly motivate and engage learners in exploration, discussion, and repeated practices. According to the University of Buea,(2008) instructional games are quite different from fantasy or other games developed for the home computer market. They are however classified as games because they run following a clear set of rules and usually have a winner at the end. Instructional games are designed to be fun for students thereby increasing their chances of learning the concepts, knowledge and skills embodied in the games. An instructional game is a commendable motivational strategy used to enhance and foster learning on the one hand, and provides the learner with a rich and complex learning environment on the other hand (Nana et al; 2012; Guha,2016). For instance, in a one-well known instructional game, learners engage in a problem-solving exercise which requires them to apply different rules of logic. In order to play this game, learners have to discover who murdered someone by putting together sentences which describe relationship between facts. They try to guess who the murderer is at any given point. For example, they are provided the following facts by the computer so that they can guess who the murder is:

Mr. Jones wears a red suit.

Mrs. Brown lives next door to the murderer.

Mrs. Brown lives next door to Mr. Jones.

By playing this game learners learn about language, thinking and reading. They learn how to process facts and make logical inferences while solving is of interest to them. Traditional learning goals like teaching basic skills can equally be addressed by instructional games. For instance, in a computer instructional game, ‘Darts’ learners have to figure out the locations of a balloon on a number line marked off in fractions and mixed numbers. In order to succeed, learners have to estimate distances and convert equivalent fractions. Students type in the fractions at which they think the balloon is located. This activates dart that strikes the chosen point. The popping balloon provides reinforcement for learners’ performance as well as a graphically joyful display. All these games make the classroom environment exciting, joyful, friendly and supportive for learners especially those with learning disabilities and difficulties who generally learn well in such environments. According to Ghosh, (2016); Bezangwa, (2019 a) a single game can teach many different skills and concepts in a more sophisticated nature and in a kind of way that learners do not get tired of it, on the contrary they wish it continue. This is very entertaining in inclusive classrooms as it keeps the learners attentive and receptive especially those with learning disabilities and difficulties.

According to Cure our Children,(2010); Barber, (2010); Johnson,(2009); Martin, (2010) communication is key for all relationships, and the lack of speech cum language can hinder the way children interact with their peers and parents or caregivers. Finding adaptive ways to communicate and play with your nonverbal learners can help possibly stimulate speech or facilitate cognitive growth. Just as all learners, learners with disabilities need access to sports and games. Sporting games can be modified to include learners with disabilities. In some situations, learners with disabilities can be included with no modifications at all whereas in others, modifications are actually required. Such modifications, where they are called for, may just be minor like a change in a rule or piece of equipment but may provide real assistance to learners especially to those with challenges. Sometimes too, according to Johnson, 2009 and Barber 2010, major modifications are needed especially for learners with high educational needs. They hold that adapting and modifying sporting activities is to minimize or eliminate disadvantages brought about by the environments in which sporting activities are taking place. This also calls for the introduction of new rules and equipment as well as the ability to constantly review them following constantly evolving situations. Some of these modifications include the following:

- a) Reducing the size of the playing ground.
- b) Playing in a closed area which is surrounded by walls or a fence will greatly help learners with some challenges like visual impairment and autism to play safely and comfortably.
- c) Practicing games indoor in a modified form and thereafter taking it outside.
- d) By lowering heights of basketball hoops, badminton net and volleyball nets.
- e) By using balls which may be easier to control
- f) By using balls with bells inside or very bright so that it is easy to track.

According to Barber, (2010) teachers can modify rules in the following ways:

- Having more players in a team reduces the amount of activity required by each player.
- Having a smaller team by reducing the number of players in order to facilitate greater freedom of movement.
- Constantly substituting players.
- Making scoring points simple and very visual to all.
- Modifying rules of throwing or passing a ball, bouncing, rolling, or underarm toss, instead of over arm throw.
- Teaching rules visually and having the visual rules nearby for reference for the learners.
- By simply modifying the rules of the games

- Drawing:

Drawing according to these researchers refers to another way of expressing ideas and enhancing associations. It is the easiest mode of expression for some learners with disabilities as illustrations enable them to express their understandings in richer details. These illustrations may then serve as a springboard to facilitate oral or written expressions. According to Katz, (1995) drawing refers to a special expression of ideas, feelings and values in perceptible forms or through senses and it is not just a method of demonstrating different concepts but equally a way to acquire knowledge. In the classroom, especially in an inclusive one, drawing can be a commendable way for teachers to offer learners real support to properly understand subjects. For instance, if a child adds 1 and 2 and writes /// or $1+2=///$, his or her answer is as correct as $1+2=3$. Similarly, if another learner writes $1+2=000$, his/ her answer is right.

-Music

According to the University of Buea, (2008), music which is referred to as the act of producing pleasing or expressive combinations of tones especially with melody, rhythm and usually harmony is a language and as a language, it is a commendable way of communication as it generally makes the audience quickly attentive. Music can equally be defined as an act of sounds which expresses ideas and emotions in significant and magnificent forms through the elements of rhythm, melody, color and harmony. It is a language which is used in every community in the world and as such it is written. Music as a curricular and co-curricular discipline in school has the following objectives:

- To develop the sensory and motor aptitude of the learner
- To train and refine the learners' voice
- To develop and enrich the learners' imagination by encouraging creativity and improvisation
- To cultivate their taste and love for music
- To develop the learners' memory and attention
- To develop sociability and group spirit in the learners
- To familiarize the children, not just with traditional songs but equally with modern songs from different world countries
- To train the children's ears to listen to music and learn how to play it on local or modern instruments
- To enable the children to construct local musical instruments.

Music makes the learning environment lively and more enabling. It is a great source of learning. In Biology for instance, recorded birds songs and animals' sounds can be used to awake students, make them attentive, participative and receptive in class especially in inclusive classrooms where a lot of motivation is needed to get everyone active. In History, historical events can be translated into plays with sound effects to extend knowledge and enrich learning in a more enjoyable way. In Geography also, traditional music from different parts of the world accompanied by beautiful dances, create opportunities for more interesting coordination and spatial learning. Songs like "the Welsh Miners"; the Cotton Spinners"; "Negro Plantation Workers"; (in the USA) and the "Cameroon Fishermen" can make Human Geography lessons more interesting and enjoyable to the diverse learners in inclusive classrooms. Besides, "Negro Spirituals" which are timeless, tell learners a lot about life in America plantations for more than a century ago. In modern languages today,

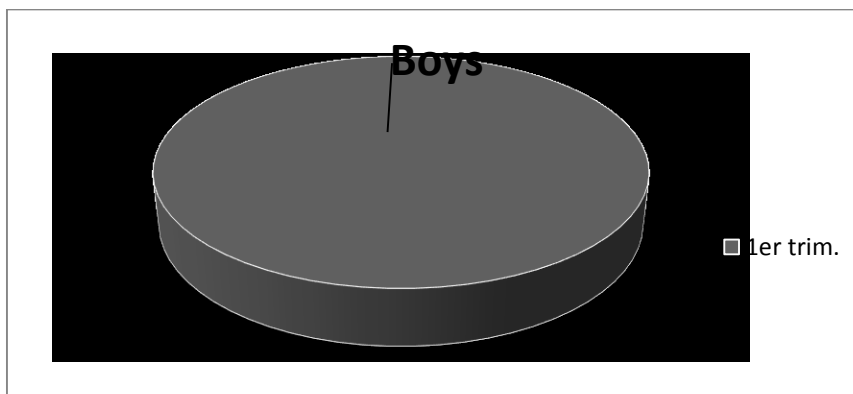
some speech difficulties or defects can be corrected by working with musical instruments. Pitch training is a commendable way to develop literary skills, talents and intelligence. Music greatly enriches learning and extends knowledge. It is the physiology and psychology of hearing as it develops the learner's multi-sensory awareness and response to a wide range of sounds, and discrimination between such variations. According to the University of Buea, (2008) music is widely used today in our schools to educate learners especially those with Learning disabilities and learning difficulties.

-Graphic materials:

Graphic materials refer to instructional materials that show relationship by means of lines, colors or symbols. According to the University of Buea, (2008) graphics include graphs, maps, diagrams, cartoons, and posters which are very useful in teaching as they render verbal symbols more concrete and clearer to learners. For instance, a political map of Africa can show the location of one country in relation to another one clearly and in more concrete terms than a verbal description of the said location.

Graphs are pictorial representation of data. There are various types of graphs namely:
 -Circle or pie Graphs: Circles and pie graphs are very useful in showing parts of a whole .For instance, when considering the birds' population of a particular region we may want to show the percentage of owls, eagle and swallows or we may be interested in showing the percentage of urban, semi-urban and rural dwellers in a given population. They are better used when the different categories of the whole to be shown are not many. Pie graphs can be used very successful in teaching learners with disabilities. It has been shown that learners with challenges can read these graphs much easier than other graphs. For instance, when teaching fractions, the whole, half and one quarter can be illustrated by a pie chart.

Example: Illustrating that the whole (1 or all) class is made of boys.



Source: University of Buea 2008

Figure 12: The whole by using a pie chart.

2.1.3 Assessment Adaptation.

Assessment adaptations are changes made in assessment in order to level the playing ground and prevent learners' with challenges from interfering with their abilities to show their real skill levels (Tchombe et al; 2011; Nana et al; 2012; Guha, 2016). However, assessment adaptations are not intended to alter or lower the standards or expectations for a test or discipline, or to provide an unfair advantage to learners with challenges. No, on the contrary the *raison d'être* of adaptation is to assess children in all the domains of child development notably cognitive, affective and psychomotor domains so that each student feels a sense of belonging in the classroom and this greatly enhances and fosters the implementation of inclusive education in our secondary schools.

The Rehabilitation Council of India, (2017) holds that assessment is an indispensable part of the educational process and as such every program should aim for the holistic development of every learner. Therefore, learning experiences provided in secondary schools should not just contribute towards the achievement of desired goals, but when selecting those learning experiences we must consider both curricular and co-curricular outcomes as desirable behavioral outcomes. One of the capital purposes of assessment is to help learners to awake from their slumbers and improve their achievements in scholastic areas and thereafter develop life-skills and attitudes with reference to the greater context of life . This why Guha (2016) holds that

Learners, educational aims, the nature of knowledge, and the nature of the school like a social space can enable students to reach at principles to guide commendable classroom practices. Besides, assessment should be seen as a component of curriculum with the twin purpose of effective delivery and further amelioration of the teaching learning process. Education is considered as a process for all- round development of children in all dimensions, for instance intellectual physical, social, ethical, emotional etc. a holistic approach to education facilitates total development by providing the appropriate learning environment where every learner is capable of building self-concept, self-image, sense of enterprise, sportsmanship etc.

Holistic development includes the development of cognitive, affective and psychomotor abilities. To ensure holistic development, the teacher has got to adapt the approach of holistic assessment as the conventional evaluation system has been giving stress on evaluating learners' abilities in scholastic areas while the behavioral out comes in co-

scholastic areas receive less important. This is a barrier to the objective of holistic development of the learners. In order to achieve the objective of holistic development of every learner in every inclusive classroom, continuous comprehensive evaluation (C C E) is called for. According to the Rehabilitation Council of India (2017) Continuous comprehensive evaluation (CCE) refers to a system of school- based evaluation that covers all aspects of learners' development. The main reasons for this are in continuity to assess learning and behavioral outcomes of every learner so that every child feels the sense of belonging in the learning environment and has something to take home too especially the challenged child. This greatly motivates every learner to learn thus facilitating the implantation of inclusive education in secondary schools.

‘‘Continuous’’ means that the evaluation of identified aspect s of students growth and development is a continuous process rather than an event, built into the total teaching-learning process and spread over the entire span of academic session. It equally means regularity of assessment, frequency of unit testing, diagnosis of learning gaps, use of corrective measures, retesting and feedback of evidence to teachers and learners for their self-evaluation.

On the other hand the term ‘comprehensive’ implies that it attempts to cover both the scholastic and the co-scholastic of the learners’ growth and development as abilities, attitudes, and aptitudes, can manifest forms other than written word, the term ‘comprehensive’ equally refers to the application of variety of tools and techniques which aim to assess learners’ development in different areas of learning namely knowledge, understanding, applying, analyzing, evaluating and creating. Continuous evaluation helps in bringing awareness about the achievement of learners, teachers and parents from time to time. They might look into the possible causes of low achievement (if any), and thereafter take remedial measures of instruction in which more emphasis is needed to meet diverse learners’ needs. Some advantages of continuous comprehensive evaluation are:

- Teachers can use varieties of evaluation methods over and above the written tests
- Teachers evaluate learners on the day -to -day basis and use feedback for improvement in the teaching learning process.
- Learners can be assess in both scholastic and co-scholastic areas.
- Evaluation is done throughout the year and can provide more reliable evidence of students’ progress.

- It encourages students to develop good study- habits.
- The feedback brought about by continuous comprehensive evaluation can be effectively used in remedial instruction for the betterment of inclusive education.

Continuous comprehensive evaluation tries to the emphasis from testing to holistic learning. Some of it features are:

- The ‘continuous’ aspect of continuous comprehensive evaluation takes care of ‘continual’ and ‘periodicity aspect of evaluation.
- Continual means assessment of learners is carried out at the beginning of instructions (placement evaluation), followed by assessment during the instruction process (formative evaluation), and carried out informally using multiple techniques of evaluation.
- Periodicity means assessment of performance frequently carried out at the end of unit/term (summative evaluation).
- The ‘comprehensive’ component of continuous comprehensive evaluation takes care of assessment of all-round development of learners’ personalities. It includes assessment in scholastic as well as co-scholastic aspects of their growth.
- Scholastic aspects include life skills, co-curricular, attitudes, and values, techniques of evaluation continually and periodically. The diagnostic evaluation takes place at the end of unit/term test. The causes of poor performance in some units are diagnosed using diagnostic tests. These are followed up with appropriate interventions followed by resting in order to facilitate inclusive education and hence education for all.
- Assessment in co-scholastic areas is done using various techniques on the basis of identified criteria, whereas assessment in life skills is carried out on the basis of indicators of assessment and checklists. See figures A 14 and 15 below:

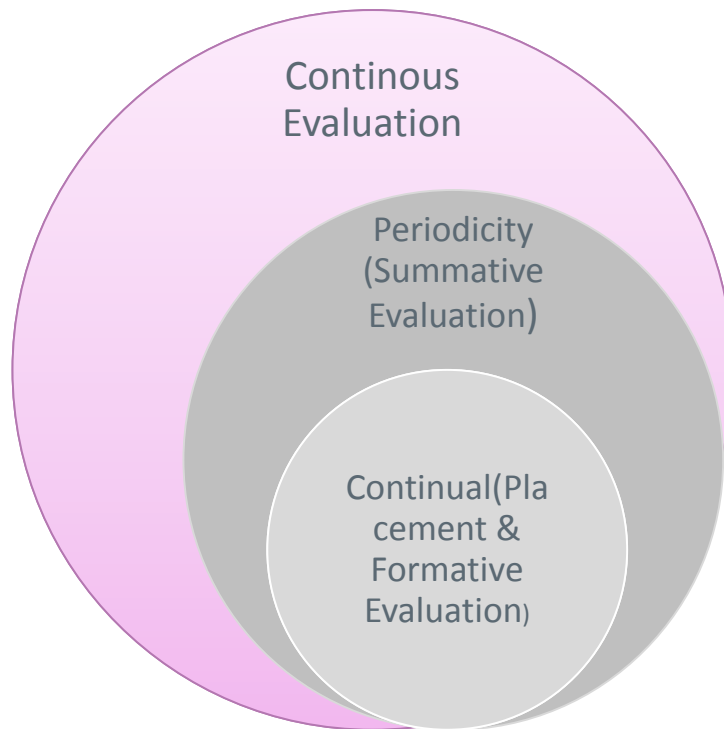


Figure 13: Aspects of Continuous Assessment
Source: Rehabilitation Council of India, 2017

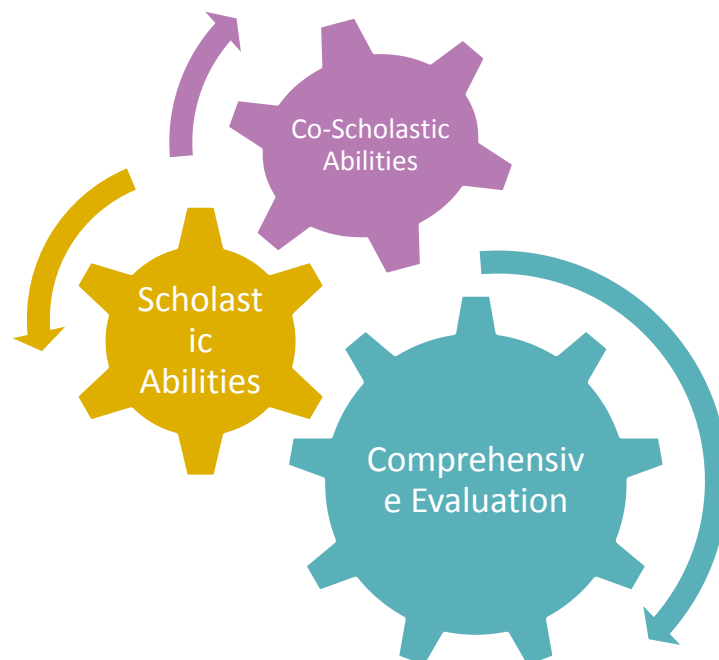


Figure 14: Aspect of Comprehensive Evaluation
Source: Rehabilitation Council of India, 2017

The main aims of continuous comprehensive evaluation are assessing the learners' development in different areas of learning with the following main objectives:

- To develop cognitive, affective and psychomotor skills
- To make evaluation an integral part of the teaching learning process
- To determine social utility, desirability or effectiveness of a program and take suitable decisions about the learner, the process of learning and learning environment.
- To carry out effective instructional strategies
- To ascertain individual learners' strengths, needs and weaknesses in scholastic and co-scholastic areas.
- To find out areas of interests and aptitudes
- To emphasize on thought-processes and discourage memorization
- To make the teaching learning process, a learner-centered activity.

The nature of continuous comprehensive evaluation is so inclusive and comprehensive that it includes almost every aspect of child development. It integrates assessment with the teaching and learning process; considering the assessment of learners' abilities in scholastic and co-scholastic areas as it:

- Reduces stress and anxiety especially in learners with learning disabilities and learning difficulties.
- Reduces dropout rate of learners especially of the challenged ones.
- Participates to the all round development of learners.
- Prepare children for future life by empowering them physically, mentally, emotionally and socially.
- Provides opportunities to learners to develop interest, hobbies and personalities.
- Creates learners'-friendly and supportive learning environments in order to enhance and foster learning for diverse learners
- Empowers learners with life skills and talents, notably creative and critical thinking skills, social skills and coping skills that help them face competitive and constant changing environments.

The Rehabilitation Council of India, (2017) holds that there are nine areas of assessment adaptations/ modifications in inclusive learning environments namely:

1-Quantity: Adapt the number of items or activities to be completed. For instance, the teacher may consider reducing the number of questions or the length of assignments

2-Time: Adapt the time given in order to allow test completion. For instance, allow learners to take assignments home, give short breaks during tests and exams, Add time for completion of tests or examinations

3-Level of support: For instance, read test questions

4-Input: allow use of visual aids

5-Difficulty: permit use of calculators or simplify test instructions

6-output: Adapt the way the way learners respond to instruction. For instance, accept verbal or written responses

7-Participation: Adapt the extent to which the learners are involved in the assessment. Permit the use of color map instead of labeling the map.

8-Adapt the goals: In Mathematics while some students calculate volumes in Geometry, others identify shapes.

Substitute curriculum: Evaluate in co-curricular skills

9-Alternative goals;

According to Orluwene et al., (2019), assessment adaptations are modifications and accommodations which a teacher makes in connection with assessment processes in order to meet the needs of diverse learners in his classroom. They hold that most assessments in our secondary schools are mainly cognitive and as a result of this exclude most learners with challenges from the process as their educational needs are not generally met. Some common types of assessment adaptations include but not limited to:

- Time adaptation
- Rest time or frequent breaks adaptation
- Preferential seating
- Use of computer to take exam
- Use of scribe or tape recorder to write down the learners' oral questions
- Reading test aloud.

Assessment adaptations are grouped into four main groupings notably:

- a-Presentation Adaptations
- b-Response Adaptations
- C-Setting Adaptations
- D-Timing and scheduling

The following table according to Orluwene et al.,(2019) briefly presents the relationship between barriers related to the assessment process and the corresponding adaptations categories, and equally provides examples of adaptation for each category.

Table 3 : Barriers Related to Assessment Process, corresponding adaptation category and examples of adaptation for each category.

Barriers Related To The Assessment Process	Adaptation Category -Allow The Students To:	Examples Of Adaptations.
Presentation Adaptation The way information is Presented.	Access books and materials - Access Information in ways Different from standard visual Or auditory means Change the way that instruction direction and information are Presented	-Books and materials with large prints. -Visual cues like color Coded text -Audio application devices -audio books -Sign language -Close captions on Videos -Braille
The way in which learners are supposed to respond as writing speech	RESPOND ADAPTATIONS Allow learners to complete assignments tests through ways different from traditional written or oral responses	- Speech to text software - Orally dictate responses - Through a scribe or digital recorder - Responding in test booklets and not in answer sheets - Use of calculators
The characteristics of the setting like noise level or lighting conditions	SETTING ADAPTATIONS Allow some change in the environment or the way the environment is structured	- Preferential seating as near the teacher or board Change setting in order to permit physical access -Testing in a different Location as in a quiet room - Reduce distraction to other students - Change setting to allow the use of specialized equipment
THE TIMING AND SCHEDULING OF THE INSTRUCTION AS TIME OF THE DAY, LENGTH OF THE TEST OR ASSIGNMENT	TIMING AND SCHEDULING ADAPTATIONS - Allow for changes to when and how long learners have to complete assignments or tests - Break assignment or test into smaller parts.	- Extend time to complete tasks - Frequent breaks - Shorter testing or assignment periods or sessions

Source: Orluwene et al.,(2019)

According to Fuchs and Fuchs,(1995); Nana et al.,(2012); Ekema,(2012); Endeley, (2015); Orluwene et al.,(2019); Shey,(2020) assessment adaptations enable the teacher to assess different learners differently in all domains of child development while adapting the tasks to children developmental stages of child development so that each learner especially the one with challenges will recognize his or herself in the exercise and thus develop interest in the teaching learning process for the betterment of inclusive education. It is worthwhile noting that the kind of technique chosen by the teacher must allow students with challenges to effectively show or demonstrate their learning during the evaluation process. These evaluations should play off students' abilities and reduce the influence of their weaknesses, so that they can unveil or awake their innate greatest potentials. It is in this light that Suzanne, (2017) says each and every student with learning disabilities is unique, as their strengths and needs, because of the diversity of challenges, it is vital that teachers know their learners very well in connection with their strengths and needs so that they will be able to select suitable adaptations for them because students will respond differently to adaptations offered to them. Similarly, each assessment is different so a technique which is effective for one assessment may not be best for another one. In line with the above, she provided some examples of assessment adaptations for students with challenges that support the implementation of inclusive education notably:

- For students with writing difficulties, they can have access to a scribe or speech-to-text technology; use spell-checker text software use word prediction software; to help with spelling and to ease the process of generating idea; use a method of demonstrating their learning, other than pen and paper; videos; mind maps comics; Bristol boards; models; complete the evaluation as fill in the blanks style page; so that the students just have to put in the information tested.
- For the students with difficulties organizing their ideas and time, chunk the information into smaller sections that a learner can complete over a number of different class periods. Chunk the questions into smaller steps, and in a logical order for the task required. Use counts down timer to assist students manage their time.
- For learners with memory difficulties, provide the following items:
 - a) A word bank related to the assessment;
 - b) A formula list related to a Mathematic test;

- c) A glossary (either with images or written definitions, depending on the learner's strength);
 - d) A reference page for calculations processes (division, multiplication, how to use a protractor);
 - e) Provide students with devices like calculators for Mathematic as they will still need to justify their answers on paper.
 - f) For problem solving, read the problem aloud.
- For students with reading difficulties, the student can listen to the assessment questions using text-to speech technology. If he or she has no access to technology, somebody can help him or her read the questions aloud.

According to Sara, (2018) rigid assessment of all learners in now days classrooms does not take into consideration the diversity needs of all learners and as such constitutes a great barrier to the implementation of inclusive education in many a schools. She holds that assessment must be adapted if it has to meet the diversity of needs of all the members of the classroom. Besides, adapted assessment that meets the interest of every learner enables them to awake their inborn talents inherited in them and thus demonstrate that in every disability there is ability. According to her, to adapt assessment for learners with visual impairment the teacher can:

- Adapt test material as students with limited vision have problems reading and responding to traditional paper-based tests. With this in mind, the teacher has to consider the following tests designs when adapting assessment materials:
 - 1) Large print
 - 2) Wide line spacing
 - 3) More spacing between words
 - 4) Tactile graphics
 - 5) Simplified instructions and text
 - 6) High contrast between the text and background (e.g., black text and bright white paper)

- **Modify assessment method**

In a situation where modified materials are not sufficient to assist learners with visual impairments, the teacher can adapt the assessment method by reading the test aloud and giving the learner the option of oral answers. Such students could be given scribes which will help them answer their questions.

-Adapting the testing environment

Apart from adapting assessment materials and methods, the teacher can think of adapting the testing environment for learners with visual impairments. Such students may perform better when they are provided a quiet testing environment which is free from noise and distraction to them.

-Adapting the testing time

Another adaptation is to give students with visual impairments extra time to complete their work. For instance, if the time allocated for the test is 30 minutes, students with visual trouble may be provided an hour. Furthermore, students with visual impairments should sit near the front of the room or closest to instruction in a well-lit area; have a larger desk or table space to compensate for any other extra equipment, have a seat near an electrical outlet to plug in any appliances and finally have flexibility to move around the class as required in order to get a better look.

According to Bryant,(2017);Endeley,(2015);Ekema,(2012);Esere,(2011) effective assessment adaptation for inclusive classrooms should not just touch one common domain of child development as it is the case in most of our secondary schools but should cover all the three domains of child development notably cognitive, affective and psychomotor domains as children may succeed differently in different domains and not just in the cognitive domain. For instance, drawing and counting ten grasshoppers is a cognitive and psychomotor learning activity which can be used to assess normal and disabled learners. While normal learners are drawing and counting ten grasshoppers, those with challenges are just drawing grasshoppers.

2.1.4 The Concept of Disability

According to UNESCO (2005), over half a million persons are disabled as result of mental, physical or sensory impairment. These individuals are often limited by both physical and social barriers, which exclude them from society and prevent them from actively participating in the development of the nations. It adds that ‘’the key of unlocking these

potential rests in the minds of men: it is through education and the respect for the rights of all individuals that change can effectively take place (p5).

The use of the word disability to describe children with a particular condition has been interpreted by some psychologists and sociologists in different ways. According to Santrock (2001) "A disability involves a limitation on a person's functioning that restricts the individual's abilities. This condition could be imposed by society, the physical environment, or the person's own attitude" (p198). This is why educators should speak of children with disabilities", rather than "disabled children " to emphasize the person, not the disability. However, as stated by Santrock, although some Psychologist hold that children with disabilities are no longer referred to as "handicapped", the term handicapping conditions" is still used to describe the impediments to the learning and functioning of individuals with a disability that have been imposed by society. For instance when pupils who use wheel-chairs do not have adequate access to the bathroom, transportation, and so, this is referred to as handicapping conditions".

In examining the concept of disability as a process, Nsamenang (2005) explains that:

Disability can be understood as a process which begins with organic impairment (of genetic or environmental origin). If impairment is not corrected or compensated for, it gives rise to functional disability. Functional disability is about a person's difficulty with or dysfunction of one or more personal characteristics, such as difficulties with hearing or seeing.

In a similar vein, the United Nations (1975) explain that a person with a physical disability for example may be unable to perform certain physical movements or functions that other people take for granted. Similarly, a person with a sensory disability may lack or have significant impairment of one of the major senses, such as sight or hearing, which for other people provide important channels for receiving information about the World around them. An individual with a mental or emotional impairment may have a reduced ability to deal with the stress of life or to sort out the real from the imagined. And people with cognitive impairments such as learning disabilities and mental retardation, have disorders in the ability or rate of accepting, processing, storing and recalling information. But whatever the limitations associated with particular disabilities, people with disabilities have been saying for years that their major obstacles are not inherent in their disabilities, but arise from barriers

that have been imposed externally and unnecessarily. As a United Nations International Group of Experts (1975, p3) concluded, despite everything we can do, or hope to do to assist each physically or mentally disabled person achieve his or her maximum potential in life, our efforts will not succeed until we have found the way to remove the obstacles to this goal directed by human society... the physical barriers we have created in public buildings, housing, transportation, houses of worship, life, and other community facilities... the social barriers we have evolved and accepted against those who vary more than a certain degree from what we have been conditioned to regard as normal.

According to William Woods University,(2016) assessment is an indispensable part of the educational process. Every educational program has to aim at the holistic development of the child. Hence, learning experiences provided in school should not just contribute towards the achievement of desired goals, but equally while selecting those learning experiences, we must consider both scholastic and co-scholastic outcomes as expected behavioral outcomes. One of the main *raison d'être* of assessment at school is to help students improve their work in scholastic areas and to develop life-skills and attitudes with reference to the larger context of life. A proper understanding of students, educational aims, the nature of knowledge, and the nature of the school as a social milieu is capable of helping us to arrive at principles to guide classroom practices. Furthermore, assessment should be seen as a component of curriculum with the purpose of proper delivery and additional improvement of the teaching learning process. This calls for the use of alternative methods of assessment.

2.1.5 The Concept of Inclusion

UNESCO (1994) defines inclusion as ‘‘ a process of addressing and responding to the diversity of needs of all learners through increasing participation in learning, cultures and communities, and reducing exclusion within and from education. It involves changes and modifications in content, approaches, structures and strategies, with a common vision which covers all children of the appropriate age range and a conviction that it is the responsibility of the regular system to educate all children’’ (p.13).

Inclusive education has evolved from the movement associated with the struggle against the inclusion of children with disabilities and others categorized as ‘‘having special needs’’ to one that challenges all exclusionary policies and practices in education (World Education Forum, 2000).

According to Norwich (1999), there are different practical interpretations of inclusive education especially when the population of children with disabilities is considered. Two interpretations are common and these view (1) inclusion as being physically in the same place and doing the same activities as other students, or (2) inclusion as social acceptance and belonging (pp.8-10). He adds that inclusion also implies a right to individual relevant learning.

The basic premise of the inclusion movement is that principles of anti-discrimination, equity, social justice, and basic human rights make it imperative that children with disabilities and special needs should enjoy the same access as all other students to a regular school environment and to a broad, balanced and relevant curriculum (Knight 1999, UNESCO, 1994).

It is believed that inclusion in the mainstream enables children with disabilities to benefit from the stimulation of mixing with relatively more able students and having the opportunity to observe higher models of social and academic behavior (Elkins, 1998).

The most important reason to include all students in the Mainstream is that it is fair, ethical and equitable thing to do...it is discriminatory that some children, such as those "Labeled" disabled, must earn the right to be in the regular educational mainstream or have to wait for educational researchers to prove that they can profit from mainstream, while other children are shown unrestricted access simply because they have no label.

A major factor influencing the rapid worldwide movement toward inclusion was the promulgation of the Salamanca statement and framework for action on special needs education (UNESCO, 1994). This statement recommends inter alia, that all children with special needs should have full access to regular schools and to be taught in classrooms using predominantly adaptable and child-centred pedagogy.

Early proponents of inclusive education like Dunn (1968) argued that placement in segregated settings is itself responsible for people with disabilities being labeled and excluded from the mainstream of society. Despite Dunn's (1968) arguments, it is not evident whether inclusion in itself can remove the stigma attached to the disability. But it is clear to say that this limits to a certain extent, the negative aspects "normal" persons have towards persons with disabilities and special education needs.

The movement towards inclusion of students with disabilities into general education classes has become the overwhelming trends in education (Chow and Kasari, 1999). Not only does inclusive education for children with disabilities bring improved academic functioning (Sideridis et al, 1997), but it offers them the opportunity for socialization with their peers without disabilities in general education classrooms (National Centre for Educational Restructuring and inclusion, 1994). Isolation and anxiety on behalf of the teacher lead to embarrassment for the student, pity leads to self pity in the student with a disability and over protectiveness leads to dependence. Consequently, teachers should “routinely project attitudes, beliefs, expectations and attributions... that imply that their students share their own enthusiasm for learning. To the extent that they treat their students as if they already are eager to learn, they will be more likely to become eager learners” (Brophy, 1986).

2.1.6 International Legal Instruments

In the report of the International commission of education for the 21st Century, Delors (1996) states that over the past fifty years, the International community has begun to develop a vision of education. Education, the report asserts, is not simply a mechanism whereby individual acquire a limited range of skills. Rather, it is a crucial factor in social and personal developments, ‘an indispensable asset in [humankind’s] attempt to attain the ideals of peace, freedom and justice’ and, ...one of the principal means available to foster cheaper and more harmonious form of human development and thereby to reduce poverty, exclusion, ignorance, oppression and war (Delors, 1996.p.11). This vision means that education has to be seen, not as a privilege for the few, but as a right for all (UNESCO, p.16).

According to Stubbs (2002, p.6), education as a right for all children has been enshrined in International instruments since the Universal Declaration of Human Rights in 1948. She goes further to explain that several instruments pointed out that particular groups, including disabled children were especially vulnerable, notably stating that the right to be educated within the mainstream system and not to be discriminated against was highlighted in more detailed instruments such as the Jomtien declaration and the UN Convention on the Rights of the child. However the right to education does not automatically imply inclusion. The right to inclusive education is most clearly stated in the Salamanca statement and framework for action which emphasizes that schools need to change and adapt. **The importance of proper resourcing for inclusion is highlighted in the UN Standard rules...** (Stubbs, 2002)

As can be noticed, the move towards inclusion has involved a series of changes at the elaboration of numerous legal instruments at the international level. Inclusion has been implicitly advocated since the Universal Declaration of Human Rights in 1948 and it has been mentioned at all stages in a number of key UN Declarations and Conventions as presented on table(4) below.

Table 4: The UN Human Rights Framework for Inclusion

Dates	UN Declarations and Conventions for Inclusion
1948	Universal Declaration of Human Rights. (Ensures the right to free and compulsory elementary education for all children)
1989	UN Convention on the Rights of the Child (Ensures the rights for all children to receive education without discrimination on any grounds)
1990	The World Declaration on Education for All (Jomtien –Declaration)
1993	The UN Standard Rules on the Equalization of opportunities for Persons with disabilities-rule 6 (Not only affirms the equal rights of all children, youths, and adults With disabilities to education but also states that education should be provided in ‘an integrated school setting’ and in the general school setting’’
1994	Salamanca Statement and Framework for Action on Special Needs Education (Schools should accommodate all children regardless of their physical, Social, emotional, linguistic or other conditions. This should include Disabled children, gifted children, street children and children from Remote or nomadic populations)
2000	World Education Forum Framework for Action, Dakar. EFA Goals + Millennium Development Goals (Ensuring that all children have access to and free compulsory primary Education by 2015. Focus on marginalized and girls children)
2001	EFA Flagship on the Right to Education for Persons with disabilities: Towards Inclusion.
2005	UN Disability Convention in Progress

Source: Ekema,(2012)

2.1.7 Education as a Human Right

At the core of inclusive education is the human right to education pronounced in the Universal Declaration of Humana rights in 1948, which asserted that everyone has the right

to education...education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Education shall be directed to the full development of human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups and shall further the activities of the United Nations for the maintenance of peace (Article, 26).

In spite of this Universal declaration of Human Rights, and its ratification by several countries in the world, Stubbs (2002); Edema,(2012) observe that, disabled children and adults are however frequently denied this fundamental right. This is often based on an assumption that disabled people do not count as full human beings, and so are somehow the exception in terms of Universal rights .As a result of this discrimination, disability groups around the world were vehement in lobbying for another UN Human rights instrument that could make specific mention of people with disabilities, and emphasize that ALL such people, no matter how severely disabled they are, have a right to education.

2.1.8 The UN Convention on the Rights of the Child (1989)

The first texts which reaffirm the rights to education, was the United Nations Convention on the Rights of the Child of 1989. This ‘‘legally binding instrument that all except two countries (USA and Somalia) have signed’’ (Stubbs, 2002; Ekema,2012; Endeley,2015;) has important provisions such as the right of children not to be discriminated against, as stated in article 2 and Article 23. A close examination on this UN Convention brings to light four general principles, which underpin all other articles including those on education:

- i) Non-discrimination (Article 2) making specific mention of children with disabilities.
- ii) Best interest of the child (Article 3)
- iii) Rights to survival and development (Article 6), and
- iv) Respect for the views of the child (Article 12)

Article 23, which focuses on Children with disabilities, states inter alia that:

- (1) State parties shall recognize that a mentally or physically disabled child should enjoy a full and decent life, in conditions which ensure dignity, promote self-reliance and facilitate the child’s active participation in the community.

- (2) ... Recognize the right of the child to special care...subject to available resources...
- (3) ... “ effective access to and receive education, training, health care services, rehabilitation services, preparation for employment and recreation opportunities in a manner conducive to the child achieving the fullest possible social integration and individual development, including his or her cultural and spiritual development” (Article 23).

However, these articles which focus specifically on children with disabilities have two weaknesses (1) It is subject to available resources” and, (2) it focuses on, or evokes the concept of “special needs” without clearly defining these special needs. Article 29 on the “aims of education” expresses that the educational development of the individual is the central aim and that education should allow children to reach their fullest potential in terms of cognitive, emotional and creative capacities, (UNESCO, 1994 p.12). A logical consequence of these rights is that all children have the right to receive the kind of education that does not discriminate on any grounds such as caste, ethnicity, religion, economic status, refugee status, language, gender, disability, etc. and that specific measures should be taken by the state to implement these rights in all learning environments.

2.1.9 The Ideal of Education for All

Based on a gloomy analysis of the world-wide state of basic education, the education for all (EFA) movement was launched at the World Conference of Education for All in Jomtien, Thailand in 1990 and culminated in the world Declaration on Education for All (the ‘Jomtien Declaration’). (See Appendix 4).The Jomtien World Declaration tried to address some of the World-wide challenges on Education for All. In its article 3 on “Universal Access and Promoting Equity” it stated inter alia that educational disparities existed and that many different particular groups were vulnerable to discrimination and exclusion. (Article 3, para, 4) and particular reference was made on disabled people, stating that: “the learning needs of the disabled demand special attention. Steps need to be taken to provide equal access to education to every category of disabled persons as an integral part of the educational system. (Article 3, para 5). However, this declaration did not clarify what was meant by “integral part” and does not strongly advocate inclusive as opposed to segregated education.

2.1.10 Inclusive Education and Special Needs

A year after the 1993 UN standard Rules, professionals working in schools and trying to find ways to enable all children to learn together, pushed forward their ideology, which led to the Salamanca conference (UNESCO: Salamanca, Five years on, 1999). This statement is today the key International document on the principles and practice of inclusive education. It outlines several pioneering and fundamental principles of inclusion that have not been discussed in previous documents. (See Appendix 6). According to UNESCO, (1994, p.iii) the major impetus for the inclusive education approach was given by this world conference on Special Need Education in 1994. Although the immediate focus of the Conference was on special needs education, its conclusion was that: ‘‘Special needs education-an issue of equal concern to countries of the North and of the South-cannot advance in isolation. It has to form part of an overall educational strategy and, indeed, of new social and economic policies. It can form major reform of the ordinary school’’ (UNESCO, 1994, p.iii-iv). Paragraph 2 in Article 2 of the Salamanca Framework for action (1994) provides a particular eloquent argument for inclusive schools as it asserts that: ‘‘regular schools with this inclusive orientation are 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).

In the same line with Stubbs,2002; UNESCO, (2005), Ekema,(2012) indicates that after the Salamanca statement on inclusive education in 1994, other instruments have been put in place notably the World Education Forum Framework for Action, Dakar (EFA goals) and the Millennium Development goals in 2000. This was for ‘‘Ensuring that all children have access to and complete free and compulsory primary education by 2015. Focus was on the marginalized and girls. In the year 2001, a flagship Program on education and disability was lauded. The aim of the flagship is to: place disability issues squarely on the development agenda...and...advance inclusive education as a primary approach to achieving Education for all. (UNESCO and EFA Flagship initiative web page). Since 2005, there has been a UN Convention (in progress). The convention aims at promoting the rights of persons with disabilities and mainstreaming disability in development (UNESCO, 2005). An overview of the international instruments is a theoretical reflection of developments in education and inclusion over the last few decades

2.1.11 Legal Provisions in Cameroon

The Republic of Cameroon signatory and number of International Conventions sparked off the enforcement of International Instruments through Law No. 90/1516 of 26th November, 1990 to lay down the conditions for the implementation of that law. Section 2(1) Chapter one of this Decree on the education of children with disabilities states:

“Les enfants déficients auditifs, visuels, et mentaux bénéficient d’une éducation spéciale leur permettant d’acquérir l’autonomie nécessaire à leur inscription dans les écoles ordinaires”. The chapter which stresses on the education of children with disabilities provides that children with disabilities shall be educated in normal schools as well as in special education centers. This is in line with paragraphs 8 and 9 of Rule 6 of the United Nations Standard Rules on the Equalization of Opportunities for persons with disabilities (1993). However, the rationale behind training in such special education centers is the prior acquisition of the required skill and autonomy needed for their coping in ordinary schools. This is probably why the state of Cameroon provided special education facilities only at the basic level of education as the starting point. The existence of the state owned Rehabilitation Institute for the Blind (RIB) in Bulu, near Buea justifies this.

This also confirms the fact that Cameroonian legislators are in line with the International Community to equally advocate the integration/inclusion of children with disabilities. According to Kusalu (2005), although there is no policy yet on how this could be effectively carried out, the Decree of application, in its Article 3(1), provides a giant idea in the following words “The normal schools where disabled children are enrolled shall, if necessary, have a specialized staff and appropriate teaching aids for the education of such children” (p.13). The weakness of this Decree as can be seen is that it lacks enforceability since regular or normal schools may be endowed with specialized teachers and appropriate teaching aids only “if necessary”.

When a legal instrument is discretionary as is the case in point, it no longer commands enforceability. This is basically the reason why there is a lack of specialized teachers and instructional materials for children with disabilities in regular public schools. This same Decree No. 90/1516 of 26th November, 1990 is not also enforceable due to the lack of inter-ministerial texts between the Ministry of Social Affairs and the Ministry of Basic and Secondary Education prescribing modalities which can facilitate the implementation of these provisions for the benefit of children with disabilities.

2.1.12 Inclusive Education

For a long time, integration has been considered a wide improvement method of educating children with challenges. The present ideal of education for all (EFA) re-expressed at the Dakar world education forum April 2000 said crystal clear that inclusive education was the gateway to education for all. Since the presidential decree of 1990, lots of schools are trying to welcome all children. It is actually the right of children with challenges to learn and go as far as their mates without challenges because in every disability there is ability. This of course can only take place in an environment which is an embodiment of peace, friendship, mutual respect, tolerance and happiness. The *raison d'être* is to ameliorate each learner's participation and learning rather than putting all efforts on subject matter and examinations. Following the UNESCO, (2008) guidelines for inclusive education, the education of challenged children is looked upon as a process which considers the diverse needs of all children, enhances and fosters participation in learning, cultures and communities and limit or remove the practice of exclusion from education. Such guidelines are concerned with quality classroom management adaptation, instructional adaptation and assessment adaptation learning environments among others.

Inclusive education requires that suitable means be found to innovate the education system as well as other learning facilities so that they will be welcoming to all types of learners (Bayliss,1997; Croft, 2010; Fish, 1995; Frederickson, 2002; Glat et al.2007; Kenosi, 2000; Wehmeyer, 2006; Miles et al.,2010; Nana et al.,2012; Endeley,2015; Taneyo et al.,2018; Fonkoua, 2018); Shey,2020; This calls for a learning environment that contains holes of different shapes namely square, rectangle, circle and triangle ready to welcome and accommodate children of different shapes notably square, rectangle, circle and triangle etc.(Bezagwa,2019b). This calls for removing the cracks in inclusive learning environments so that inclusive education would be properly implemented. Such cracks include inaccessible roads and facilities, hostility and non inclusive practices on the part of teachers. Here inclusive education contrasts with mainstreaming in the sense that unlike inclusive education learning environment that is made up of holes of various shapes welcoming learners of various shapes, it is made up of a learning environment that has just round holes welcoming learners of different shapes and it is the responsibility of each learner to adapt to the learning environment (Bezagwa, 2019b). For teachers to meet the diverse needs of every child, they have the right to and the responsibility to use suitable and diverse instructional materials. Besides, it is equally their responsibilities to transform their classrooms from jungles to

environments which are embodiments of peace, happiness, tolerance, mutual assistance and peaceful co-existence(Bezangwa,2018).These materials could be made available to them by the school authorities, the children, families, health services, community leaders, and the community, (Shey, 2003; Fonkoua,2018; Manfouo et al.,2020), as the creation of commendable learning environments is the responsibility of the government, educational institutions, NGOs, teachers, learners and parents. In Cameroon as elsewhere on the African continent, most children with challenges find the learning environment of their schools inaccessible to them (Nana et al.,2012; Endeley, 2015; Onyekachi et al., 2016; Ibebuike and Ibe, 2014; Federal Republic of Nigeria, 2004; Izugba and Obiefuna, 2005; Mkpa, 2015; Iwuamadi,2009; Chaffi, 2017; Bezangwa,2018b; Shey,2020).

The figure 15: below according to UNESCO, (1994) indicates the characteristics of a friendly, supportive and enjoyable inclusive learning environment of a school.

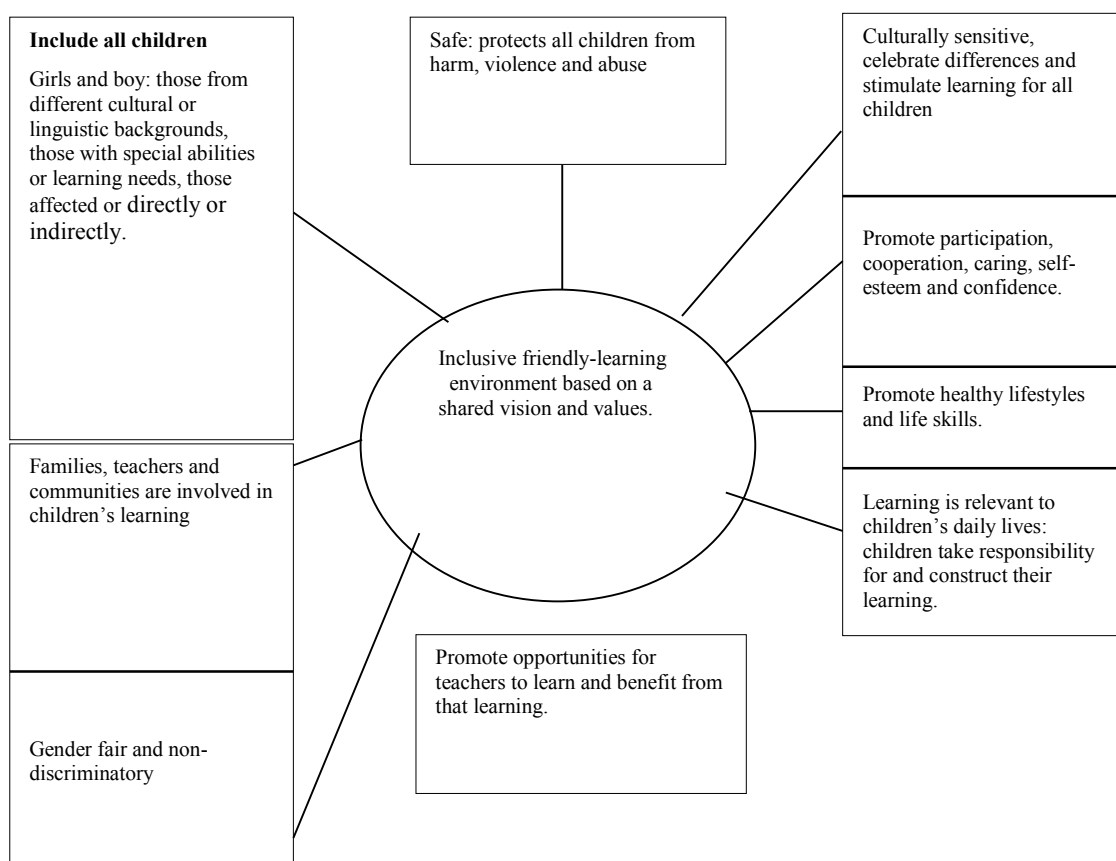


Figure 15: Characteristics of a friendly, supportive and enjoyable learning environment
Source: UNESCO Toolkit (2006)

The above diagram clearly states the kinds of elements expected in an inclusive learning environment. Such an environment admits every child irrespective of his or her

challenge, is safe, culturally sensitive, promotes participation and healthy lifestyles, non-discriminatory, and promotes learning which will enable the children to fit themselves into constant changing societies. It is possible to adapt some learning environments in secondary schools in Cameroon in order to obtain these characteristics which are very supportive of inclusive education. Learners with challenges will find happiness and the desire to learn and interact with others if the learning environment of their school embodies most of these characteristics or all of them, a contrary learning environment will surely force them to drop out of school. However, as Tanyi, (2016); Chaffi, (2017); Bezungwa, (2018b); Nkegoa, (2015); Horne and Timmons, (2009); Niesyn, (2009) hold, some variables namely, gender, type of school and type of challenge, do not allow some students with challenges to hold on their studies in learning environments that leave so much to be desired.

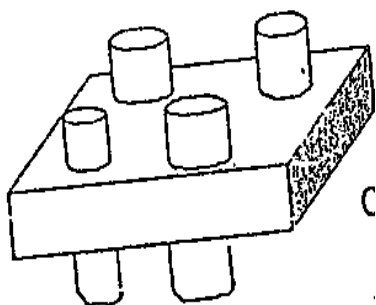
According to UNESCO Salamanca statement (1994), most schools with inclusive ideologies are the best ways for fighting discriminatory behaviors, putting in place welcoming and enjoyable communities, creating inclusive societies and educating every child no matter his or her physical or mental situation. A school in this study is considered as an ideal learning environment though other informal learning environments like the home, church and the community, isolated at the level of the research design, are not less important. Generally, inclusive education vocabulary embodies togetherness, happiness, love, welcoming, value and friendship whereas exclusive education vocabulary is made up of sadness, rejection, anger, isolation and no availability of appropriate and sufficient educational media. Some variables that influence the education of children with disabilities will be investigated under three types of learning environments which influence the implementation of inclusive education in secondary schools in Yaounde municipality namely classroom management adaptation, instructional adaptation, and assessment adaptation environments.

2.1.13 Mainstreaming versus Inclusion

The concept of mainstreaming and inclusion are sometimes used interchangeably, mostly referring to learners “mainstreamed” or “included” into regular classrooms. These two concepts are however very different, and for the need of clarity for this investigation, their significant differences will be explained. As pointed out by Thomas,(1997) & Ekema, (2012) the problem with mainstreaming is the physical movement of the learner from one place to another without concomitant expectation of real change. In other words the

mainstream ideology holds that the learner has to be ready to fit into the system. On the contrary, inclusion as seen by Clough and Corbett, (2000) & Ekema,(2012) is about the participation of all learners and the removal of all forms of exclusionary practices. Whereas mainstreaming is about making additional number of arrangements (Frederickson and Cline, 2002; Ekema, 2012; Nana et al., 2012; Chaffi, 2017; Shey et al., 2018), inclusion is made up of various forms of practices and it is not just providing access into mainstream (Clough and Cline, 2000). Access into mainstreaming according to Thomas (1997) means that the policies and practices concern everybody and makes sure that everybody belongs to the learning environment.

Furthermore, mainstreaming usually focuses on particular types of learners, for instance, according to Thomas,(1997); Miles et al(2010); Ekema,(2012) those with learning difficulties, challenging behaviors, sensory impairment or physical disability (referring to the medical model of the disability). But inclusion focuses on all learners and generally uses a social model of disability to describe and analyze the conditions of oppression for learners described as having special education needs (Slee, 2003). The notion of inclusion does not therefore set limitations and conditions as it the case with mainstreaming about helping particular types of learners. According to Black-Hawkins et al.,(2007), Endeley,(2015) & Shey et al.,(2018) inclusion is a process that calls for wider or broader restructuring of schools so that they become more welcoming and responsive to learners diversities. For the purpose of this study, our concern is inclusion. The concept of inclusive education shall be used for this paradigm shift in providing education to students who have challenges in inclusive framework. The following figures illustrate the differences between mainstreaming and inclusion.



- Special child
- Square pegs for round holes
- System stays the same
- Child must adapt or fail
- Change the child to fit the system
- Make the square peg round

Figure 16: Mainstreaming

Source: Researcher initiative

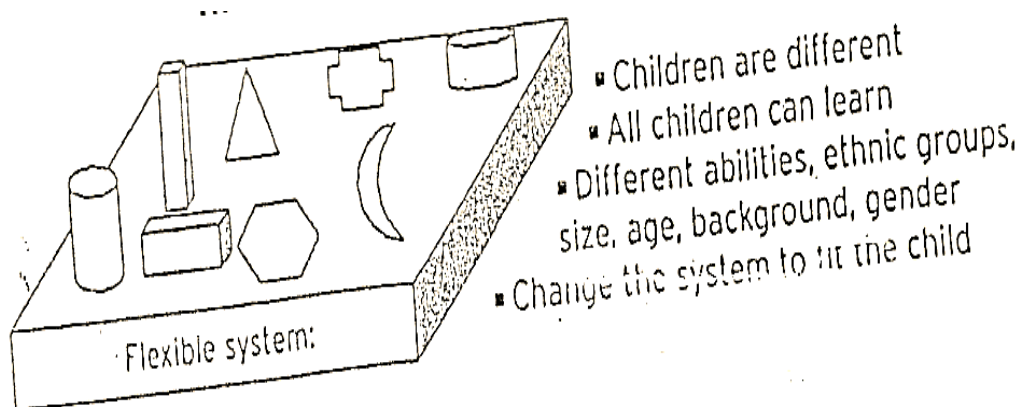


Figure 17: Inclusion

Source: Researcher initiative

2.1.14 Special Education Needs (SEN)-A Global Perspective

According to Stakes and Hornby (2000); Ekema, (2012); Endeley,(2015) the concept of special education needs is relatively new resulting from the language and philosophy of the Warnock Report (1978) that was a great milestone in the development of education for learners with special education needs (SEN) in the United Kingdom. It refers to a broad number of challenges that affect learners' ability to achieve during their stay in school. The definition of special education needs is concerned with what it takes to enable a child with a challenge to learn. Fish and Evans (1997) explain that any "special educational needs" definition should not concern itself with the circumstances or conditions that can give rise to a learning difficulty. A definition of this concept should focus more on the strengths of the learners to help teachers to have a starting point. According to Frederickson and Cline (2002) definitions of special education needs are generally based on individual deviation from normal expectations or significant in learning compared to the majority of learners of a particular age. This investigation will focus on children with special education needs especially those with learning disabilities, as this group of learners is the principal focus not just only to the researcher but also to the government of Cameroon as it is a concern that she has raised over the alarming rate of students who continuously fail and drop out of secondary schools.

2.1.15 Barriers to Inclusive Education

The Cameroon government as well as other African governments, sometimes faces the same problems in their efforts to implement inclusive education in their countries. The challenge here is how to redress this situation (remove these barriers which constitute

darkness to the education of challenged children) in order to open the way for social and educational inclusion for all learners or students. Some of these barriers are:

-Teachers' attitude and Concerns

Since inclusive education in most African countries is based on the concept of teaching learners with special education needs within regular education systems, it means all teachers are to be involved in this process. Many teachers, as Agbenyega (2007); Nana et al.,(2012); Chaffi,(2017); Taneyo et al.,(2018); Tchombe et al.,(2011); Shey,(2020) Bezangwa,(2019 b); Manfouo et al.,(2023) explain, feel unprepared and fearful to work with learners with special education needs in regular classes and they display frustration, anger and negative attitude towards inclusive education. In their studies to investigate the perceptions of basic school teachers towards inclusion in the Hohoe District of Ghana and Mbalmayo municipality in the Center Region of Cameroon, Agbenyega(2007) and Bezangwa(2019b) respectively found out that the attitudes and concerns of teachers affect their acceptance and commitment to implement inclusive education. On a different note Engel Brecht and Chris (1998); Manfouo et al.,(2023) caution the need for relevant teacher training to implement inclusion in Africa and that the teacher training curriculum has to revolve around how to cope with differences or challenges.

-Socio-economic barriers

Access to basic services is a big problem in many African countries. Poor living conditions, poverty, under-nourishment, lack of proper housing and unemployment, violence, HIV/AIDS have a negative impact on all learners Pottas (2005). These conditions may arise within the social, economic and political environment in which learners live. A lack of resources is perceived as a barrier to inclusion across cultural, geographical and economic boundaries. It is therefore important to understand what we mean by resources and begin to tackle the problem.

Miles (1989) explains that the resources are sometimes divided into human resources, materials resource (money, materials,) and access to information and knowledge. He emphasizes that the attitudinal barrier to inclusion is so great that the level of resourcing is irrelevant. It is people's attitude to those resources, and the way they utilize them, that is crucial to the implementation of inclusive education. As Bezangwa (2019 b) holds, the misuse of educational resources in our schools is one of the biggest stumbling block to the effective implementation of inclusive education

-Inflexible Curriculum

Any curriculum which is rigid and inflexible and which does not permit for individual differences can be a major stumbling block to the implementation of inclusive education. Kenosi(2000) holds that education of children with special needs in Africa has to be implemented within an education system characterized by its isolation from society and its academically focused curriculum. As pottas (2005) agrees and highlights, the lack of relevance subject content, lack of suitable learning materials, inflexible styles of teaching and concentration on academic outcomes, can lead to poor implementation of inclusive education. In some countries, problems and tensions of including children with special education needs arise from the way those countries see differences in schools. For instance, the Namibian government published a separate curriculum for learners who are intellectually impaired. Croft (2010) warns that, this raises questions about how the selection of students for this different curriculum is likely to be difficult in a country living with the legacy of apartheid. Other challenges dominating schools curriculum in Africa and Cameroon is no exception, is its orientation towards examination. Examination results in most African nations are used to judge the success of learners and this kind of definition of success as the 48th International Conference on Education (2008) pointed out is misleading because educational success should be concerned with the outcome of learning across the curriculum, not just test or examination results and should not be restricted to academic achievement. The exam-driven assessment system however, fails to capture other important aspects in the learners' experiences, most of which occur in the classroom environment.

-Medium of Instruction

English and French languages have become the dominant media of instruction in most colonized African countries (De Klerk,2002; De wet,2002). Generally most African countries colonized by Britain, France, Spain, Germany and Portugal kept their colonial masters' languages. Kenosi,(2000) remarked that in spite of their independences, most African countries have maintained their former colonial masters' languages as the media of instruction in schools, instead of replacing them with indigenous languages. The use of English and French languages as media of instruction in schools can be a hindrance and a disadvantage to many a learners. Adkins (2000) warns that young learners learn well when they are taught in their birth language or mother tongue. For many children found in schools, for instance in Cameroon, English or French language becomes their first or second language and thereafter they face learning difficulties as a result of that since all subjects are taught in

either French or English language except for English language as second language for the francophone sub system and vice versa. Considering the above explanations, foreign languages are barriers to our educational development especially in the context of inclusive education in our schools.

-Class sizes

Class size refers to the maximum number of learners assigned to a teacher or more teachers for a period of time (Bezangwa, 2019 b). When this number falls above the maximum (50-60 students) in Cameroon, it becomes a large class size. According to Van Reusen et al.,(2001), a large class size refers to the enrolment of a class which is above the fixed norms. Large class sizes do not encourage teachers to buy the idea of inclusive education. According to Agran, Alper and Wehmeyer (2002); Prochnow, Kearney; and Carroll-Lind (2002); Van Reusen et al.,(2001); Tchombe et al.,2011; Nana et al,2012; Ngwokabuenui,2013; Shey, 2014; Tanyi, 2016; Chaffi,2017; large class sizes are seen as obstacles to the effective implementation of inclusive education. As Stoler,(1992); Van Reusen et al., (2001) and Bezangwa,(2019b) put it, larger class sizes put additional demands on the regular teacher, while reinforcing worries that all learners may not get proper attention or time. According to Cornoldi et al.,(1998), the Italia educational law 517 states that a class size cannot exceed 20 if it has a student with a disability. It is believed that smaller class sizes of 20 or less can make teachers more supportive of inclusive education. While these smaller class sizes are merely indicators of the importance of small class sizes to the successful implementation of inclusive education, they are difficult to obtain in developing countries and Cameroon is no exception.

According to Demimone and Parmar. (2006) teachers may not support inclusive education because of large class sizes. This is why he said;’’ teachers feel more burden with the inclusion of children with disabilities or special educational needs in large classes as it does not promote differentiated evaluation’’. According to this author, a normal inclusive education class size should be made up of 15 learners so that the needs of every child will be met. According to Cameroon (1998), normal class sizes for nursery, primary and secondary are 25 kids, 50 pupils and 60 students respectively. But the reality in the field is quite different as in most secondary schools in towns, the class sizes are usually above 70 students and more in secondary schools in towns. The class sizes are usually above 50 kids in nursery

and 80 pupils in primary schools. This however, as Bezangwa,(2019b) points out, interferes with the proper implementation of inclusive education in Cameroon.

According to Home et al.(2009),large class sizes do not favor inclusive education principles and practices. On the contrary, large class sizes places additional burden on the regular classroom teachers and make it difficult for them to meet the needs of various groups of learners in the classroom. In support of this, Austin (2001); Toneye et al.,(2014) report that overcrowded classrooms constitute real obstacles to inclusive education and must be surmounted in order for inclusive programs to be successfully implemented.

-Support Mechanisms

Responding to the diverse needs of students with challenges in schools may lead mainstream teachers with a considerable amount of pressure in a bit to cater for students with challenges or special education needs. Ellins and Porter(2005) doubt if children with special education needs and challenges are to succeed in the mainstream education system, then their needs must be met within the classroom and teachers who are expected to meet them must be willing to provide for them. If teachers are not willing to meet their needs due to the stressful nature of the task, the children could be placed in the classroom but that is no assurance of participation or achievement. In order to facilitate inclusive education in Africa schools, Agbenyega, (2007) holds that support must be provided alongside policies to provide clear guidelines specific to each context and to involve classroom teachers in all the stages of inclusion policy development. Absence of support system may have serious repercussions not just to the innovation itself but equally to those that the innovation is intended to profit. To empower teachers to paddle the implementation process in schools demands the united support of governments, parents, communities, and all other significant role players for effective implementation of inclusive education. For instance in Botswana, the Ministry of Education has set up School Intervention Teams (SITs) within schools to help school teachers to respond to the learning needs of specific learners (Kisanji, 1999). These teams were set up in order to prevent the unnecessary referral of learners with relatively mild learning challenges to the Central Resource Centre (CRC) for special education. Whether or not these teams provide the support they are supposed to give to teachers and learners who have learning disabilities is equally another problem which needs to be followed further. Support for those who implement inclusive education should be a continuous process. Short term trainings, one-off workshops often fail to meet stated objectives as teachers may lack a clear

image of what implementation will look like in their professional schema (Spillane et al.,2002).

-Teachers' knowledge and Skills

The concept of inclusive education is new to many practising teachers in African schools and Cameroon is no exception. Ocloo and Subbey (2008); Ekema,(2012); Shey,(2014); Endeley,(2015); Manfouo et al.,(2023) hold that this situation is especially true for those teachers who began teaching long before the concept of inclusive education came into light. This is why a long time ago, learners with disabilities were refused admission into primary and secondary schools in many parts of Africa as their education was considered a great waste of resources. Besides they were to waste time for normal students (Ekema, 2012).

In his study of primary school teachers' views and experiences about inclusive education in Ghana, Mapsea (2006) found out that most teachers supported the notion of inclusive education and would like to implement it but admitted that they needed more training in the field of educating learners with special education needs in order to accommodate and teach them well. In the South African context, Ngwenya (2009) as well as in Cameroon, Bezangwa,(2019b) found that teachers' perceptions were that their fears of facing up to the challenges of inclusive education were as the result of their lack of adequate specialized basic knowledge and skills in order to meet the diverse needs of learners with disabilities and thus enhance and foster the implementation of inclusive education. It is therefore in this light that Manfouo et al.,(2023) hold that teachers should be well trained in order to properly adapt and use pedagogic methods that enhance and foster the implementation of inclusive education in Cameroon.

2.1.16 Physical Learning Environment

Physical Learning Environment is made up of facilities, furniture and available materials in schools. This also includes the seating arrangements as well as class sizes. An inclusive physical learning environment should have the following facilities which meet the needs of every learner, like separate toilets for girls children and ramps instead of stairs for children with physical challenges; a clean healthy, enjoyable and supportive environment, availability of healthy and nutritious meals, a regular supply of clear and safe drinking water and should be connected with health personnel who provide routine examination checkup of learners.

In most countries, large class sizes are common and constitute an impediment to the successful application of inclusive education. It is this light that Pearson, (2015); Anyanwa, (2009); Tanyi, (2016); Chaffi, (2017); Nkegoa, (2015); Fonkoua et al.,(2018) hold that large class size constitute obstacles which are veritable barriers to the teaching learning process notably poor individualized attention, insecurity, poor quality instruction, poor classroom management that make some students more confused and disturbed especially those with challenges. Generally in developed nations, class sizes of 25-30 are viewed as too large while in developing countries, class sizes of 70-100 are common and acceptable and Cameroon is no exception. Such large class sizes as Bezangwa, (2019b) and Agran et al., (2002) hold, do not support inclusive education as teachers are most of the time overloaded. Besides, teachers feel more burdens with the inclusion of children with challenges or special educational needs in large classes because it does not promote differentiated evaluation. To these researchers, large classes are one of the greatest causes of teacher negative attitudes towards inclusive education.

In Cameroon as elsewhere, children with challenges are found in large classes in many a school and the way out in this context is providing educational media to regular school teachers handling such classes so that they will be able to meet the diverse needs of every learner. A proper arrangement and availability of commendable infrastructure in the learning environment make students attentive, receptive and participative in the teaching learning process and this is more interesting to students with disabilities.

According to UNESCO, (2004) issues related with the physical environment of the classroom can be handled by the educator as he or she plans on how to manage all students and eliminate sentiment of confusion, frustration, crowdedness that usually install darkness in large classes. Some of these issues are maximizing classroom space in different ways, maximizing available resources and using learning, in the right way. Discussions on these issues are opened below.

Maximizing Classroom Space

In large classroom, lack of space is usually a common phenomenon. To use the available space rationally, teachers have to do away with irrelevant furniture that block space, giving the feeling of over crowdedness so that movement of learners will be properly facilitated from one point to the other. The use of more blackboards in each section of the classroom could enable students to work in groups as they would use these boards for their

learning activities like planning discussion of ideas and solving of problems. Besides, educational media should be handled in the way that they do not take a lot of space.

Facilitating Movement

Teachers need to put in advance plans to enhance and foster easy movements of the learners in and out of the classroom. They equally have to plan in advance on how routine activities will be carried out. Such activities are collection of student's scripts and returning them to the learners thereafter.

Using of Space outside the Classroom

School fields or grounds are very good resources for the teaching learning process. They are commendable learning spaces as compared to large and crowded classrooms.

Maximizing Available Resources

Enthusiastic and experienced teachers create interesting and friendly learning environments for all learners in their classrooms despite their ages, sexes, abilities or social backgrounds.

Such classroom are exciting, stimulating and real places of happiness which are greatly supportive of inclusive education as they are peaceful learning environments for children especially the challenged ones. Generally in the midst of limited and poor educational media, teacher can still perform much better by properly ordering, cleaning and making classrooms interesting and peaceful if they are creative and are willing to seek for help from the educational community. In this light, there should be more chalk boards, light and easily movable desk and chairs for group work, suitable learning corners for particular activities and if possible a petit library.

The Physical Space

Learners should be able to move very freely between various groups of desk or chairs and sometimes between their mates sitting on bare floor without disturbances. Usually, it is advisable for the teachers to vary the seating arrangements so that they and their learners would find adequate seating arrangements for the whole class as well as petit mixed ability groups. In an inclusive learning environment, the physical space allows all types of learners to enter and move around the classroom without difficulties, boys and girls to sit together and not separately, learners from different backgrounds with challenges to sit with others and not apart. In a way to make the classroom most suitable for learning, light, heat and ventilation

have to be taken into consideration. In case of poor ventilation in the classroom, the teacher should take students out of the classroom for out-door activities. Constant rotation of learners' seating positions is also called for so that the same students do not always sit in places with poor light and ventilation

Display Areas

Following the UNESCO toolkit (2004) for the creation of inclusive learning conducive environments, adequate display of education media and learners work in the classroom will make children attentive, participative, receptive and thus feel a sense of belonging to the classroom. Besides, this will make parents and guardians more interested in their children's work and will better understand what goes on in class on the daily basis to enhance and foster their children's learning abilities. The work of every learner should be properly displayed in order to show his unique capabilities. Generally, children are impressed when they see their names beside their works and this makes them happy and feel that they too have something to offer in their classroom.

It is advisable to regularly change the displays in order to keep all the learners focused and to ensure that each of them has something display per term.

Furthermore, work displayed and removed can be used to evaluate their authors. In our classrooms, colorful displayed boards are commendable instructional materials which provide lively focus in the learning environment. These displayed boards can be fabricated from local materials as woven palm and of course with the assistance of skilled parents from the educational community. Some advantages of displayed boards include, provision of information to the learners; display of learners work and improvement of their self-esteem; reinforcement of done activities; provision of feed-back information on vital learning activities as home activities and societal work; encouragement of children to learn together and assist each other, despite his or her cultural background or challenge; and the encouragement of students to learn from others' work.

Class Library

To go by UNESCO's provisions for the management of inclusive supportive learning environments, lots of local communities do not have library facilities and as a result of this children do not have access to many books. Classroom libraries can be created by using simple cardboard boxes which are decorated and filled with books made in the localities. Children's locally made books are impressive to them and they take delight in

finding their stories in print materials. The equally learn how to make, classified and care for books. Children made-books are very good teaching materials as the explanations or illustration that they include in these books are capable of helping others to understand some vital details.

Besides “feeling books” can be made and used for both with and without seeing difficulties. A book can be made for instance by gumming objects onto pages. Children learn what objects are by feeling them, for example, a circle or square is gummed onto a page so that learners who are visually challenged can learn what the shape of a circle or square is like by simply feeling it. Similarly, those who are not visually challenged may find pleasure in creating and using such “feeling books” by closing their eyes and feeling them page by page. In the same line, “feeling posters” based on touch instead of sight can equally be made and displayed in the class library.

A class or school library in some milieus is a platform where important community resources are displayed for educational activities and information related to weather, rocks and soils, agricultural calendars, the site of specific buildings or lakes, etc... which can at times be exploited by community workers or NGO’s when they intend to carry out community development activities.

Learning Corners

According to UNESCO toolkit (2004) for the creation of inclusive, learning friendly environments, learners are usually interested and curious about the natural environment around them. Corners for science subjects notably Mathematic’ Biology; Physics and Chemistry can arouse students’ curiosity, make them attentive, receptive and thus improve their learning. Here, students are permitted to collect and organize things that draw their interest so that these resources are made available for all students. It is advisable for teachers to make students grow seeds in these corners, get fruit and display objects which they have seen, for instance, snail shells and sea shells. These learning corners should be well located so that users do not perturb their mates.

In case of nature corners, living things such as a fish can be much suitable in an active classroom. This does not only make the lesson more interesting but it equally enables the learners to cultivate love and care for living things, to stop being cruel to them. The fish should be returned to the water if possible. For mathematics corners, empty cans and packets can be made available and well placed in shelves. They are not only very good learning

materials but also places for the storing of other materials like beads coins and paper and cardboard and well used in role-playing activities or sketches related to shopping.

Generally, objects discovered or found, labeled, displayed and used by the learners enable them to make connections between the school, daily life and the rural or local environment. It is sometimes necessary that rural craftsmen and community musicians pay visits to schools and discuss with the students and where it is possible leave some objects like instruments and tools, for the learner to explore and draw, for a set time. Full participation of students in the management and organization of the learning environment and learning materials will help to secure classroom learning materials, and also enable them to develop responsibility and citizenship skills. Not all classrooms are sufficiently large to have different learning corners. According to Nkegoa (2015) parents can weave baskets, fill them with shells, stones, beads, seeds, empty cans and anything that can be used as instructional materials and place them in the classrooms so that they are used for various learning activities.

All of this makes the physical learning environment accessible, pleasant and enjoyable for all learners.

2.1.17 Social learning Environment

The social learning environment of the school refers to the relationship between teachers and learners, the school administrators and staff, the school administrators and learners, the learners and other learners, and the school and the community. Concerning the relationship between learners and peers with challenges, Tukov, 2008; Federal Republic of Nigeria, 2004; Izugba and Obiefuna, 2005; Nana et al.,(2012); Mkpa, 2015; Obanya, 2017 hold that one of the elementary assumptions of inclusive education is that immediately learners with challenges are included in regular education classrooms, they will become less stigmatized and they will be easily accepted by their peers without challenges. It is in this light that they equally stress that children's most fundamental needs as they grow up are to be known, accepted and valued as members that are important among their mates.

The contact between learners with and without challenges comes in through interaction and this coming creates, enhances and fosters social acceptance among them. Emphasizing on the importance of the need for peer acceptance Samter, 1997; University of Buea 2008 a; University of Buea, 2008 b, University of Buea, 2011 c; University of Buea,

2011 d; University of Buea, 2011 e; University of Buea, 2011 f; Tambo, 2012; Tanyi, 2016; Chaffi, 2017; Bezagwa, 2019 a; Bezagwa, 2019 b say that learners who are accepted by their classmates find happiness and the desire to learn in their classroom and thus enjoy a number of outcomes as playing together, learning and sharing experiences which bring enrichment whereas those who are not accepted find hatred, mockery and discrimination in the so-called learning environment and suffer a lot of undesirable consequences which force them to drop out of school. Such negative consequences include stigmatization, nick-naming on the basis of their challenges and depression. Based on the above findings, it is evidenced that students who play together and socialize in various school activities finally accept and tolerate each other. It is up to teachers now to create appropriate conditions for love and amicably sharing as well as enjoyable and educative interactions. But the conflicting attitudes in most Cameroonian learning environments of the school as indicated in table 4, makes the social learning environment of the school one of the greatest stumbling blocks to the implementation of inclusive education in our Cameroonian schools.

This situation is brought about by some students who consider themselves untouchable as the result of their parents' societal influential positions. Such students negatively think that the respect of school rules is the business of their mates from poor family backgrounds and any attempt by their mates or school administration to redress this situation usually create tensions in the school environment which sometimes leads to deaths or serious wounds of others or to situations where their parents or guardians come in and humiliate school authorities, Bezagwa,(2019b).This tensed situation makes students with challenges feel that , as Rotimi, (1971) says “ if crocodiles can eat their own eggs then what can they not do with eggs of other animals?” Meaning that if learners without challenges can fight and kill themselves and even beat and stab teachers, then what can they not do with them? For a successful implementation of inclusive education, the educational community has to sensitize learners to know that all students are equal before the rules and regulations of their schools and that everyone is a potential person with a disability. When everyone acknowledges these facts and cultivates the spirit of love and peace in the learning environment, students with disabilities who are fragile and sometimes looked upon as embodiments of ill-locks and witchcrafts who are there just to waste their time and that of others as their education is a big waste of resources, Ekema (2012) will find happiness ,the sense of belonging and the desire to learn in the learning environment and this will no doubt facilitate the implementation of inclusive education in our schools.

But on the contrary, if the school environments in Cameroon remain “ les ecoles des couteaux ” ou “du sang et des larmes” meaning in English language, “ schools of swords” or schools of blood and tears” how can students in general and those with disabilities in particular who are generally fragile and timid learn? Below are some samples of “l’Ecole des couteaux” in Cameroon which can inspire the government, curriculum designers, decision makers and other stakeholders in education to devise means and strategies which will enable them to put an end to these rotten situations which have brought darkness in some secondary schools in Cameroon. It is only by doing so that the government can in practice, among other factors, facilitate a meaningful implementation of inclusive education in Cameroon.

In this connection, the Cameroonian head of state, Biya (2023) in his youth day speech to the youths acknowledged that school learning environments in Cameroon are not conducive as he said:

“...you have to keep educating yourself. You must also continue to cultivate a taste for discipline and effort, while letting yourself be guided by the virtues of creativity and audacity.

For my part, I will continue to make the necessary efforts to create, with the government and the other social partners, an environment conducive to your education.”



Figure 18: L’Ecole des couteaux or the school of swords

Source: Signatures No 172 of 19/04/ 2022



Figure 19: Some hostile learning environments in Cameroon

Source: Signatures No 172 of 19/04/2022

Table 5: Conflicting Attitudes and Tensions in Cameroon School Environments from 2018 to 2022.

Year / School and Learner's Offense	Teacher's Or Peers' action	Student/ Parents' reaction
November 20 th , 2018 Lycee Mayo Omlo: A Commander's daughter, Savana, Jeannette refused to do manual labor and assaulted the S.D.M.	The S.D.M Punished her	The commander and his wife, savanna's parents came to school and got the S.D.M well beaten
12/11/2019: At Lycee Bilingue Bonassama Douala, teachers on Duty asked a girl who came late To run to her classroom but her father who accompanied her Insulted the teachers and beat Them	Some of the teachers went to hospital for treatment and medical certificates	Their families condemned this act on teachers in the strongest terms
19/09/2019 at government school	The class 2 teacher, Mme	Her father, a gendarme got

garage militaire Bafoussam, a class 2 pupil refused to do home work	Louissette Tenalen punished him for that	the school officials copiously beaten
23/9/2019 at Lycee Bilingue Deido Douala: A christian student stabbed his muslim School mate to death.	Arrested and handed over To the forces of law and order	Parents strongly condemned their son's action.
15/01/2020 at Lycée Nkolbisson Yaounde. A student Brice Bisse Nkosso came late and the teacher asked him to go out.	He refused and stabbed the teacher Njomi Tchakounté Boris Kevin to death	Parents wept and bitterly Condemned their son's atrocity.
18/11/2020 at Lycée de Mouko, a student by name Kevin Nkemi Stabbed with a sword Mohamed Nyam to death.	Officials did not see him as he ran away before being arrested by his comrades	Parents condemned their son's deed.
22/3/2021: at GBHS Nkongsamba. Wandji Uwuma, a student, disrespected the Senior Discipline Master	Tried to Punish him but was beaten by the student	Parents condemned their son's deed
23/01/2021 at Lycée Doghem -Douala. Two students fought over 50frs and while one sustained serious wounds the other one died.	Took them to hospitals	Parents wept bitterly and condemned their son act in the strongest terms
28/03/2022: At Lycee Bilingue Nkol-Eton Yaounde, a terminale Female student fought violently With the Discipline Mistress	The indiscipline student Was dismissed	While some parents condemned their daughter behavior, others criticized the Discipline Mistress behavior that sparked that fight.
06/04/ 2022: At Complexe Scolaire Yona, a premiere student stabbed the principal with a sword .	The principal was rushed to hospital and he narrowly Missed death.	Parents wept and prayed that the principal do not dy.
05/05/2022: At Lycee Technique	She was rushed to hospital where her life was	

<p>Ebolowa, a female student was Stabbed by the school mate</p> <p>10/05/22:At Lycee Bilingue de Bafoussam a lowersixth student stabbed his classmate to death.</p>	<p>saved.</p> <p>The student was rushed to The hospital where he died</p>	<p>Parents wept and prayed for this girl's survival Lamentations and shock In his family.</p>
<p>10/05/2022: At Lycee Leclerc Yaounde, a student equally stabbed his classmate.</p> <p>05/12/2019:At Garoua 2eme, a D O (sous prefet), forced a teacher to put her knees down in front of her colleagues and school children for beaten one of her school children.</p>	<p>The police arrested him</p> <p>The poor teacher pitifully put her knees down and raised her both hands up</p>	<p>His parents were in shock Her family was shock but was no march to the D O.</p>

Sources: -Cameron Tribune no 12579/8778-48th year of 13/04/ 2022

- Signatures no 172 of 19 /04/2022

- Google scholar

-Field data

According to Samter, 1997; Nana et al.,2012; Ekema,2012; Shey,2014; UNESCO, 2016; Adewale, 2016; Anochiwa & Adeleke 2016; Chaffi,2017, the consideration which learners have for their peers, is susceptible of cultivating a positive self-esteem in them and hence assuring them of their sense of belonging that comes with attention and receptiveness. Generally, children who are happy and confident about themselves are attentive and receptive in class and are most likely to perform well in most learning activities. This is as a matter of fact in line with Maslow, (1954) who holds that the need for self-esteem can come through mastery or success in a particular area or by gaining respect or acceptance from other classmates. The creation of an enjoyable and enabling inclusive setting is prerequisite for the development of self-esteem, self -actualization which Maslow sees as one of the key requirements in his hierarchy of needs for proper child development. In the teaching learning process, integration refers to the act of belonging, belonging to the learning environment or group of learners. Each time learners have the right to belong, they enjoy the right to diversity which is a platform of give and take of knowledge and skills. It is in this light that UNESCO, (2013); Adewale, (2016); Tanyi,(2016), hold therefore that the desire to value diversity

within the human society is one of the major principles of inclusion. From the above research findings, it is evident that when the whole educational community cultivates this fundamental practice of inclusive education, learners with challenges will likely have self-esteem and a good sense of belonging to their learning environment.

Peer assistance and love is equally required in a supportive social learning environment. This is emphasized in Ekema (2012); Peach (2007), Pinar (2004); Nkeng and Mambeh (2008), Taylor and Parsons (2011); Nana et al.,(2012); Taneyo et al.,(2018) where inclusive education practices provide both learners with and without challenges commendable opportunities to make friendship with one another. For learners to properly socialize with their learning environment, they need to interact with other learners, touch and play with them. The absence of attention makes children sad and neglected children lack interest in life and doesn't usually grow well in body and soul. Children with challenges need friends with whom to share their worries, hope and happiness (Bezangwa, 2019a; Shey, 2020).

In the social learning environment teachers and school administrators equally need to take into consideration the effects of integration on learners without challenges. It has been noticed that much attention is usually placed on how integration can enable children with challenges meet their educational need and this up to an extent to the detriment of those without disabilities. On the contrary, it is beneficial to both children with and without disabilities. Inclusive education does not affect learners without challenges negatively. After all, it has been demonstrated by the growing body of research that learners without challenges usually gain lots of vital benefits from their relationships with learner with challenges. These important benefits range from social skills, personal principles, comfort level, and friendship with mates who have challenges and caring classroom environments.

The relationship between children with challenges and the teacher is a vital aspect in the social learning environment of the school. From the view point of Adewale (2016); Bezangwa (2019b) and Stainback (2008), a large majority of teachers hold that inclusive education is morally and ethically accepted, but a number of obstacles impede its implementation in most learning environments. For instance, educators usually find it difficult to use traditional methods of educational evaluation to meet the needs and concerns of learners with challenges.

Historically, evaluation methods are based on hypothetical average learners, but these methods do not take into consideration the needs and capabilities of learners with challenges, (Ekema, 2012). Usually too, educators also lack the training and experience required to take note of the needs and capabilities of learners with challenges. It is this perspective that Tanyi (2016b);Taneyo et al.,(2018); Manfouo et al.,(2023) hold that teachers usually consider just the difference or challenge of the learner instead of his or her ability to actively take part in class activities and thus learn well. Whatever the case, lots of educational systems in the world are practicing inclusive education and are experiencing positive results from it. Most teachers are today viewing the integration of learners with challenges in classrooms as a commendable contribution to classrooms diversities.

According to UNESCO (2013), Repp and Coutinho (2008), the opinion that education really has to teach social skills in order to enable all learners showcase the behavior required in order to develop and keep satisfactory relationships with mates and other school members is very much founded. In a situation where learners with challenges have behavioral problems, educators can use principles of instruction called applied behavior analysis, that analyses and changes the sources or consequences of the behavioral problem. Behavior analysis refers to the definition and analysis of specific task to be learned, direct and frequent measurement of learner performance, and giving systematic feedback to the learner. Behavior modification techniques enable learners to deal with their anger and other emotions, to better solve problems, and handle their own behavior. Educators also create suitable learning environments where adequate behavior is considered, valued and rewarded. When students are motivated and attentive, they will be really receptive and learning will thus become most effective. According to behavioral studies with both people and animals, one of the best ways of maintaining learner's motivation is the delivery of strong and immediate re-enforcers for good answers.

According to the University of Buea, (2008); Tanyi (2016) and Repp and Countinho, (2008) there are many different teaching techniques which are used for students with learning difficulties and disabilities. One of such techniques is direct instruction which is a method based on a systematic curriculum design and highly structured that enhances and fosters fast-paced lessons in which learners often participate actively. Another Instructional method is called the learning strategies instruction that is designed to teach learners' specific skills, like strategies to promote memorization or problem-solving skills. Educators can equally help

learners to work around learning disorders. For instance, educators may allow a learner who has memory difficulties to use a tape recorder to dictate notes and record class lectures.

Many children who have low vision or are blind learn to read and write by using the Braille system of raised dots that can be read by touch rather than sight. They may also use a special laptop computer that allows them to take notes in Braille and print in Braille or English or French. Sophisticated electronic devices can also convert print into a form that is readable by blind or visually impaired students. Some computers can scan printed text for a blind student and read it aloud by means of a synthetic voice. Most children with visual impairments have some functional vision and can often read by using large-print materials.

Education of students who have hearing problems involves the use of powerful amplification devices, such as hearing aids, or it may use captions (printed words that appear on a television screen or computer monitor). Many deaf or half-hearing students learn sign language, an organized system of gestures for communication. Others learn to speech read (lip read), a method of interpreting speech by “reading” the patterns of a person’s mouth as he or she speaks. Some deaf students receive Cochlear implants, which are receivers surgically implanted behind the ear and hear sounds to a varying degree.

Gifted children are often moved through the regular school curriculum at a faster pace than their peers. Some children with exceptional high ability in a particular subject area may be allowed to reduce the time they spend in their other subjects to permit more time to focus on challenging content in their specialties.

. The teacher should establish good flow of intention among learners and between teachers and learners. Tchombe (2004), suggests the use of mixed ability teaching in such classrooms when a teacher attempts to address individual difference by granting equal opportunity for learners to succeed. She further adds that good relationship between teachers and students with disabilities can be strengthened through the use of social objective. Some social objectives include: Work together and learn from each other, increased interaction between pupils, learn to tolerate and demonstrate interpersonal understanding, acquire social skills, cooperate instead of competing with each other as well as make new friends across all levels. She holds that, to translate these objectives into teaching techniques, necessitates the use of group work, peer tutoring, cooperative and collaborative learning.

2.1.18 Students with Physical Disabilities and the Learning Environment

Students with disabilities need to be able to access the learning environment. Some of these physical disabilities are caused by genetic problems. As concerns children who have physical disabilities, Silver, Kempe, Bruyn & Fulgniti (1987); Ekema,(2012); Shey,(2024), state that developmental disorder of the nervous system may occur at birth due to genetic factors, alcohol or drug used during pregnancy. Some may lead to obstruction of the circulation of the cere-brosphalus frequently accompanied by elodysplasia which is a malformation of the spinal cord and vertebrae. It occurs most frequently in the lumbosacral region of the spine. Disorders of the nervous system may be noticed as; muscular dystrophy, cerebral palsy or spinal bifida.

The muscular dystrophies are genetically determined diseases of skeletal muscle. Muscular dystrophy (Meninggomyelocel) has a soft round cyst-like mass, the walls of which contain neural tissue of the usually imperfectly developed and damaged cord. In some cases, this form consists of a defect at any point of the skull, the frontal bone, orbit or nose. They may be flaccid paralysis, absent sensation and deformities of the legs. In cervical lesions, there may be spasticity and hyperactive reflexes in the progressive weakening and sensory loss.

Cerebral palsy is a term applied to the neuromotor components resulting from various types of brain damage occurring before or during birth, or in the first year of life. It is characterized by paralysis, weakness, un coordination or ataxia, convulsions, mental retardation, visual defects, hearing defects and emotional disturbances may also be present. Cerebral palsy is the largest cause of congenital crippling disease in children. In some cases, children can be bedridden. Spinal bifida is the most common of Myeldytypsπλασία. There is no externally visible sac; vertebrae are defective, usually with no damage to the spinal cord.

The treatment of physical disability depends on the type. In some cases, correction is done through surgical measures. Children who have deformities in their limbs can be helped through wheelchair. Teachers should be vigilant about the head sizes of their learners and report in case they notice that which is growing out size.

Students with physical disabilities often benefit from the use of technology designed to increase their capability to participate in classroom activities. Technological devices used by these students may be relatively simple, such as leg braces for students with orthopedic

problems, or they may be as complex as a computer that synthesizes speech patterns for children whose disability causes speech disorders. Friend & Bursuck (1996/1999), offer some examples of learning tools that can be used with students with physical disabilities as follow: Wide aisles and walkways; Desks adapted for wheelchairs; Handrails in classroom or hallway; Accessible chalkboards and bulletin boards, Safety plans for emergency drills and others. Providing an environment that is conducive for optimal learning and that stimulates positive brain learning is the sole responsibility of the teacher facilitating the students in his/her classroom. Enriching the environment is a step toward producing a more productive and effective classroom.

2.1.19 Gender Differences in the Perception of the Learning Environment by Students with Disabilities

It's important to examine the perceptions of the learning environment by male and female disabled students. Creating gender-sensitive learning experiences is very important in an inclusive classroom. According to UNESCO toolkit (2006) "gender" refers to the social roles that men and women are assigned within a given culture, such as "men as breadwinners" and "women are assigned within a given culture, such as "men as breadwinners" and "women as child caregivers". Gender roles are created by society and are learned from one generation to the next as part of the society's culture. Gender role are not static because they change over time, similar to other cultural traditions and perceptions. Unfortunately, these roles can harm the learning of our children especially those with disabilities because they often restrict how girls and boys behave and what they are allowed to learn. The following case study is an example of how this gender restriction could occur as seen in Suan's story.

An example of gender differences in the perception of the learning environment by students with disabilities is seen in Suan's story. According to Disability Report (2013), Suan lived in a village near Pakse in Southern Laos. She was nine years old and in Grade 3. She enjoyed walking to school with her two brothers, Lee and Hing. She was a good pupil and tried hard in school, but she did not find school easy. Suan's difficulties were caused by what she had to do at home before she came to school. She had many duties to perform. Suan's sister had stepped on a mine while playing and lost one of her legs. She would often wake up Suan to comfort her as she feels the pain. Each morning, Suan had go get up before the rest of the family to carry wood and light the fire. She had to pound rice so that it could be cooked. After that, she had to wash and feed her younger sister. By the time Suan arrived at school,

she was very tired. Her brothers were never asked to help at home. They only went fishing with their father on the weekend, so they had time to do their homework. When Suan went to school; she tried very hard to concentrate.

However, she found it difficult to pay attention all the time because she was so tired, and the topics she studies were very different from her daily life. The teacher often got angry with her, particularly one day when she fell asleep during a lesson. After being scolded by the teacher, Suan decided to be absent from school. She thought it would help her parents if she stayed home every day to collect the water and firewood, care for her sister, and learn about looking after the animals. So Suan started to miss More school days school, and finally she decided not to go to school at all. She stayed at home every day and helped her mother. She did not finish Grade 3. Her brothers, Lee and Hing, both finished primary school. They could read and write and were ready to move on to junior secondary school. Suan is just one example of how gender roles and duties can lead to marginalization and dropout among girls though the teacher here as elsewhere is not less responsible for this situation.

Gender can also affect the learning of boys when they feel that school is meaningless and it is important for them to work and support their families. Moreover, girls and boys are socialized into a way of thinking about themselves and what they can do. For example, you might hear “boys don’t cry” or “girls shouldn’t play rough games”. In the same way, some girls may not feel confident in mathematics or science because they have been told that these are “boys” subjects”. Yet, all children can achieve well given the right opportunities. This is supported by Carl Roger’s Facilitation theory which advocates attitudinal qualities of teachers to facilitate and scaffold learning by students. If we are to include all children in our inclusive, learning-friendly classrooms, then we need to ask ourselves: “Do all of my children have the time and energy to complete the tasks I have assigned?” One of the ways to help answer this question is to conduct a small classroom project on how much work girls and boys do at home. Ask your children to talk about or write a short story on “What I Do At Home”. You might be surprised at how much work your children, especially girls, have to do for their families. Teachers can then adjust learning plans in their classrooms in order to fit these children’s needs.

UNESCO Toolkit (2006) proposes that girls feel more at ease in school and to ensure equal opportunities for them, teachers should work with other colleagues and school administrators or undertake the following actions. Support the revision of learning materials

and the elimination of gender and other biases, such as the lack of inclusion of children with disabilities or children of ethnic minorities in text books, or the stereotyping of poor children, street children, and working children. This is a task for the school to undertake, but individual teachers need to be aware and know how to take action. Just a sticker on a book can indicate that the book is biased in some way, and it can lead to constructive class discussions about inclusion. Introduce a more flexible curriculum and self-directed learning materials, since some girls may have many demands on their time, such as domestic work and care for siblings. Both boys and girls from poor families often find the little time to do school work, since the family needs everyone's help to survive. Try to complete learning activities during school time, and allow a choice when homework is being given.

Usually teachers speak more to boys than to girls in many classrooms. Teachers should remember to give time "waiting time" for children to answer questions. If you do not have colleague to observe you in the classroom, you can try a participatory activity with the children to assess whether you treat boys and girls differently. For instance, ask each child to collect five stones (you may already have a collection for use in mathematics). Ask each child to put one stone to one side of his or her desk every time you speak to him or her, ask them a question, or allow them to answer. Together you can assess the pattern of interaction and discuss why this might be happening.

All of these components identified above will strengthen the teacher's ability to create a learning-friendly environment for boys and girls. We may need to use single sex groupings for some practical activities so that girls can develop their confidence and not be dominated by boys. Latter, mixed sex group would be appropriate so that girls and boys learn to cooperate together. Many of these activities will need support of parents or other caregivers. For this reason, these issues should be discussed at school committee meetings, and a practical action plan should be developed. It will help all teachers if school policies on such matters as discipline and gender bias are discussed and agreed upon by all teachers and parents.

2.1.20 Perception and Sensation

The concept of perception and sensation are expanded on to include the five human senses of seeing, hearing, smelling, touching and tasting. Other senses such as; balance, kinesthetic and visceral senses and their implication in teaching and learning of students with disabilities in diverse learning environment are discussed.

According to Kendra (2011), perception is our sensory experience of the world around us and involves both the recognition of environmental stimuli and action in response to these stimuli. Through the perception process, we gain information about properties and elements of the environment that are critical to our survival. Perception not only creates our experience of the world around us; it involves the five senses; touch, sight, taste, smell and hearing. It also includes what is known as proprioception, a set of senses involving the ability to detect changes in body positions, movements and the cognitive processes required to process information, such as recognizing the face of a friend or detecting a familiar scent.

Landsay & Norman (1977), state that perception is the process by which organisms interpret and organize sensation to produce a meaningful experience of the world. Sensation usually refers to the immediate, relatively unprocessed result of stimulation of sensory receptors in the eyes, ears, nose, tongue or skin. Perception on the other hand, better describes one's ultimate experience of the world and typically involves further processing of sensory input. In practice, sensation and perception are virtually impossible to separate because they are part of one continuous process. Nsamenang (2005), states that sensation refers to the stimulation and arousal of a sense organ while perception is the act of interpreting a stimulus registered in the brain by one more sense mechanisms. The eye or any other sense organ 'receives' while the mind 'perceives' or interprets what it receives.

Human Senses: It is conventional to speak of live human senses: seeing, hearing smelling, touching and tasting. These senses are fundamental in perception. Nsammenang (2005), gives a brief explanation of human senses as follows.

The Sense of Vision: It is probably the most complicated of the sensory functions. The eyes are the sense organs of sight. They are generally likened to a camera in the way they operate. Light waves from an object enter the eye through the pupil and pass through the lens. They focus on the retina which is the photographic back plate of the eye or the true receptor of visual stimuli. The optic nerve attaches to the retina and serves as a medium for carrying the visual impulses to the brain. The retina has two kinds of receiving cells which are rods and cones, so named because of their shape. Cones are nerve cells that are sensitive to light, detail and color. Cones contain three different pigments, which respond either to blue, red or green wave lengths of light.

If a person is missing one or more of the pigments, that person is said to be color-blind and has difficulty distinguishing between certain, such as red and green. Rods are

designed for night vision and the detection of motion and objects. They also provide peripheral vision, but they do not see as acutely as cones. Rods are insensitive to color. Visual function is described in terms of visual acuity and visual field. Visual acuity is a measurement of the ability to distinguish details and shapes. Visual field indicates the ability of each eye to perceive objects to the side of the central area of vision. A normal visual field is said to be 180 degrees in diameter, or half a circle. Legal blindness is thus defined as a visual acuity of 20/200 or worse in the better eye with the best optical correction, such as eye glasses or contact lenses. This means that in legally blind, the visual field is not better than 20 degrees in the better eye. Faulty vision that cannot be corrected by eye glasses or contact lenses is called low vision.

A variety of tools are available to help students of special needs with low vision to read and work, for example, magnifier glasses in the form of eye glasses or hand-held glasses that enlarge type in books and newspapers. Computer users can benefit from closed-circuit television-reading machines that use a zoom lens to enlarge print on a computer monitor. Printers also create text in large type that is easier to read. Some computers are equipped with a voice output that reads the text aloud. Structural differences in the size of the eye cause the defect of hyperopia, or farsightedness, and myopia or nearsightedness. Some vision problems are the result of illness such as high blood pressure or diabetes mellitus.

As concerns children who have difficulty seeing, Bazily, Hawes Ibonati (1994), are of the opinion that some children cannot see as well as others. If this is discovered early, the teacher can do a lot to overcome the problem. Moreover, children who suffer the most may be those with diverse backgrounds and abilities, because their inability to see well may antagonize their already difficult situation of being set apart. They are at even greater risk of teasing, harassment and bullying. Hence, it is very important to find out if children can see well while they are still young. There are different ways of doing this in an integrated classroom. Some of the signs of a child who may not be seeing well are when the child: bumps into things easily, has difficulty in reading objects that are close by than those which are far away, has difficulty writing in straight lines, has difficulty threading needles, holds books very close to his or her face when reading and may have tears, may complain of headaches or itchy eyes, fails to catch balls when playing, wears clothes inside out, arranges items incorrectly, as well as brings the wrong objects when asked to bring something.

It is the duty of a more knowledgeable teacher to improve on the pedagogic environment of the classroom in order to make it more inclusive. When a child who has difficulty seeing first comes to school, the teacher has to meet the child and the parents alone. Next introduce the child to his or her classmates and vice versa. Write on the chalkboard using large letters, and teach your children to write in this way. Read out instructions; never assume that everyone can read them from the chalkboard. Allow children to feel teaching aids if they cannot see them; for example, maps can be outlined with strings. Each child who has difficulty seeing needs a reader to help him or her. The reader will read and explain books to the child and help the child to learn. The reader can be a classmate, an older child, a friend, or a volunteer teacher.

In case of eye problems, students can be referred to an ophthalmologist who is a physician qualified to perform medical eye examination, prescribed corrective eye glasses and contact lenses, treat diseases of the eye and perform eye surgery.

Friend & Bursuck (1996/1999), offer some examples of learning tools that can be used with students with visual impairment as follow: Large print materials: low vision devices (magnifying glass); bright light, closed circuit television, portable note taker and specialized computer software (screen reader, speech synthesizer).

The sense of hearing: In several ways our auditory sense has much in common with visual sense. Together, sight and hearing are the primary mechanics for bringing to us experiences from the outside. Hearing is one of the five senses by which which sound waves are perceived by the organ of hearing, the ear, in vertebrate animals. The process of sound perception is called audition. Humans can hear vibrations passing through gases, solid and liquids. Humane ears are capable of perceiving an extraordinary wide range of changes in loudness, pitch, frequency and tone. Some diseases of the ear can cause partial or total deafness. Ear problems should be evaluated by specially trained physicians called otolaryngologists, who treat conditions ranging from eardrum injuries caused by physical trauma to bony deposits in the inner ear caused by the aging process. Microsoft student (2009), identifies four types of hearing loss. The first, conductive hearing loss I caused by diseased or obstruction in the outer or middle ear and usually is not severe. A person with a conductive hearing loss generally can be helped by a hearing aid, surgical or medical treatment. The second kind of deafness, sensor neural hearing loss, results from damage to the sensory hair cells or the nerves of the inner ear can range in severity from mild to profound

deafness. The third kind, mixed hearing loss, is caused by problems in both the outer or middle ear and the inner ear. Finally, central hearing loss is the result of damage to or impairment of the nerves or nuclei of the central nervous system. Deafness in general can be caused by illness or accident or it may be inherited.

Children who have difficulty hearing or speaking according to Bailly, Hawes & Bonati (1994), often do not communicate, or they communicate poorly. Some of the signs that can tell us if a young child is having difficulty hearing include the following: The child does not notice voices or noises if he or she does not see where they are coming from; The child is disobedient or is the last person to obey a request; The child's ears are infected or liquid or pus is coming out; The child watches people's lips when they are talking; The child turns his or her head in one direction in order to hear; The child speaks rather loudly and not very clearly; Sometimes the child appears to be quiet and perhaps rude, prefers to be alone and may not do as well at school as he or she should.

Some children who are born without hearing may not learn to speak. They should be taught other ways to express their thoughts, needs and feelings, such as artistically or through movement and gestures (sign language). Children who have difficulty hearing or speaking are sometimes irritable. They may pay attention, or they may not listen carefully to what is being said. The teacher can improve the pedagogic learning environment by observing children who exhibit the above signs carefully. If they do not pay attention, find ways to make them interested in what you are saying. Use visual clues to introduce lessons, such as a picture, object or key word. Speak close to the child's ear when you communicate with him or her. Tell other children to do the same. When you communicate with a child, give him or her time to listen and to think. If the child responds by making sounds that are not proper words, repeat correctly and slowly the words the child has tried to say. Make sure that the child can see your face as you say the words correctly.

When you speak as a teacher, move parts of your body to make what you say clearer to the child who has difficulties hearing. Also use your hands when you speak, for example, you may use your hands to show the size of objects. Teach other children in class to use expressions and movements to communicate with the child who has difficulties hearing. Teachers should encourage children with impairments to sit with a friend who can take notes for them, so they can concentrate on lip-reading. Games and exercises can also be ideal opportunities to create a more inclusive classroom. Examples of games include; learning by

looking and learning by touching. Friend & Bursuck (1996/1999), offer some examples of learning tools that can be used with students with hearing impairment. Some of them are hearing aids, FM system (microphone worn by the teacher and receiver worn by the student), sign language and the ability to see the teacher.

The sense of taste, smell and touch

The sense of taste and smell as sensory mechanisms are traditionally linked together. Psychologists have shown that many of the things we believe we taste are only susceptible to discrimination by our senses of taste and smell. Taste is determined by receptors called taste buds, the number and shape of which may vary greatly between one person and another. Taste has four gustatory qualities (sweetness, sourness, saltiness and bitterness) plus the taste of metallic substances. The taste buds in the humans are located in the surface and sides of the tongue, the roof of the mouth and the entrance to the pharynx. The papillae are located at the back of the tongue. Taste is considered a chemical sense and requires a liquid solution from the salivary gland for stimulation.

Smell is one the senses which orders are perceived. The nose, equipped with olfactory nerves, is the special organ of smell. Smell and olfaction can be basically classified; spicy, cloves, flowery, violet, rose, fruity, orange, rid, resinous, pine, pitch, turpentine, scorched, burned, tar, putrid, decaying fish or meat and so on. The ability to perceive and distinguish odors is crucially important to health and quality of life. The smell of fire, for example, provides a warning as does the odor of spoiled food. According to Richard Axel (1990), the brain interprets this pattern and constructs what amounts to a permanent "sensory map" for each smell. This explains how humans remember odors and how a given smell-good or bad-can be associated with a particular recollection or experience for a lifetime.

Through the sense of touch, human body perceives contact with substances. Touch is accomplished by nerve endings in the skin that convey sensations to the brain via nerve fibers. Touch is the least specialized of all the senses, but acuteness can be sharpened by the use; for example, people who are blind exhibit a remarkable delicacy of the tactile sense in their ability to read the fine, raised letters of the Braille System. The skin is used in the sense of touch or pressure, pain, warmth and cold. The sensory tracts for impulses of pain, pressure and temperature follow separate paths through the spinal cord to the brain. The skin is essential to a person's survival.

Other Senses

Some other senses have identifies in the literature. They include: the sense of balance, Kinesthetic and visceral senses. The sense of balance is the normal ability to maintain an upright position. It is controlled by a delicate sensory mechanism called the semi-circular canals. For example the position and movements of the head control body position in space.

The kinesthetic sense is the sensory impulses from the muscles, tendons and joints which control the coordination of body movements. Kinesthesia is defined as the awareness of body movements. We use the sensations from our muscles and tendons as cues for performing a multitude of muscular activities. In everyday, we do not usually give conscious attention to the responses of our muscles and tendons senses. In certain physical abnormalities where they are impaired such as muscular dystrophy (crippling disease), we gain conscious appreciation of the appreciation of the implication of the kinesthetic sense.

The visceral senses are sensory responses thought to originate from the internal organs such as the stomach, intestines, liver, heart, bladder and genitalia. Laboratory experimentation has indicated that the internal organs are not as accurately localized as those of other senses like hearing, taste, equilibrium and others. Visceral sense organs do respond to specific stimuli and register characteristic body sensations which influence behavior such as hunger, thirst, fatigue, and sexual excitement, which indisputably have their origin in the internal organs.

2.1.21 Pedagogic Learning Environment

The pedagogic learning environment includes class size, teaching strategies, teaching styles and assessment techniques. The Latin meaning of ‘pedagogue’ is teaching or instructing scientifically, it is the way of dishing knowledge to the learner or facilitating their acquisition of knowledge and properly organizing the realization of educational goals. According to an educational researcher in Cameroon, Makome (2005), inclusive education pedagogy should have learning activities which are made and carried out to bring positive change in the students’ behavior. Naturally, this pedagogy should embody the cognitive, effective and psychomotor domains of the learners. According to the university of Buea (2011) and UNESCO International Bureau of Education, (2016) an inclusive pedagogic learning environment does not ignore the fact that children are different and as a result of this, learn in different ways and at different paces. This of course testifies that there is

diversity in learning and so teachers have to vary their teaching methods in order to meet the needs of all the learners especially those with diverse social backgrounds and challenges.

In order to have a totally integrated classroom, the International Bureau of Education (2016) says educators should ensure that the curriculum is accessible and relevant for all students in connections with the content they teach, the process they use to teach it and how this content relates to the milieu in which the students live and learn. In the discharge of their classroom duties, teachers normally have to take into consideration students who have challenges notably visual, auditory, physical, intellectual or sensory challenges, According to Nkeng, (2011) and Shevlin et al., (2009) differentiated instruction is one of the most important skills of education in general and inclusive education in particular as no two learners are equal. In this light, they hold that inclusive schools put great importance on providing opportunities for students to learn and be tested in various ways.

It is in this perspective therefore, that teachers in inclusive schools are supposed to take into consideration different ranges of learning modalities (visual, auditory and kinesthetic) in preparing learning activities for this does not only help challenged students, it does also diversify the education experience of all the students. The problem at this level is that many teachers are poorly prepared during their training and as a result of this does not just know what differentiated instruction is all about. Such teacher lack the required pedagogic skills needed for this kind of teaching. Equally, some educators have negative attitudes towards differentiated instruction or learners differentiating the curriculum for weaker or lower learners for reasons best known to them(Bezangwa,2019b). When teaching in inclusive schools teachers are allowed to modify the curriculum or innovate it in the areas of objectives, content, instructing, learning activities and testing strategies. For instance this could be done for students with challenges.

According to Nkegoa (2015) the *raison d'être* of modifying the curriculum is basically to help an individual to catch up with intellectual, physical or behavioral changes and thus creating learning environments that enable the learner to meet up with existing skill repertoires at the same time promoting the acquisition of fresh knowledge and skills. Modifying a curriculum calls for changes to the range of educational components in curriculum notably knowledge of content, teaching method and learners' learning outcomes by change of programs and materials. According to King-Sears (2001) and Reid (2005) there are four kinds of curriculum modifications namely accommodation, adaptation, parallel

curriculum outcomes and overlapping curricula on a continuum. These different types of curriculum modifications are discussed below though our study is based on curriculum adaptations. This is for more insight about curriculum modification for inclusive education as this fights against education wastage (Agborbechem et al.,(2020)

Accommodation

Accommodation refers to modification at the level of instruction delivery or method of learner performance and does not touch the content or conceptual difficulty of the curriculum. In order to get the same outcomes expected in the general curriculum, both students and teachers can contribute to the changes of teaching methods. There are lots of examples of accommodations. According to the University of Buea, (2008) some types of accommodations most suitable for inclusive classrooms are use of audio, graphic organizers, pictorial representation, time-frame for learning, time of support for individual learner's needs and changing the amount of output.

Using assistive/adaptive technologies can assist students with challenges to cross inaccessibility brought about by individual differences. For instance, in now day classrooms, children with challenges can use computers with extra-large keys or computer devices like a trackball mouse that requires less hand movements, to carry out their writing activities. The content and difficulty level of tasks in this way are not changed. They remain the same as those of their classmates. This type of accommodation is of great importance to the students as it enables them to use assistive adaptive technologies to safely carry out tasks that would otherwise be very hard to do.

Making audio versions of books put at the disposal of students with visual challenges, focusing on reading comprehension related skills is another good instance of accommodation. Teacher could have their students work in a small group or individually to read a given text or book using an auditory support instead of giving them the traditional printed or written form of the text or book. The use of an audio book in a reading comprehension activity is a good occasion for learners to use their listening skills in addition to decoding or reading skills. It is worth noting that this type of accommodation enables students with different educational need to achieve the same content knowledge as their other class mates and then move to the next level of learning with them. Accommodation therefore has the power and flexibility of adjusting intended educational goals based on context. Accommodation is actually a kind of adaptation that does not fundamentally alter all the

standards or lower expectations in either the instructional or assessment phases of a learning activity (Guha, 2016; NCERT, 2005; PEAK, 1999; Alvior, 2015 and LearnMor Blog-Private Tutoring, 2017). They hold that accommodation in the form of adaptations occur when teachers differentiate instruction, assessment and materials in order to create a flexible learning environment. For instance, a student could be working on below grade level or class level learning outcomes in Language Arts and at grade level or class level in all the other subjects or courses, some of which may require reading materials at the lower reading level. Like other curriculum developers, they insist that adaptation should include but not limited to:

- audio tapes, electronic texts, or peer helper to assist with assigned readings
- access with a computer for written assignments (e.g. use of word prediction software, spell-checker, ideal generator)
- alternatives to written assignments to demonstrate knowledge and understanding
- use of organizers/graphic organizers to assist with classroom presentations
- extended time to complete assignments or tests
- support to develop and practice study skills; for instance, in a learning assistance block
- use of computer software which provides text to speech/speech to text capabilities
- pre-teaching key vocabulary or concepts; multiple exposure to materials

Accommodations in the form of modifications on the other hand, are instructional and assessment related decisions made in order to accommodate some students' educational needs that consist of Individualized Learning Goals and Outcomes which are different than learning outcomes of a course or subject.

Adaptation

Adaptation refers simply to quality instruction. This means that the teaching methods which are good for students without challenges will equally work for those with challenges. According to Corbett, (2001); Ekema,(2012) curriculum adaptations is therefore about recognizing individuals' learning styles and finding ways to employ the style most effectively in the learning situation. Curriculum adaptation is a modification concerning the instructional methods and intended goals of learners' performance which does not change the content but changes the conceptual difficulty of curriculum a bit. Making curriculum adaptation for children with challenges often demands more teacher's time and efforts than

just altering teaching methods or access as it the case with accommodation. Before making an adaptation to curriculum, teachers need first to specify intended goals for individual learners with challenges as a curriculum adaptation is a goal-driven process. Some examples of curriculum adaptation according to Browning, (2005) include: Quantity, time, level of support, input, difficulty, output and substitute curriculum. In integrated ordinary classrooms, adaptation usually takes places when the educators take time to differentiate teaching. A typical example is that, educators can invent or create writing activities that meet each learner's unique needs by putting them on adapted activities. At the same time students are taking a writing activity individually, learners with challenges can do their given task in small groups with the educator's support. Teachers may equally modify the content of the writing assignment in connection with the learners needs. For instance, the teachers may expect the students without challenges to answer six questions in a given geography test while those with challenges answer three or four questions in the same test. Similarly in mathematics, teachers may ask students with disabilities to do multiplication with two digits while others work with three digits. Curriculum adaptation instruments here call for little change in conceptual difficult in order to meet learner's needs. Curriculum adaptation is generally called for when teachers agree that the same learning activity would be suitable for both learners with and without challenges if a little change is made to modify the conceptual difficulty

Parallel Curriculum Outcomes

Parallel curriculum out comes refer to modification that take place at the level of the delivery of instruction and intended goals of students performance. Just as it is the case with curriculum adaptation, parallel curriculum outcomes do not alter the content knowledge and the main raison d'être of educational goals for individual learners. The main difference between parallel curriculum outcomes and curriculum adaptation is the level of change in conceptual difficulty. Parallel curriculum outcomes significantly change the conceptual difficulty whereas curriculum adaptation only does it lightly. Parallel curriculum outcomes plays a commendable role in the building of a pedagogically friendly and enjoyable learning environment because it modifies the conceptual difficulty in a significant way and this creates a kind of learning environment in which educators are able to enlarge the idea of a wider level of diversity among learners. Also as in curriculum accommodation and adaptation, the use of parallel curriculum outcomes is determined by the educational context and individual learner needs.

There are various types of application related to this kind of modification and learner with different characteristics and capabilities gain much from parallel curriculum outcomes as well as those with varying challenges. When dealing with these types of curriculum modifications, most teachers use the terms parallel curriculum outcomes and enrichment interchangeably. For instance, in classroom settings where the majority of learners carry out scientific projects which include analysis of cause and effect problems, learners with different challenges may as well take part in the same project focusing on one experimental process. By so-doing, educators are capable of including students with various challenges in the same content activity like all students and then assist the students with challenges in order to enable them achieve adequate school goals. There are many other examples namely giving learners with challenges in listening comprehension or language arts classes a sheet with the whole or half of the story and thereafter asking them to pick main words on letters whereas others are busy reading the story; demanding that students with challenges complete worksheets on counting bean seeds from 1 to 5 whereas others are asked to draw and name 5 bean seeds; and finally asking some learners to answer two question orally from the listening text read during a reading aloud class, whereas others read the text aloud and answer related questions.

Overlapping Curriculum/Overlapping Instruction

Overlapping curriculum or overlapping instruction refers to the types of modifications on the curriculum that brings overlapping or same goals for learning outputs of different learners. This is not a direct modification of the main curriculum. On the contrary, it just incorporates specific learners' goals and expectations for children with diverse challenges. In general education, overlapping curricula or overlapping instruction can be practiced if teachers expect particular goals to be met. According to the UNESCO International Bureau of Education, (2016) overlapping curricula or overlapping instruction helps learners with challenges to properly take part in general education curriculum activities, enhance and foster the idea of partial participation. There are many methods of practicing overlapping curricula or overlapping instruction notably designing the components of curriculum for challenged students different from those of general education students. Such components include background knowledge method of teaching and conceptual difficulty. The practice of overlapping instruction at times demands that educators creatively design and make available shared educational activities like peer-mediated interventions and cooperative learning. Generally, the educational goals as well as expectations or challenges of challenged learners overlap with those for the general education learners in times of these shared

activities. This kind of modification is very important for learners with particular needs as it enables them to achieve varied curriculum goals and at the same time take part in general education curriculum.

By practicing overlapping curriculum, most educators are capable of putting in place a veritable learning environment in which learners with challenges contribute very important roles in their classrooms. Besides, general education students benefit much from the inclusion of challenged peers in their classrooms as they learn and get assistance from peers with challenges (university of Buea, 2011; Adewale, 2016). For instance, an educator can demand that a learner with a severe challenge use an adaptive switch for the activation of an audio recorder and work on holding up his head for a higher length of time whereas peers are taking a rough draft of a play which they are making. Equally teachers can demand that the same learner use a test tube and a work sheet whereas other learners in small groups are carrying out a biology experiment. Sometimes, it is the teachers' manners of approach in handling learners with challenges or those without challenges which force them to abandon the learning environment as they consider it unfriendly and thus dangerous for them. According to UNESCO toolkit, (2006); Disability Rights Promotion International, (2009); UNESCO International Bureau of Education, (2016) Anochiwa and Adeleke, (2017), barriers like nicknaming, bullying, prejudice and discrimination, and challenges to diversity have to be handled carefully by educators in order to build peaceful and enjoyable pedagogic learning environments for all learners especially the challenged ones.

Bullying

Bullying is one of the major problems that exist in many a learning environment. It is the act of frightening or hurting an individual who is different, smaller, or weaker than you by having him do things against his wills and at time by beating or physically harming him. According to Ekema, (2012); Shey, (2014); Chaffi,(2017) everyone on ten students is bullied at school. Bullying is one of the sources of darkness in the school learning environment that makes the implementation of inclusive education really difficult as it creates fear and insecurity in the school environment and learners especially those with challenges who need to learn in a friendly and peaceful milieu are the most affected by this type of violence(Bezangwa,2019b). The brutal stabling to death of the poor student by name Bello in Lycée Deido-Douala Cameroon on the 29th of March 2019 in the midst of his school mates by his own school mate is a typical example of this.

According to Nkegoa, (2015) bullying is a kind of violence which is found in the school environment and that may obstruct students from learning in an integrated, learning friendly classroom. When one talks of bullying, he talks of a peer or group of peers (the attackers) menacing another peer (the victim) usually seen in terms of cultural group, religion, grade or simple poverty. Various types of bullying exist and impede a pedagogic learning environment. Some of them are intellectual bullying characterized by the non-recognition or rejection of learners ideas; emotional bullying caused by poor self-esteem, harassment, embarrassing moments on the school campus, or rewards withdrawn, that may be linked to intellectual threats; Verbal bullying like nick-naming; Indirect bullying such as spreading rumors or excluding and individual from social groups; Cultural or social bullying that comes from prejudice or discrimination because of differences in class, ethnic caste or sex.

According to UNESCO toolkit (2006), for the creation of friendly inclusive learning classrooms, bullying is sometimes a kind of violence or aggressive attitude which is painful and willful. At times it goes on for weeks, months or even years. In most societies, individuals who are different are usually bullied because of their sex, ethnicity, challenge, or some other personal traits. Boys are usually involved in physical bullying practices whereas girls are more involved in indirect bullying like teasing and they usually do it in groups and not individually. Generally, the effects of bullying interfere with the learning ability of the bullied child or children.

As educators, we really need to deal with bully with a lot of care and seriousness in order to *identify its* extent of destruction in our learning environments. In order to do this, teachers need to be good observers. Observation is a vital data collection skill and teachers have to observe their learners within or without the classroom. Learners who are usually alone, who have few or no friends and who are in a way different are likely targets for bullying. Usually, bullying occurs outside the classroom especially to and fro the school learning environment, or in the play grounds. Some signs of bullying are: Learners who suddenly lose confidence; learners, who avoid eye contact and become timid, those who achieved poorly though they previously learned well and those who now attend school irregularly or start to have types of unexplained headache or stomach pains.

It is generally very important to discuss with parents or guardians of such learners and even try to picture out the kind of relationship that goes on between groups of peers

within the classroom or school campus. One good way educators can use to explore the extent of bullying as well as its causes and solutions when it takes place within or without the school premises is the use of drama or role play instance, a story whose plot is bullying in school can be used in a classroom where this form of violence exists. Debates and discussions may also be used to redress this situation in our school learning environments.

Prejudice and Discrimination

Most of the time, the causes of bullying are found in prejudice (which is unjust behaviors or opinions about individuals) and discrimination (which is unjust distinction between groups of people as “they” against “us”). Prejudice and discrimination can be reflected unintentionally in the school curriculum and learning materials. This is for instance the situation with girls, learners affected by HIV/AIDS, and other learners with diverse backgrounds and challenges. When girls find themselves represented in books as passive beings whereas boys are represented as active ones, they may assume that they too should be passive. This usually brings about poor performance especially in science subjects. It is in this light that girls may be afraid to use materials related to Mathematics or even just take part in science related findings as they may be looked upon as “boy” activities.

2.1.22 Diversity and Disability

In creating inclusive classrooms in order to include learners with diverse challenges, teachers need techniques which will enable them to meet the diverse needs of all these children so that each child has at least something to take home. Some of the strategies to achieve this according to Swanson (1999) are listed below:

- Sequence: Break down task and give step by step prompt or instruction.
- Repetition and feedback: Use daily testing of skills, repeated practices and daily feedback.
- Start small and build: Break down a targeted skill into smaller units or behaviors and then build the parts into a whole.
- Reduce difficulty: Sequence tasks from easy to difficult and only provide important hints.
- Questioning: It consists of posing process-linked questions as “how” or “how to” or content related questions like “what is?”

- Graphics: Place a lot of emphasis on pictures or other pictorial representations as their attractiveness make lessons interesting and enjoyable (Bezangwa, 2019b).
- Disability: Such assistance may consist of moving round the campus, going to and fro the library, latrine or play grounds. Group instruction. Group instruction here consists of providing guidance or instruction for small groups of learners.
- Supplement teacher and peer involvement: This refers to the educator or teacher use of homework, parents, peers or others helps in teaching.

Besides, in order to cope with diversity and challenges in our classrooms, teachers have to encourage learners without challenges to work with peers with challenges by pairing each student with a disability with another one without a disability. Such assistance may consist of moving round the campus, going to and fro the library, latrine or play ground. Sometimes teachers can invite parents with challenges in their classrooms to talk with students about diversity and disability. To tell students some causes of challenges namely diseases, heredity or accidents. To let children know that everyone is a potential person with a disability and finally to encourage students without challenges to accept those with challenges and help them to go through their difficulties.

Teachers in inclusive learning friendly environments have to perform a variety of roles in order to meet the diversity of needs of all learners. Today, teacher's roles have changed from traditional givers or distributors of information to those of facilitators, learners, observer and managers (University of Buea, 2008). The 1998 educational Law as stated in Tambo (2012) holds that intellectual development remains one of the key educational goals in Cameroon and as a result of that, the pedagogic services at the ministries of education insist on instructional strategies which enhance and foster thinking. This educational approach known as the "new pedagogies approach" (NAP) which was put in place in order to sensitize and enable teachers to turn their backs to out dated and archaic teaching practices and cultivate pedagogic innovation. This new pedagogic approach is learner centre and develops critical or inferential thinking of the mind. Here, learners take active part in learning activities and the teacher's role here is to guide the learners to learn through discovery and acquire problem-solving skills and also intellectual development. This new pedagogic approach (NAP) guarantees quality learning, encourages creativity, guides children to learn through thought-provoking questions, promotes students' active participation during lessons, and cultivate personality growth in learners through role play (Nkeng and Mambeh, 2008; Tchombe, 2009). Following the alarming rate of class repetition, the NAP has been replaced

by another approach known as Competences Based Approach (CBA) which expects that learners develop knowledge, attitude, skills and competences to solve real-life situations.

The vocabulary “inclusive learning” signifies embracing a diversity of thoughts as well as a diversity of learners and their learning styles or strategies. One of the key barriers to children’s education as well as to any human endeavor is low self-esteem. It reduces children motivation to learn and usually has damaging impact on their cognitive and social development (university of Buea, 2008). An improved learning environment is capable of enhancing and fostering self-esteem in the learners. In such a friendly and enjoyable learning environment, appropriate reinforcement is provided when students are performing well, where efforts count as well as results, where cooperative and friendly grouping is much welcomed, where students feel the sense of belonging, and especially where students know that they are cared for and will be assisted in their learning activities.

In its usual way to improve the pedagogic learning of the school, UNESCO, (2001) puts in place nine golden rules for managing diversity in a classroom especially when one or more learners have challenges. Teachers here and elsewhere have overwhelmingly find them useful and hold that children learn well when they are properly applied. These golden rules are listed below.

- 1) Include all learners;
- 2) Communication is central to teaching;
- 3) Manage the classroom;
- 4) Plan your lessons;
- 5) Plan for individuals;
- 6) Give individual help;
- 7) Use assistive aids;
- 8) Manage behavior;
- 9) Work together.

Teachers’ knowledge on inclusive education practices as well as the implementation of the above golden rules will greatly ameliorate the pedagogic learning environments of our schools at all levels of our educational system and thus make the implementation of inclusive education effective and successful in our secondary schools. This as Fonkoua et al.,(2018); Manfouo et al,(2023) put it, calls for constant training of teachers so that they will be able to

properly adapt the curriculum in order to meet the diverse needs of children in inclusive classrooms.

One aspect of quality sustainable inclusive education is the quality of teacher/student relationship. Positive relationships between teachers and learners are commendable aspects of quality teaching and learners' learning. Commendable teacher / student relationships enhance and foster a sense of school belonging and really encourage students especially those with learning disabilities and difficulties to actively participate in class activities and cooperate with one another. It is this light that Adewale, (2016); Bezangwa,(2018a) hold that appropriate teacher-student relationships enable students to be attentive, participative and receptive in class. It is therefore possible that educators who build such excellent relationships with learners contribute immensely towards their success in school and in the society. Such strong teacher-student relationships are vital for the implementation of inclusive education in our school learning environments. In the same perspective Beidler, (1997) cited in the university of Buea, (2011) states that positive teacher/students relationships have good, significant and long-lasting influence on the learner's lives academically and socially. Based on the above, we believe that, in an inclusive classroom, learners without exceptions' feel valued when teachers do not only care about their success in school but also about their well-being and the way they live in the society.

According to Kirby hall school, (2017) the relationship between teachers and students may influence the development of children. For instance, teachers who have excellent relationships with learners have been seen to be really effective in their teaching activities. Besides, lower levels of behavioral problems with strong classroom bonds are equally capable to get higher levels of academic success among learners. The following guide proposed by Kirby hall school (2017) explores the importance of positive teacher-student relationships.

Improving Academic Success

Some studies have indicated that strong relationships between teachers and their learners can have big impacts on their academic results. Students are more available for learning when they consider their educators as partners and not as opponents. When this is the case, classrooms may become collaborative environments where students especially those with challenges are happier to listen to teachers as well as to other classmates.

Preventing Behavioral Problems in the Classroom

Student usually feels a sense of alienation in some classrooms from peers beside them. In particular, learners from poor socio economic backgrounds and those with challenges sometimes think that the school is an environment that tries to mock and control them without any personal fallout.

By building or putting in place a powerful relationship, learners and educators are capable of solving lots of behavioral problems by assisting students to feel that they are full members of the classroom. This will surely convince students that they are part of the team and not strangers or outsiders in the learning environment. Though educators are not friends, a familial positive relationship can be very beneficial for many students in general and for students with challenges in particular.

Improving Student's Attitude Towards Class work

Generally students are most likely to participate in class activities and class work harder in the classroom if they recognize that their teachers really want them to succeed in order to properly socialize themselves in constant changing societies. In our classrooms, especially inclusive ones, many students do not know that even though school work is not fun, it may be very helpful for them in future. Most learners, especially disabled ones see school work as something without value which wastes their time. But by building commendable and enjoyable relationships with learners using stories and songs to make learning a fun (Bezagwa, 2019a) teachers can enable their students to see the value of their work and thus develop love and interest in it as their future and life depend on it.

Aiding Growth in and outside the Classroom

Children's development touches many different areas notably emotional growth, academic growth, physical growth and spiritual growth. Sadly, most classrooms only focus on academic growth. When educators are capable of taking time to build powerful relationship with their students, it will be possible for them to create a stronger understanding of the things or issues that students require to get to higher growth. In order to do this, teachers can adapt their classroom activities to better meet the needs of their students especially the needs of those with challenges as in every disability there is ability. This is why an effective teacher has the capability to help his learners grow beyond academics. Teachers have the responsibility of building holistic children. This is why teachers should learn how to assist their students grow in various different ways of their lives and make sure

that students have brilliant future in order to live well and develop their societies. In line with the above, University of Buea, (2008) holds that an effective teacher needs three factors among others to build teacher/student relationship. They are:

-Warmth. He has to accept his/her learners for whom he/she is and care for him/her as a good parent does. Beside he/she lets the student knows that he/she is important to him/her.

-Empathy. He/she understands how his/her thinks and feels about what is going on around him/her.

-Time. He/she takes the time to be physically and mentally present when talking with his/her students.

Furthermore, Beidler (1997) cited in the university of Buea (2008) made a number of points in connection with qualities that make a good teacher capable of creating a conducive social learning environment. These points which come from his personal experience and observation are listed below.

Good Teachers Really want to be Good Teachers

Good teachers work very hard and if they make their learners understand that they are working harder, their learners will really respect them and double their own interest to work well thus eliminating or reducing frustration that usually creates tension between the teacher and the learners as a result of poor classroom performances. However, students do not forgive their teacher when they notice that he/she does not care about what he/she is teaching. This sometimes creates a tense climate in the classroom which is not favorable for vulnerable groups of students. It is in this perspective that Ekema, (2012); Endeley, (2015); Chaffi, (2017); Fonkoua, (2018); Nana et al., (2012); Taneyo et al., (2018); Bezangwa, (2019b); Shey,(2020); Manfouo et al.,(2023) hold that proper training of teachers is vital for the implementation of inclusive education in Cameroon.

Good Teachers have Positive Attitudes

Teachers are supposed to enjoy, and not to complain about diversity and its related problems. Effective educators try not to be cynical or negative about their learners especially those with disabilities or else cast themselves as real victims. Teachers need challenges and there is none if all the learners we have are smart, self-motivated, hardworking and wide-awake students who do not need to be instructed. For effective implementation of inclusive education in secondary schools, teachers really have to face the challenges of diversity

wholeheartedly especially that everyone is a potential person with disabilities (University of Buea (2008) (2011); Bezangwa, (2019b). This is why Forlin, (1998) holds that teachers who are required to include students with disabilities into their classrooms must feel confident in their own ability to cope with the situation, and must have some positive expectations about the learners' learning potential. He goes further to say that:

Ideally, teachers need to be in possession of relevant interpersonal skills relating to students with learning or behavioral problems, and for providing some elements of guidance and counseling when necessary-the caring aspect of the teacher's role.

Good Teachers think of Teaching as a form of Parenting

Quality teachers have to make caring that goes into their teaching looks much like caring which goes into parenting. This calls for knowing when to be firm or very firm in connection with a deadline or a standard of excellence, and when to be flexible or to ask for apology. Good teachers are aware of the fact that their learners, as well as their own children at home, embody insecurities and problems. These teachers' attitudes towards their learners can create wonderful relationship between them within and without their classrooms. This makes students happy and feels a sense of belonging in the learning environment.

Good Teachers try to give their Student Confidence

Students will likely get along well without knowing much about the subject matter that the teacher teaches. But it is the process of them learning what the teacher teaches which will make a difference for them. Such process the teachers takes them through like having them say something worthwhile clearly, forcefully and with a proper marshaling of evidence which will give them confidence in their ability to carry out hard assignment. At times, a teacher can do students a great favor by forcing them to speak up in class. This is especially helpful to weaker students and those with special needs education. Good teachers usually find something positive to say or praise about what is offered or presented. This process can awake confidence, happiness and hidden skills in such learners.

Good Teachers Listen to Their Students

It is generally agreed that good teachers are accessible, available, approachable, enthusiastic, and energetic and excited. They are qualities required of an effective teacher for the creation of a peaceful, supportive and enjoyable social learning environment.

Good Teachers Motivate Their Learners

Good teachers use extrinsic motivation in the form of praises and positive feedback on class work done. A student praised is likely to perform better next time. This practice encourages and motivates every student to happily participate in class activities.

2.1.23 Curriculum

Curriculum has been defined differently by different curriculum developers. This is because it is not easy to find a wide public or professional agreement on the definition of curriculum as a result of the diversity of values and experiences of authors and educational researchers as well as the societies in which it will be applied. According to Ornstein (1992) as cited in Mongwaketse (2011), curriculum as a field of study is elusive and fragmentary and what it is supposed to entail is open to a good deal of debate and also misunderstandings.

In other to properly understand the broad range of beliefs about curriculum, it is worth wide to consider tanner and tanner's conflicting conception of curriculum as shown on table 6 below:

Table 6: Conflicting conceptions of curriculum (source: Tanner and Tanner, 1980, 37)

Concept Of Curriculum	Controlling Mode	Function
Cumulative tradition of organized knowledge	'Permanent' studies, essential studies, and skills established disciplines	Cultural Inheritance, skilled learner, specialized knowledge.
Modes of thought	Disciplinary enquiry reflective thinking	Specialized knowledge production. Personal-social problem solving
Race experience	Cultural norms for thinking and acting	Cultural assimilation
Guided experience	Community life felt needs	Effective living Self-realization
Planned learning environment	(electric) (usefulness of theory to curriculum decision)	Facilitative education process
Cognitive / affective content and process	Electric	Gain knowledge, develop skills Alter affective processes
Instructional plan	Stated intentions for instruction	(electric)
Instructional ends	Identification of ends (may be constructed as behavioral objectives)	Attainment of measurable ends

Source: Mongwaketse 2011

In this light Tanner and Tanner defined curriculum as the planned learning activities sponsored by the school (1990). According to walker, (1990) curriculum refers to the content and purpose of an education program, together with their organization. On their part, sadker and sadker (2000) hold that curriculum is the organization of intended learning opportunities

for which the school takes responsibility. According to a popular Cameroonian curriculum developer, (Tambo; 2012) curriculum is all learning opportunities that are planned and guided by the school either they are carried out in groups or individually, inside or outside of the school compound.

On the basis of the above, we define curriculum as a plan for the education of learners during their stay in educational institutions. It is a general plan which is used by educators as a starting point for developing teaching strategies or techniques to be used in learning environments especially inclusive ones. In a nutshell, curriculum is the qualification or description of what, why, how and when children or adults have to learn. Curriculum development process varies from society to society and from country to country as its *raison d'être* are to meet societal needs and national policies. It is in this perspective that UNESCO (2016) holds that curriculum is not an end in itself. Rather, it tries at the same time to achieve commendable learning outcomes for learners, and realize a number of societal demands and government policies. According to Bezangwa, (2019b), curriculum refers to school subjects and the totality of experiences which learners acquire through a number of learning activities on the school campus, in the classroom, play ground, laboratory, and library as well as in informal interactions between teachers and learners, between school administrators and learners and between learners and learners. UNESCO (2016) further emphasizes that it is in and through the curriculum that major economic, political, social and cultural questions about the aims, purposes, content and processes of education are solved.

- Curriculum Development Process

The curriculum development process refers to the steps required in the development of the school curriculum. According to Taba (1962) as cited in University of Buea, (2008) a curriculum development process has five stages notably need assessment, Design and planning, Curriculum development, Curriculum Implementation or Operationalization, and Curriculum Evaluation. These stages are modified by UNESCO (2016) and brought to four. Stages one and two are combined to form stage one which is the development of curriculum while stage three which was curriculum development became stage two called Curriculum itself and stages four and five became stages three and four respectively. These stages of curriculum development process put forward by UNESCO (2016) for quality curriculum are presented in figure 21 below.

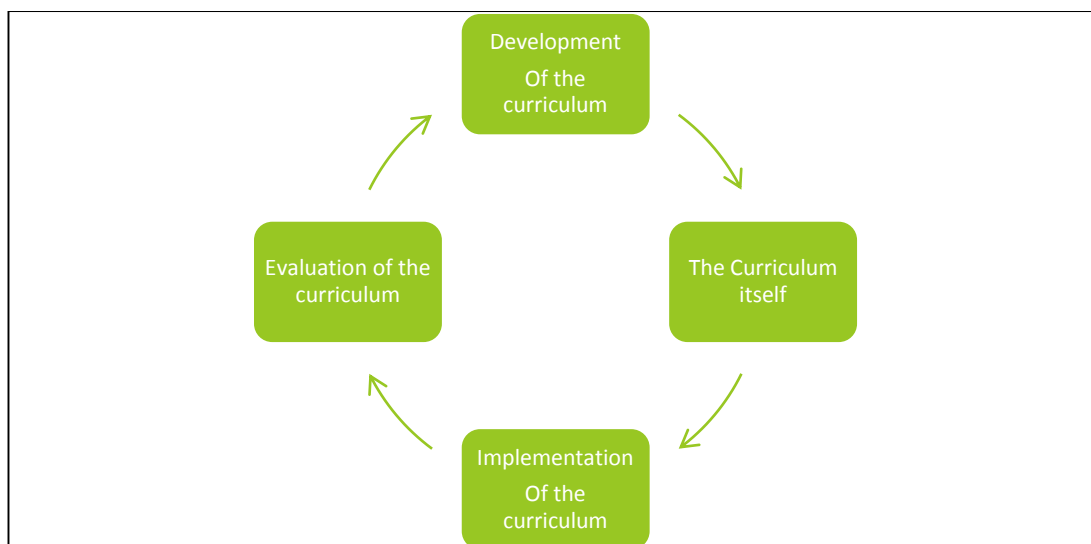


Figure 20: Stages of Curriculum Development process

Source: UNESCO, 2016)

Based on our research topic, entitled Curriculum adaptations and the implementation of inclusion education in English secondary schools in Yaounde municipality, the fourth stage of curriculum development process which is the implementation of curriculum will be discussed.

-Curriculum Implementation

According to the University of Buea, (2008); Smith et al; (1999) and Tambo, (2012) Curriculum implementation means taking specific steps to make sure that the curriculum development reaches and is used in educational institutions. It is equally concerned with interaction with learners during the delivery processes within or without the classroom. These delivery processes are concerned with:

- Breaking down the developed curriculum into the syllabus
- Interpreting the syllabus by producing some outlines into units of work
- Breaking down schemes of work into teachable units per fixed unit of time, for instance, a term, week or month. Generally, schemes of work are organized from simple to complex, concrete to abstract and from known to unknown. This is done in connection with the age, level, past experiences of learners and resources in place.
- Lesson plans. They are guidelines made in order to assist the teacher in carrying out his/her classroom lessons. Lessons plans can be general or specific. General

lesson plans are topic or units plans drawn up to show the main objectives to be carried out in a given unit or topic. The specific or individual lesson is called the daily plan and is an outline of the important part of the lesson in a teaching order.

For its part, UNESCO, (2016) holds that curriculum implementation refers to the way the written curriculum is presented to the learners and how teaching, learning and assessment really take place. Besides, educational system, schools and educators make lots of decisions while translating the needs and pieces advice of curriculum documents into meaningful and effective learning activities in the classroom. Implementation would hence include all the decisions taken in turning curriculum documents into practice so that learning outcomes might be most successfully enhanced and fostered. But these researchers which we are, hold that teachers should not just implement the curriculum. On the contrary, they should understand and realize it following constant changing situations with their own learners. It is in this context that, UNSECO, (2016) Tambo, (2012) the university of Buea, (2008) and Adewale, (2016) hold that to be properly implemented, a good quality curriculum involves and puts vital expectations on learners, teachers, learning environments, parents and employers as well as educational systems and authorities. Good quality curriculum content is important to quality learning outcomes for learners, but this content has to be supplemented and supported by proper implementation (Stabback, 2016). A good quality curriculum does not only prescribe what should be taught and learned in different subjects and school levels, but equally the way that curriculum should be taught and assessed.

Good quality curriculum content is important to good learning outcomes for students, but this content needs to be supplemented and supported by effective implementation. A good quality curriculum not only prescribes what should be taught and learned in the various subjects and grade or stage levels, but also how that curriculum should be taught and assessed.

Good quality curricula therefore place clear expectation on students, teachers, schools /learning environments, parents, employers, and on education systems and authorities.

- **Students**

In much contemporary teaching, learning and assessment practice, students are no longer seen as passive recipients of knowledge. Students should thus be engaged in and contribute to the teaching learning and assessment processes. This transition from passive to active learners can be difficult for teachers and education systems to manage. It cannot be

expected to happen immediately, and students need to be guided gradually into their roles as active learners in ways that are appropriate to their stages of development.

Real learning requires genuine engagement. To learn well, students need consciously to make connections between known and new knowledge and skills, to apply the newly acquired knowledge and skills to real or simulated situations, and to value what they have learned, being all the while active participants in the learning process.

A good quality curriculum encourages and expects students to:

- Understand the purpose of classroom activities and participate actively in them;
 - Know what they will learn and why, what the expectations of them are, and how they will know that they have learnt well;
 - Be curious and willing to ask questions;
 - Raise what they take for granted to the level of conscious critical scrutiny;
 - Engage in assessing their own and other students' learning;
 - As well as learning the content and associated skills, understand how they accomplished this and try to become better learners; and
 - Support and respect other students' efforts to learn, especially mates with challenges
- **Teachers**

A key point here is that a well-articulated subject syllabus will help to ensure that the curriculum is capable of being adapted to the needs and expectations of different students. Teachers are critical here: it is teachers who decide and adapt the learning content, activities and pace that children need to move through the curriculum in ways that ensure they learn effectively. (If this professional autonomy is not accorded to teachers, it will require highly prescriptive curricula for children of differing strengths and abilities). Teachers need accordingly relevant advice in Teacher guides on adapting the curriculum to meet all learners' needs. They should be provided with guidance on how to plan learning and progression, and on the kinds of classroom learning activities that bring the curriculum to life. The content of any topic in the curriculum can, after all, be presented to students in an almost endless variety of ways, and teachers should be helped to create situations and activities, both in the classroom and beyond, that will make learning most effective.

Adaptation of the curriculum to meet the learning needs of all children is the responsibility, after all, of the teacher and not for the curriculum itself. If this is not the case, education systems occasionally develop special or adapted curricula for different groups of pupils. This carries great risks of inequity. All children should have the opportunity to learn the entire curriculum-it is the teacher who can make this possible by adjusting tasks, activities and pace in adapting the curriculum to the specific interests and needs of learners. Teachers can be provided with ideas for teaching in ways that add value to the curriculum through professional development courses or written Teacher Guides which can provide:

- A clear explanation of the philosophy of teaching, learning and assessment which underpins the curriculum;
- Sample approaches to learning and teaching that outline a topic or unit within a syllabus ; and
- Where appropriate or required, more detailed lesson notes and resources which describe how to conduct a lesson or a particular topic in a step by-step way.

Teacher Guides can also provide teachers with clear guidance about assessment as the bridge between teaching and learning. This does not mean that teachers should be making students write tests every other day. Teachers need rather to be made aware of the importance of continually providing feedbacks to their students through continuous assessment of which each learner is in his/her understanding, so that each student can ask his/herself about his/her learning:

- Where am I?
- Where do I need to go next?
- How do I get there?

This is the meaning, as John Hattie and others have stressed, of genuinely worthwhile formative assessment: it is the bridge between teaching and learning, without which the two are not easily connected. Teachers should be guided to use assessment not just to test how well content and skills have been learned, but to understand the strengths and weaknesses of individual learners and to ensure that future classroom activities use this information to each student's advantage. After all, effective feedback to students on their learning means, as Hattie has shown, 'providing information about how and what directions the student must take to improve'. It implies that the best teachers will make every effort to

assess and evaluate their students' understanding in order that they might understand the constructions their students have made in their learning, and so that they might then match their next teaching act to this understanding. The most successful feedback will seek to correct erroneous hypotheses that students might have made, and will be linked to reinforcement aimed at the acquisition of prerequisite knowledge and skills, and at further motivating students - not least by building on their strengths.

- **School / Learning Environments**

School leaders should understand the content of the curriculum and make management decisions within their areas of responsibility to support its delivery. They should encourage and support teachers in adopting new and innovative teaching practice.

School leaders should make the space for their Learning. Leaders have to consider the curriculum and its implementation in some depth with the teachers in their teams. This is vital in ensuring that teachers are not guided only by the textbook but that they are co-creating the curriculum with their Leaders, teacher, colleagues and learners themselves.

School leaders can also use curriculum delivery as a means for professional development and for the continuous improvement of teachers' practice by asking each teacher, as Dylan William has suggested, answering three questions with regard to his curricular practice.

- What am I going to improve in my practice this year?
- How am I going to do it?
- What evidence of its effect on learning outcomes will I seek as an indication of the improvement?

School leaders can helpfully set up teams, within and across Learning Areas in which teachers can provide each other with professional support in their striving for such improvements in their curricular practice. The responsibilities of school leaders with regard to curriculum implementation and curriculum advice for their school are important roles to include in school leadership.

Within their responsibilities, school should also ensure that learning environments are as safe and well-equipped as possible, and that the best materials to support good

teaching, learning and assessment practice are provided. The objective is to provide learner-friendly environments that enable and encourage effective and enjoyable learning.

- **Education Systems And Authorities**

A good quality curriculum also creates expectations of education systems and school authorities. These include:

- **Supporting teachers and schools in being innovative and creative**

Education systems and authorities should support teachers and schools in their efforts to understand and implement the curriculum. A good quality curriculum may require teaching approaches to be more innovative than they might typically be in a particular context - for example, to encourage students to question, discuss and debate. These strategies need to be encouraged. In the broader sense, a good quality curriculum may require an education system to change its definition of what constitutes a ‘good’ teacher, which may in turn have consequences for recruitment criteria, teacher professional development, remuneration, incentive and promotion schemas, and the monitoring of teaching effectiveness through, for example, inspection systems. Similarly, an education system should encourage principles and practices of the ‘good quality’ curriculum.

- **Ensuring assessments, formative as well as summative, reflect the curriculum.**

A good quality curriculum needs to be supported by appropriate methods and strategies for assessing student achievement as defined by the curriculum. For example, education systems usually have direct control over national examinations, and these should be constructed in ways which are aligned with and reflect the curriculum.

In particular, a good quality curriculum, as mentioned earlier, will require students to acquire a balance of knowledge, skills and values. System requirements for assessment should also reflect this balance.

- **Providing the resources and equipment necessary to implement the curriculum successfully.**

To be effective and successful, a good quality curriculum requires resources and equipment. Education authorities should ensure that these are available, and that they are distributed equitably. This may frequently mean allocating resources unequally. For example,

additional resourcing may be necessary to provide compensatory education for particular groups in the society who might be disadvantaged on account of history, disability, gender, their socio-economic status, their ethnicity or cultural background, or where they live-whether in difficult urban or deeply rural environments

- **Allocating time in flexible ways.**

There are different approaches to specifying the time to be allocated to each subject or Learning area. Many education systems and authorities adopt flexible approaches and allow school some autonomy in deciding how much time should be allocated. This is often a requirement of the development of a quality formal curriculum.

Rather than allocating hours to subjects in a highly regulated way, it is possible to:

- Prescribe minimum hours over a certain period of time, leaving some discretion to schools and teachers to spend more hours;
- Express the time to be spent on particular subject as percentages of the total available hours, thus acknowledging variations in the number of school days in a school year in different parts of the system;
- Allocate hours to a Learning Area rather than to individual subjects, allowing some flexibility and autonomy to vary the time spent, according to the needs of their students; or
- Write the curriculum and what students are expected to learn in terms of outcomes.

The teacher, learning leader and school principals, education authorities, parents (and employers) then work together in deciding the balance of time allocated to different aspects of the curriculum-for different groups of learner-so that learner are helped to achieve their potentials. Provided that these outcomes are described in ways to enable flexibility in the teaching and learning process, such an approach helps to give meaningful expression to personalized learning as discussed in the last paragraph. Such an approach also exemplifies the principle on which curriculum for excellence is based: it depends on high quality teachers and good quality evaluation and assurance processes; but it also enables teachers to make learning more focused and motivating for learners.

Whichever approach is adapted, the time allocation should be sufficient to achieve meaningful learning outcomes. It is not, for example, realistic to allocate one hour per week to learn a language. There are international standards and expectations in this area: in Europe, for example, 1,000 hours over nine years would be considered a minimum allocation for achieving acceptable language proficiency.

In this area, the relative percentages of time allocated between subjects or learning area should also reflect accepted international practice.

Education systems need also to maximize curriculum support budgets and to ensure that schools are provided with the best possible quality teacher and resources (including Teacher Guides, text books and other materials).

-Curriculum adaptation

For the sake of consistency in this study curriculum adaptations will be used referring to efforts to modify some learning environments of the school and the way in which the students engage with and respond to the curriculum. According to Maghuve (2006) curriculum adaptations are modifications that relate specifically to instruction or contents of the curriculum. Curriculum adaptation, according to Sawyer (2000), ‘involves both content and the enactment of curriculum, ideally creating a process of dynamics interaction among teachers, learners, subject matter and multiple setting’. Content can be described as the shape and matter of teaching and learning. Hernandez (1989) points out that, ‘the context in which the curricular content is transmitted, and the processes involved in doing so may involve the less formal and visible aspects of classroom life’. Further, these could be adjustments or modifications to the teaching and learning environment, teaching and learning techniques, teaching and learning support material that enhances a learners’ performance or allows at least partial participation in a learning activity, learning programs and assessment. To adapt the curriculum is not sufficient, when teachers do not know what to adapt, how to adapt it, when to adapt it and on whom to do the adaptation. Janney and Snell (2000) suggest that adaptation can be in four faces, the *what, how, where and when* of curriculum adaptations and they particularly focus on these factors: a) curricular-adapt what is taught b) instructional-adapt how it is taught c) how learning is demonstrated and d) ecological-adapt the setting (where, when and with whom).

Despite many educators’ reservations regarding curriculum adaptations, Labon (in Pijl et al 1997) Lewis and Norwich in (Corbett, 2001) point out ‘curriculum adaptation is

nothing more than good teaching'' thereby implying that strategies that work for learners without barriers to learning, will similarly work for learners with barriers to learning. Ambruster et al., (2001) agree that for many students with disabilities and for many without, the key to success is the classroom activity. Curriculum adaptations are therefore about recognizing individuals learning styles and finding ways to employ the style most effective in the learning situation (Corbett, 2001; Ekema, 2012; Shey, 2014; Endeley, 2015). Looking into the kind of diversity in our schools today, teachers are compelled to take analytic approaches when dealing with these learners. Pritchard (2005); Nana et al.,(2012); Ekema,(2012); Taneyo et al., (2018) support this by alluding to the view that 'we learn in different ways to each other and we often choose to use a 'preferred learning style'. 'Curriculum adaption must provide the setting and climate in which learners can grow and develop their capacity, and criteria for selecting curricular content should be based on an understanding of the learners' disability and needs' (Taylor & Harrington, 2003; Fonkoua, 2018). Evans (1997) explains that curriculum adaptation simply means that the greater the learner's learning difficulties, the more the educator would need to act as a mediator between the learner, the learning environment and the learning content. In relation in the above definitions, we define curriculum adaptation as a careful modification of elements of the school curriculum in order to meet the diverse needs of learners in the learning environment.

When teachers are aware of what learning styles are, this arguably enables them to adequately cater for the differences in learning. Pritchard (2005) defines learning style as a preferred way of learning and studying; for example, using pictures instead of text, working in groups as opposed to working alone, or learning in a structured rather than unstructured manner. If a learner is aware of what his/her preferred way of learning is and understands the learning process it can lead to improved learning outcomes. The role and responsibility of any given education system, any school and individual teacher is to ensure that differences are catered for within the system. Reid (2005) supports that catering for differences 'is a tall order' and perhaps an idealistic desire; it represents an attitude shift and such a shift is necessary if teachers are to be able to accommodate to the range of differences within most classrooms today. Learning styles are about individuality and diversity in much the same way as inclusion.

According to the Rehabilitation Council of India, (2016) curriculum adaptation is an ongoing process which changes the regular prescribed curriculum by modifying or adapting it in terms of the content or delivery of instructions to meet the learning requirements of

learners with disabilities including those with difficulties. This calls for the modification or adaptation of the content, teaching process, assessment and evaluation, and the physical environment so that learners benefit and achieve success in the classroom. Teachers therefore have to adapt the curriculum in order to balance the learning environment and meet the needs of diverse learners so that all children benefit and can really participate in classroom activities. But curriculum adaptations are not supposed to bring down school standards. On the contrary, curriculum is adapted in order to make school first and foremost accessible and secondly to make sure that no child is wrongly prejudiced and excluded or pre-maturely forced to drop out of school. Good inclusive practices call for adaptation in teaching and learning environments, teaching and learning support materials which enhance a learner's performance and allow at least partial participation in a class activity, level of support and assessment.

According to UNCRPD, (2006) curriculum adaptation is vital because of a number of reasons notably:

- Curriculum adaptation is a form of reasonable accommodation which facilitates the teaching learning process when there are children with learning disabilities or learning difficulties in the classroom.
- Curriculum adaptations are made to simplify and reduce the content so that challenged children can benefit from the most crucial part of the curriculum.
- Curriculum adaptation makes it possible for all learners to have access to meaningful and quality learning experiences.
- Curriculum adaptation ensures that children with challenges do not feel excluded in terms of understanding the subject matter.

In order to properly adapt the curriculum, UNCRPD,(2006) proposed the following guidelines for curriculum adaptation:

- Curriculum adaptation should not change the original concept of curriculum used as the reasons for adaptation are to provide some learning experiences to all children and to make them feel the sense of belonging.
- To provide the same experiences, compensatory activities should be planned in a way which learners get a holistic image of the concepts taught in the regular classes. The *raison d'être* for educational media should remain the same for all learners.

- Modification in educational media should aim to facilitate maximum participation of learners with challenges in such a way that it equally motivates all the children in the classroom. If it is mainly an auditory learner, provides adjustment in the mode of presentation by use of the techniques below:
 - Provide both verbal and written instructions to assignments.
 - Put test instructions on tape so that learners can replay them when need arises.
 - Give learners oral than written tests
 - Let learners drill on important information using tape recorder, reciting information into the recorder and replaying it.
 - Let learners drill aloud to themselves and to other learners.
 - Have learners close their eyes to try and hear words or information.

- **Rationale for curriculum adaptations**

In the design and development of teaching and learning processes, use of materials and the learning environment often do not take into account the learning needs, aspirations and uniqueness of learners. Reid (2005) suggests that, it is a challenge that many believe he is at odds with the practical reality of meeting the needs of all learners within an inclusive setting. ‘Curriculum’ has always been of the major obstacle or tool in the education system to facilitate the development of more inclusive provision, the reason being that it is frequently extensive and demanding, often rigid and non-flexible, leaving teachers with little or no room to try out new approaches. UNESCO (2003) explains that sometimes the content might be too distant to the reality in which the student lives and therefore inaccessible and not motivating. There is a need for teachers to adapt the curriculum as without those adaptations, some students would never be challenged whereas others may never experience success. This is supported by Lorenz (1998) in that, by adapting the curriculum, learners receive optimal exposure to the curriculum and are encouraged to become independent learners because they learn to persevere with challenges. While good instructional design for the entire class can minimize the need for adaptations, Loreman et al (2005) point out that sometimes the only way to cater for children with these diverse needs is to adapt the curriculum in order to accommodate their learning goals. Before these adaptations can be made, teachers are to ask themselves questions regarding why there is need to adapt the curriculum. Loreman and Deppeler (2000) suggest that, teachers should ask the following questions in identifying curriculum adaptations:

1. Can the learner take part in the curriculum in the same way as others? If not...
 - a) *Can the learner take part in the same way as other students if the environment is modified?*
 - b) *Can the learner take part in the curriculum in the same way as other students if instructional strategies are modified?*
 - c) *Can the learner take part in the curriculum in the same way as other students but with different learning outcomes?*
2. What adaptations are needed to maximize learning and participation?

Going beyond what Loreman and Deppeler are suggesting, other questions that are to be asked include but are not limited to: Can the learner construct knowledge while taking part in the curriculum? If these questions cannot be answered then an individualized program may be justified to allow individuals to progress at different rates and at their own paces. Muijs and Reynolds (2005) point out that ‘‘The use of ‘individual learning plans’ is another variant of individual learning strategies. In this strategy used in several countries for learners with special needs or learning strategies. In this strategy, used in several countries for learners with special needs or learning difficulties, teachers develop specific individual learning plans which set out the goals that learners should be able to acquire and the means by which teachers can help them acquire these goals’.

Other authors, for example like Taylor & Harrington (2003) refer to this as an Individualized Educational Plan (IEP). However, using an IEP does necessarily mean that the individual learner should be isolated. Loreman et al., (2005) contend that for an IEP to assist in the process of inclusion, it must be infused into the class curriculum rather than be taught in isolation. A range of methods can be used by educators to guide the process of curriculum adaptations which is made. It is therefore important to note that accommodation is not a change of educational input crafted for overall or general curriculum, but it is a modification of instructional methods and strategies which are targeted to meet individual learners’ needs. Adaptations may be practices in inclusive classrooms which can occur when teachers decide to conduct lessons which meet individual learners’ unique needs by working on adapted assignments (King-Sears, 2001). Curriculum adaptations or modifications do not only benefit student with SEN, but also facilitate successful learning for learners without difficulties or disabilities in acquiring mastery of context. For example, William (1998) contends that for many students with disabilities and for many without, the key to success in the classroom lies in having appropriate adaptations, accommodations and modifications made to the instructions and other classroom activities.

According to NCERT, (2015) modifications refer to changings to learning goals, teaching processes, assignments and or assessments to accommodate a student's learning needs. On the other hand, accommodations refer to instructional and assessment decisions made in order to accommodate learners educational needs that consist of individualized learning goals and outcomes which are different than learning outcomes of a course or subject

- **Types of curriculum adaptations**

The main aim of adapting a curriculum is to meet the learning needs of individual learners within a given context and therefore adapting a curriculum has no recipe since each teacher, each learner and each classroom is unique and whatever adaptations made will be specific to each situation (Hall, 2009). However, for the purposes of this study, the Nine types of Curriculum Adaptations from Browning (2005) have been adopted::

- Quantity or Size - adapting the number of items the learner is expected to learn. For instance, reduce some students' workloads at all times.
- Time-adapt the time allocated and amount of teacher assistance to keep the student on task. For instance, individualize timelines for completing assignments or tasks; learning at different paces(increase or decrease working time) for some students.
- Input-adapt the way instruction is delivered to the learner. For instance, using more visual aids especially real objects and lots of concrete examples; providing hands-on activities and placing learners on cooperative groups.
- Difficulty-adapt the skill level, problem type or the rules on how the learner may approach the work. For example, allow calculators for Mathematics problems; simplify task directions; change rules in order to accommodate learners' needs.
- Output-adapt how the learner can respond to instruction. For instance, accept verbal or written answer; use a communication for students; allow students show knowledge with hands-on materials.
- Participation-adapt the extent to which a learner is actively involved in the task. For example in Biology, let a student hold a diagram bearing animal cells, while others point out the different parts.

- Alternative-adapt the goals or outcome expectations while using same material. For example, in Geography, expect a student to be able to locate just the regions of Cameroon while others are expected to locate these regions and their capitals.
- Substitute curriculum- provides different instruction and material to meet a learner's individual goals. For instance, individualize a timeline for completing a task; pace learning differently(increase or decrease for some learners)
- Level of Support-Increase the amount of personal assistance with specific learners. For instance, assign peer buddies; teaching assistants, peer tutors or cross-age tutors.

The individual learner need will determine what type of adaptation the teacher engages to help the learner reaches his/her maximum potential.

- **Role of teacher in making curriculum adaptations**

Doctors want their patients to get well, lawyers want justices for their clients, and teachers want their pupils to become educated, (Langford, 1978). For learners who have learning needs, their education will depend on whether they access the curriculum or not and whether they are given opportunities to construct knowledge. A teacher is not only to teach but he/she has a duty to teach. Crawford et al., (2009) spells out the duty of the teacher as: 'knowing students' strength and weaknesses and needs related to learning, creativity and socialization with peers'. This places a teacher in a better position to know how to achieve desired results and knowing how they can be achieved. Teachers should understand principles of teaching before they can understand the different children they are supposed to teach and the diverse learning needs they bring into the learning environment (Ekema,2012; Shey,2014; Endeley, 2015; Chaffi, 2017; Fonkoua, 2018; Taneyo et al., 2018; Manfouo et al., 2023). Woods (1995) point out, 'creative teachers seem guided by particular theories of pedagogy and learning, they are concerned with the effective as well as the cognitive-(body and mind, feelings and intellect)'. When teachers are creative, they will promote creative learning in pupils. Teachers as well as learners play a major role in the changes of curriculum strategies in order to achieve the intended curriculum outcomes. Because of their involvement in classroom situations, the role of teachers is crucial for noticing these gaps and bringing about required change or improvement. Using a variety of approaches and/or adaptations in learning environments usually requires more teachers' efforts and time than

simply changing instructional methods or access. Since they spend a lot of time with learners and are expected to have more knowledge of learners, classrooms, and school environments, they can use this knowledge to point out weaknesses, shortcomings, and conditions which should and can be changed. Their knowledge, attitudes, concerns and needs are the starting point of curricular process. Teachers' expertise about classroom realities are deemed as being crucial for discerning practical problems that call for curricular remedies. Westbury (1972) characterizes Schwab's (1983) approach to the practical as drawing upon 'an image of a creative and practical reformer discerning problems through an awareness of apparent gaps between what should be and what is, then seeking solutions from his understanding of what might be done, and finally moving to bringing about changes or improvement'.

One other aspect to note is that teachers are the immediate agents of change who by their instructional activities can implement appropriate curricular solutions. They are therefore, viewed as starting points in curriculum deliberations. The role of the teacher needs to change from the transmitter of information to a facilitator of learning, (Ekema,2012; Shey,2014; Fonkoua,2018; Taneyo et al.,2018; Shey,2020; Manfouo et al.,2023), a view shared by the constructivist approach. For teachers to effectively meet the needs of their students, the mode of curriculum delivery is to change so that they facilitate successful learning for those experiencing difficulties (Ekema,2012; Shey,2014; Endeley, 2015;). Some of these changes include but are not limited to understanding processes of learning. As Pritchard (2005) explains, 'a basic understanding of processes of learning is essential for those who intend to develop activities that will have potentials to lead to effective learning taking place in classroom'. Individual preference for different approaches to learning has the potential to make a big impact on what happens in classrooms.

An understanding of how learning proceeds is supported by Gardner's (1993) work on 'multiple, intelligences'. He explains that an individual's particular strength in intelligences has a direct bearing upon the way their learning takes place. Teachers may want to take this into consideration when planning activities in which children are expected to take part. Pritchard (2005) supports this by alluding to the fact that in planning for multiple intelligences, teachers should consider the range of activities related to the content of the lesson and the intended learning outcomes which will give a range of opportunities to the children's different intelligence strengths. One other aspect which teachers may employ is allowing for a wide variety of responses to particular task to allow a balanced and equitable multiple intelligence environment. Teachers are to be aware that each learner will adopt an

approach to learning with which they feel comfortable with. According to Reid (2005) ‘Learning styles are integral to the process of learning and this must be considered when curriculum adaptation is taking place’. The use of the ‘one-size fits all’ curriculum no longer meets the majority of learner (Tomlinson, 2002), and ignoring these fundamental differences may result in some students falling behind, losing motivation and failing to succeed (Tomlinson and Kalbflesch, 1998). As a response to addressing curriculum adaptations to cater for learner with LD, Armbruster et al., (2003) conclude by cautioning that using instructional accommodations increases chances of students becoming better learners throughout their school years and beyond.

Curriculum Adaptation of the Learning Environment

Curriculum adaptation of the learning environment refers to modifications and accommodations carried out on the regular prescribed curriculum in terms of content or delivery of instruction in order to meet the learning requirements of learners with disabilities and learning difficulties. The content, the teaching process, assessment and evaluation, and the physical environment may be modified or changed and activities should be flexible so that the learners benefit and achieve success in the classroom. It is in this light that the Rehabilitation council of Council of India, (2005), Nana et al., (2012), Ekema,(2012) Adewale, (2016), Chaffi,(2017), Fonkoua, (2018), Taneyo et al.,(2018), Shey, (2020) hold that schools and classrooms environments have to be accessible, safe and favorable to all learners. Schools should treat all learners with equality, respect, dignity, provide equal opportunities for participation without any bias, realize the rights of the learners and provide a flexible curriculum which is accessible to all learners especially to the challenged ones so that they will be able to see their dreams come true. Teaching and learning processes in the learning environments should be planned in such a way that the specific needs of every individual child are met. In the learning environment, a teacher’s role is vital in providing education to all learners because challenges in some learners do not in any way limit their abilities to learn and perform as well as other learners without challenges.

In the same light, Philips, (2012), Shey, (2020) hold that psycho-motor skills be given more value in school learning environments as it is only through them that some learners can showcase their own knowledge. Besides, he opines that if teachers give more value to art in the classroom, it will enable some learners especially those with learning disabilities and learning difficulties to find interest in schooling and thus perform well in school for the betterment of inclusive education. Performing arts embodies vocal and

instrumental music, dance and theatre to pantomime, sung verse and beyond. They cover lots of cultural expressions which reflect man creativity and which are equally found, to some extent in numerous other intangible cultural heritage domains. Some of these performing arts which can make children attentive, receptive and thus take active part in school activities are acting, theater, dance and music. As a kind of performance art, acting involves impersonating a character. The different emotions and motivations of characters are displayed through various expressions, intonation and body movements. Usually actors must use empathic skills in order to convey the character in a convincing manner. Another form of performing art is musical theater. Musicals theaters are plays which integrate songs in place of some spoken words as well as plot details. Performers or learners usually alternate between speaking and singing during the production and it brings happiness and a sense of belonging into the learning environment. This greatly enhances and fosters the implementation of inclusive education. For instance, learners who have difficulties in expressing themselves through writing and drawing may show excellent results when expressing themselves through dance. With appropriate props, they may find it easy to show rhythmic movements with music. Learners could be supported by a teacher or a peer, hidden in the wings. Learners with challenges can happily imitate him or her. Visual cues can be put on the stage by drawing lines, foot-prints or arrows, and then an individual can dance without any person's assistance. Dance can be choreographed in such a way that learners can participate. For example, hand movements for wheelchair users, visual cues for those with autism and hearing impairment (Shey, 2020).

Visual arts are a way of expressing feelings, emotions, opinions, or taste through visual means like photographing, painting, sculpting, and drawing whereas the professional arts are means to express opinion, emotion, feeling, or taste by ways of performance such as theatre, music and public speech. Arts enhance and foster skills in school and classroom environments, Philips (2012).Some of these skills include;

- **Creativity:** Creativity is an art program in which learners are asked to recite a monologue in various ways, create a painting that represents memory, or compose a new rhythm to enhance a piece of music. If learners have the practice of thinking creativity, it will come naturally to them now and in their future career.
- **Confidence:** Theater training gives learners the practice of stepping out of their comfort zone and allowing them to make mistakes and learning from them in rehearsal. This process gives learners the confidence to perform in front of large audiences.

- **Problem-solving:** Artistic creations are through the solving of problems. How do I transform this clay into sculpture? How do I portray a particular emotion through a dance? How will my character react in this situation? Without even realizing it, children who participate in the arts are consistently being challenged to solve problems. All this practical problem solving develops learners' skills in reasoning and understanding.
- **Focus:** The ability to focus is a vital skill developed through ensemble work. Keeping balance between listening and contributing involves a great deal of concentration and focus. It requires each to not only think about their role, but how their role contributes to the big picture of what is being created.
- **Non-verbal communication:** Through experiences in theater and dance education, children learn to break down the mechanism of body language. They experience different ways of moving and how those movements can communicate different emotions. They are thereafter coached in performance skills to ensure that they are portraying their characters effectively to the audience.
- **Receiving Constructive Feedback:** Receiving a constructive feedback about a performance or visual art piece is a regular part of any arts instruction. Each arts discipline has built in parameters to ensure that critique is a valuable experience and greatly contributes to success of the final piece.
- **Collaboration:** Generally, most arts disciplines are collaborative in nature. Even though for the arts, learners practice working together, sharing responsibilities, and compromising with others to accompany a common goal. When a learner has his or her own part to play in a music ensemble, or a theater or dance production, they begin to understand that their contribution is necessary for the group's success and this greatly makes learners happy especially the challenged ones as they feel a sense of belonging too in the learning environment. Through these experiences, learners gain self-confidence and begin to understand that their contributions are valuable even if they do not play the biggest role. This is a commendable awakening spirit of consciousness of the fact that every child's act is considered and valued in the learning environment as it creates confidence in learners especially in those with challenges and greatly facilitate the implementation of inclusive education(Bezangwa, 2019b)

- **Accountability:** When learners practice something collaboratively they get used to the idea that their actions affect other children. Also through arts, children learn that it is important to admit that you make a mistake and take responsibility for it.

According to Ekema (2012) curriculum adaptation of the learning environment refers to all the changes and modifications carried out in the school environment in order to welcome and educate every child despite his or her condition. He holds that drawing is an alternate means of expressing ideas and enhancing associations. For some learners with disabilities and difficulties, drawing is a way to enhance their memory of linguistic material, like new vocabulary or summaries of information they have heard or read. According to him providing reference or more appropriate material in a clear readable format will make information accessible to learners with challenges like handwriting, spelling or memory difficulties. Learners with disabilities who have limited handwriting or spelling skills may be unmotivated to write or read their own handwriting. For learners who have challenges, recalling basic facts or steps in a process, reference or appropriate educational media enables them to apply information, facilitating both uses of handwriting and memory difficulties.

We define curriculum adaptation of the learning environment as psychological, social and physical changes, and or modifications carried out in an educational setting in order to meet the needs of every child who has the right to be educated at the closest educational institution to his or her home. This calls for proper classroom management adaptation, instructional adaptation and assessment adaptation of the school learning environment not just to welcome every child but to ensure that his or her educational needs are made for the betterment of inclusive education in secondary schools.

2.1.24 International Perspective on Inclusion Policy, Legislation and Recommendations

Shevlin, Kearns, Ranaghan, Twomey, Smith & Winer (2009), identified that international developments in policy; research and practice have established the right of students with disabilities to be educated in regular schools. The Salamanca statement (UNESCO, 1994) proclaimed that schools should accommodate all children including those with a disability. More recently, ‘‘the Dakar Statement’’ (UNESCO, 2000), reflecting a World Education Forum, restated an international commitment to education for all children in inclusive educational environments. The adoption of the United Nations Convention on the Rights of Persons with Disabilities (UN 2006), is also important, although it has not been

ratified in some countries. Ratifying this convention imposes an obligation on signatory states to submit regular reports on its progress and implementation in their countries.

According to Mittler (2008), inclusive education constitutes one of the outstanding contentious issues in this convention. Following these international trends, it is necessary for any principal of a school in a country that is a signatory to this convention to implement inclusive practices in his or her administration. Cameroon is a signatory to this convention. To strengthen the capacity of the government to design and implement policies and programs that are disability inclusive, some recommendations which have been made to various institutions and government will globally be started.

In a study of attitudes, Fisher, Pumpian & Sax (1998), investigated the attitudes of 1413 pupils without special education needs from two high schools, one inclusive (experimental) and one traditional self-contained (control). They focused on pupil's attitudes towards peers with disabilities and on what their recommendations would be for inclusive education. The results showed that pupils from both schools had overall positive attitudes towards pupils with special education needs and felt that inclusive education did not negatively influence their attitudes towards people with disabilities. In this light, a general recommendation to all governments in the world is to include learners with disabilities in regular schools. This has been emphasized in Article 28 and 23 of the United Nations Convention on the Child (1989), to education and the responsibility of governments to ensure that disabled children receive quality education.

In another study, York, Vandercook, Macdonald, Heise-Neff, and Caughey (1992), survey 181 middle-school pupils without disabilities concerning their reactions to being in inclusive classes with severe disabilities learners. The findings indicated that these pupils: overwhelmingly felt that inclusion was a good idea, believed that being in "general education" classrooms resulted in positive outcomes for pupils with disabilities, particularly in terms of social and interpersonal skills, and developed more realistic and positive perspectives concerning their classmates with disabilities.

This study still supports the inclusion of students with disabilities in regular setting. Chang & Antonio (2005), in a study of making diversity work on campus: A research-based perspective, gathered on behalf of the University of Michigan in its defense of its affirmative action policies before the Supreme Court, indicated that diversity must be carried out in international ways in order to argue persuasively for a conception of diversity as a process toward better learning rather than as an outcome. They also provide numerous suggestions on how to "engage" diversity in the service of learning, ranging from recruiting a

compositionally diverse student body, faculty and staff; to developing a positive campus climate, to transforming curriculum, co-curriculum and pedagogy to reflect and support goals for inclusion and excellence. Most governments in the world have to embrace diversity in educational institutions and this can better be done through inclusion.

Tchombe (2004)2 recommends some pedagogic implications for effective functioning of inclusive education. She says these pedagogic practices include: strategies managing (learning in class must focus on precision during teaching), meta-cognitive skill must be developed (focus of control from an animal rather than external base must be encouraged), motivation (both extrinsic and intrinsic motivation must be enhanced as well as strong sense of self-esteem), self-image and self-actualization must be nurtured. These strategies help teachers to use their pedagogic practices to meet the individual learning needs of the learner especially in inclusive classrooms.

According to International Disability Right Monitor Online (2004), sport can be used to empower persons with disabilities in regular schools. A study conducted in the United Kingdom found that the schools surveyed had no staff with a disability and only 16% could name a textbook that included a positive reference to disability or achievements of persons with disabilities. They suggest that sport is an effective means of building knowledge and awareness among persons with disabilities because it allows large groups to come together in an enjoyable way. For this reason some exhaustive policy recommendations have been made on sport and disabilities as follows: Declare the right of persons with disabilities to participate fully in society and affirm the realization of this right as a national objective; identify and eradicate stigmatization and discriminatory attitudes, policies and practices within the government itself; Increase public awareness of the rights and capabilities of persons with disabilities and the importance of ensuring full participation in society. Incorporate a special focus on inclusion and developing opportunities for persons with disabilities in national sport and sport for development strategies; establish more fundamental social supports for persons with disabilities to ensure that they can participate fully in sport; emphasize the importance of developing sport opportunities for people with different types of disabilities and equal opportunities for female and males to participate and include physical education for children in any disability legislation to ensure that all children with disabilities are included.

Other recommendations made on sport and disabilities are to create strong physical education requirements for all children, ensure that policies and practices are right-based, with suitable and effective enforcement mechanisms, refer specifically to disability in government policies, define the terms “sport for all”, “disability”, “participation”,

mainstream sport” and “ “disability-specific sport”; include persons with disabilities in policy development and planning; focus on both accommodation and inclusion, actively communicate government sport and disability policies and make them easily accessible to donor agencies, development partners and affected individuals. As well as enforce laws and polices created to perfect the rights of persons with disabilities to sport and physical education.

International Disability Right Monitor Online (2004), further puts forward some program recommendations to include students with disability in sport, as follows: Ensure that coaches and physical education teachers are trained in adaptive sport and inclusion of persons with disabilities; Invest in programs to produce and make available low-cost adaptive aids; Disseminative resource materials on adaptive sport that include photographs and positive role models, including women and disabilities; Include monitoring mechanisms and indicators to gauge the impact of programs on persons with disabilities and their families; Organize forums where parents of children with disabilities can gather, share experiences and ideas and network; Encourage partnership and collaboration and finally recognize and apply the right of all persons with disabilities to participate in sport, physical education and activity in all spheres of government activity. We remark that this is not yet the case in Cameroon secondary schools but hold that if it were the case, it would be a unification factor of challenged and unchallenged learners especially that sporting activities are known for their happiness and unification abilities.

In addition to the above program recommendations, the media can ensure that disability is portrayed in a positive way. This is because, too often, the view of disability is a negative one of dependence, inactivity and isolation. These policy recommendations can go a long way to influence students of special need’s perception of the learning environment. In Cameroon, Law No.98/004/ of 14 April 1998 to lay down guidelines for education, states clearly in objective 8 that one of the objectives of education shall be to “provide physical, sports, artistic and cultural training for the child”. Though this is clearly stated, most of the students with disabilities are often left out of sports activities because of lack of facilities and poor organization (Ekema, 2012; Shey, 2014).

Further efforts have been made towards an inclusive, barrier-free and right-based society for persons with disabilities in Asia and the Pacific, Bangkok (2007). It is worth noting that Asian and pacific regions are the homes to two third of the 650 million persons with disabilities in the world. In order to ensure greater recognition of their rights, governments and other stakeholders in Asia and Pacific regions have taken a number of

measures. According to high-level intergovernmental meeting on the midpoint review of Asian and Pacific decade of disabled persons 2003-2012 in Bangkok (2007), it resolved to follow the Bimako Millennium framework for action towards an inclusive, barrier-free and rights-based society in Asia and the Pacific. The millennium framework for action emphasizes the paradigm shift from a charity-based approach to right-based approach for the development of persons with disabilities. It also promotes a barrier-free inclusive and right-based society, which embraces the diversity of human beings.

Further, the Bangkok meeting enables and advances the socio-economic contribution of its members and ensures the realization of those rights by persons with disabilities. Despite these measures, it was noted in this meeting that many governments still have challenges and obstacles including; lack of availability and quality of demographic data and socio-economic indicators concerning disability, lack of financial and human resources, technical knowledge and capacities hinder implementation of inclusion (Chaffi,2017; Fonkoua,2018). It was noted in this meeting that while more persons with disabilities are becoming increasingly empowered, due attention should be paid to marginalized groups, such as, those with psychosocial disabilities, intellectual disabilities or multiple disabilities and those living in rural and remote areas.

The following are additional actions they recommended that may help countries to achieve their targets in inclusion: The development of self-help organizations of persons with disabilities and related family and parent associations; The inclusion of gender perspective in disability-relevant policies, programs, plans and legislation; Explore the possibility of establishing efficient coordination and communication mechanisms for early detection, early intervention and education of children with disabilities and an inclusive system and life-long learning; Recognize the right of persons with disabilities to training and employment, including self-employment; Take appropriate measures to enforce accessibility standards effectively and to promote accessibility in both existing and newly built environments and public transport; Actively promote access to information and communication including information communications and assistive technologies. In addition, there could be poverty alleviation of persons with disabilities through capacity-building, social security and sustainable livelihood programs.

In a study by Buckup (2009), he opines that the inclusion of persons with disabilities in the development programming also makes sense from an economic perspective. Excluding persons with disabilities from the world of work has cost for societies, in terms of their productive potential, the cost of disability benefits or pensions, where these exist, and the

implications for their families. This exclusion may cost countries between 1 and 7% of gross domestic product. These costs to society can be minimized by dismantling barriers to participation of persons with disabilities in education, skill development, enterprise development and employment, as well as poverty reduction and development programs.

Sharma & Deppler (2005), in a study of an integrated education in India, challenges and prospects, propose some possible strategies to address some of the challenges of inclusive education in India to be the training of teachers. The educational authorities in India may adopt a policy of training teachers in a three-level training approach as follows: A five day orientation course for all the teachers and a one-year multi-category training program for eight to ten regular school teachers. Teachers will complete this program act as resource teachers. There is also a need to design innovation system of training educators at mass level, e.g. through the user of distance open learning, collaboration between ministries in order that persons with disabilities can be used effectively, involvement non-governmental organizations in implementing inclusive education programs and establishing an alternate system of examination for students with disabilities. School-university partnership and pilot project involving local schools could be initiated by universities to explore strategies which can be produced in the common language spoken by educators in each of the states.

2.2 Empirical Review of Literature

Many empirical studies have been carried out world-wide on curriculum adaptations of the learning environment and the implementation of inclusive education. In this connection, the works of some scholars will be reviewed under three research questions notably:

2.2.1 Research question 1:

How does classroom management adaptation of the learning environment significantly influence the implementation of inclusive education? This question is intended to bring out the relationship that exists between classroom management adaptation and the implementation of inclusive education. In this light, the works of the following writers will be reviewed: Tom et al, (1992); Encarta, (1998); Agra et al, (2002), Austin, (2001), Mongwaketse, (2011), Ekema,(2012); Nana et al., (2012) and Shey,(2018)

In a study carried out in California on curriculum adaptation and inclusive education, Tom et al.,(1992) found out that a positive and accepting school climate and culture are vital in any meaningful learning environment. They hold that building a sense of

community in a classroom environment is vital in order to enhance and foster a sense of acceptance, responsibility and cooperation among students and their teachers. To build a sense of community is to create groups that extend to others the respect and consideration others have for them; that know others as persons to be respected and cared about. To show love to others, and to let them feel a sense of membership and accountability to the group. This kind of learning environment greatly favors the implementation of inclusive education in secondary schools. Tom et al.,(1992) especially found out in their study that creating ability awareness in the learners was better than creating disability awareness because in every disability there is ability and everyone without a single exception is a potential person with a disability.

Encarta (1998) in a study of students' perception of their classroom learning environment in Iowa in the United States of America, noted in a school building conference that, «humanized school buildings» were vital and necessary because human beings values are determined by physical environment. Hence high school buildings having «student centres' were preferable to teacher policed study classrooms. To humanize school buildings means to make them more pleasant, friendly and suitable for learners, that is for instance to make them have stairs and ramps not only stairs, separate latrines for boys and girls, a good source of drinking water etc. This makes the learning environment more humane and thus more suitable for the implementation of inclusive education. The implication of this is that students' perception of their learning environment may be positive or negative depending on how pleasant, accessible and suitable the school facilities, furniture, materials and more importantly classrooms are built and managed taking into consideration the needs of learners with challenges. A negative perception of the learning environment especially the classroom environment is a great stumbling block to the teaching learning process and thus the implementation of inclusive education especially when learners with challenges are concerned.

On their part, in connection with classroom management adaptation for the implementation of inclusive education, Agran et al., (2002) hold that class size which refers to the number of learners per class influences the implementation of inclusive education. Large class sizes do not encourage teachers to buy the idea of inclusive education. They hold that large class sizes are seen as obstacles to the effective implementation of inclusive education. They equally hold that larger classes place additional demands on the regular teacher, while at the same time reinforcing concern that all learners may not get proper time or attention if the class has learners with challenges. They concluded that teachers are more

supportive of inclusive education when the classroom environment is adapted. For example, if large class sizes are reduced to smaller sizes; rooms are larger for proper arrangement of desks; and assistive technology is available, teachers will be more supportive of inclusive education and it will be properly implemented.

For his part, Austin (2001) reports that there is need for the adaptation of the class size in order to reduce the burden of the class teacher. He reports that overcrowded classrooms constitute real barriers to the effective implementation of inclusive education in our secondary schools. So, there is need for the reduction of class sizes so that inclusive programs will be successfully implemented.

According to Mongwaketse, (2011), the majority of teachers attributed their reluctance to the implementation of inclusive education to the overcrowded classrooms. They revealed that having to contend with large class sizes especially those in towns is a great barrier to the implementation of inclusive education. He concluded that reduced number of learners per class will enable teachers to effectively implement inclusive education.

On his part, Ekema,(2012) in his work on inclusive education in Cameroon holds that classroom buildings and class sizes are great barriers to the implementation of inclusive education in Cameroon. He insists that humanized classroom buildings and smaller class sizes will significantly facilitate the implementation of inclusive education in secondary schools in Cameroon. Just like Ekema,(2012), Nana et al.,(2012) in a study carried out in Cameroon on the situational analysis on the policies practices and barriers to inclusive education in primary education sector in Cameroon, and Shey et al., (2018) in their study in Limbe City Council on including the excluded: Effects of social stigma on the socio-educational development of deaf persons in Limbe City Council, are in agreement with the opinions of the above researchers related to the ways by which most classrooms' buildings and large class sizes interfere with the implementation of inclusive education in Cameroon.

2.2.2 Research Question 2:

How does the instructional adaptation of the learning environment significantly influence the implementation of inclusive education? This question is set to find out the kind of relationship that exists between instructional adaptation and the implementation of inclusive education. The works of the following writers will be reviewed: Goetz, (1994); Murray-Seegert (1989); Peterson and Spencer, (2000); Cress, (2008), Mongwaketse, (2011), Stainback et al.,(1992); Endeley, (2015); Obanya, (2017); Chaffi,(2017); Manfouo et al., (2023)

In an investigation carried out by Goetz (1994) on mixed cooperative learning groups of 10 learners with challenges and 10 learners without challenges in a Mathematics lesson, he focused mainly on progress in Mathematics in secondary schools' classrooms. He used a pre-post-test design to compare the achievement of targeted Mathematics objectives of 10 learners without special education needs (SEN) who participated in co-operative learning groups with their classmates with special education needs (SEN) with a control group of 10 learners without special Education Needs (SEN) who were members of co-operative learning group that did not include learners with special education needs (SED). The results revealed that both group significantly increased their mastery of targeted Mathematics objective and that, learners without special education needs (SEN) who participation in co-operative learning groups alongside pupils with special education needs (SEN) performed as well as the learners without special education (SEN) in the control group. This investigation is true testimony that co-operative learning is a good contribution of the student/student relationship to the implementation of inclusive education. It is also an indication that co-operative learning is a good pedagogic practice in an integrated learning classroom as it enables students to work together in small mixed ability groups, interact with one another, learn from each other and from the teacher. Cooperative learning thus enhances and fosters the implementation of inclusive education

In another study by Murray-Seegert (1989) he found in his study in which ethnographic approaches were used to examine social relationship between students without disabilities and their peers with disabilities during a one year period. The learners without disabilities reported that their experiences in inclusive setting had lots of benefits for them, including learning from their classmates with disabilities, experiencing positive feelings as a result of supporting another individual and being better able to deal with disability in their own lives and times. The results of this study reveal that good student/student relationship can contribute enormously towards the implementation of inclusive education.

The social learning gives rise to the school climate. In other words, climate is not limited to perception and attitude or what we call psychological climate but includes too the campus organization and history as well as people's interactions across differences. According to Peterson and Spencer cited in Brown (2000), climate can refer to the common actual patterns of important dimensions. Cress (2008), holds this sentiment in her article; «Studying Campus Climate » is way of discerning how the environmental complexities of a campus affect the overall functioning of both its members (teachers/students and students/students relationships) and organization. Cress study determines students' perception

of campus climate with regard to gender, race, sexuality, friendship and disability. This researcher used a sample of about 8500 students across 130 institutions. This sample was surveyed when they entered college for the first time and four years later. She further studied ways create a supportive and enjoyable inclusive campus climate. From her study, she found «Students who feel that teachers treat them with respect, give them honest feedback about their abilities and provide them emotional support are less likely to perceive that there is a negative Campus Climate» and this gives them a sense of belonging to the group and thus the willingness to happily learn, especially learners with disabilities. This is a clear indication that Campus student/student interactions are integral to the success of marginalized student groups and to creating more inclusive and accepting campus climate for proper implementation of inclusive education.

Cress also holds that if teachers interact with students in ways that make them feel valued and affirmed both within and outside the classroom, the effect will moderate a negative learning environment and ultimately facilitate positive learning communities for all students for adequate implementation of inclusive education. She holds that prejudice and discrimination are alive and well on school campuses, whether blatant or furtive. There are two shifts that must be made on the college campus to create more positive climate: Changing behaviors and changing attitudes, at both the individual level and organizational level. These recommendations are in line with our Cameroon school institutions at all levels, where learners with challenges are still discriminated upon and suffer stigmatization in regular schools. This makes the implementation of inclusive education difficult.

Mongwaketse (2011) holds that the general mood of teachers was that of dissatisfaction when describing the nature of curriculum and meeting the learning needs of learners with challenges. There was evidence in the data that the vast majority of teachers believed that the curriculum was examination centered and as a result of this their teachings were focused on running after the objectives in order to cover all of them before examination time and this is not workable in a diverse classroom. This kind of situation where teachers work under examination pressure is a great barrier to the implementation of inclusive education as in an inclusive classroom, students learn at different paces. The wide held view amongst teachers was that meeting the needs of learners with disabilities was not possible given the circumstances surrounding the nature of the curriculum. Teachers here agree that there is need for instructional adaptation of the curriculum at the levels of teaching methods and strategies as well as programs and objectives in order to enhance and foster the implementation of inclusive education. We believe that the act of teachers rushing through

the syllabus to meeting objectives because of examination pressure actually constitutes a great barrier to the implementation of inclusive education. There is therefore an urgent need for teachers to carry out instructional adaptation of the curriculum in order to meet the diversity of needs of all learners, especially those with learning disabilities. Here, Ogunrinde, and Adewale (2020), Chaffi,(2017) as well as Endeley, (2015) talk of the use of social media to make learners active and receptive at all levels of the instruction. It is what Zimmerman, (2012) and Fonkoua, (2018) call motivation for self-regulated learning in inclusive settings.

In the same perspective, Manfouo et al., (2023) in their study known as Formation des enseignants des écoles primaires à l'utilisation des méthodes pédagogiques adaptées à l'enfant à besoins éducatifs particuliers et éducation inclusive au Cameroun, call for the urgent need to adequately train and prepare teachers for sustainable quality education in Cameroon. This calls for teacher training colleges as well as faculties of education at Cameroonian universities to train teachers on the use of adapted teaching techniques so that they will be able to properly teach children with challenges in order to adequately facilitate the implementation of inclusive education in schools in Cameroon.

Stainback, Stainback, Moravec and Jackson, (1992) hold that cooperative learning plays a great role in enhancing and fostering the inclusion of all students and that it embodies many a benefits notably:

- 1) Cooperative learning is fun, so students enjoy it and are highly motivated.
- 2) Cooperative Learning is interactive, so students are engaged, active participants in the learning activities.
- 3) Cooperative learning favors discussions and critical thinking, so students learn more and remember what they have learned for a longer period of time.
- 4) Cooperative learning encourages students to learn together, and this is an important skill for their future lives.

According to these writers, cooperative learning is a commendable learning strategy that enables every learner to take part in the learning process and thus masters well and for a longer time what is learned. Besides, we hold that, it enables stronger students to pull weaker ones along with them and it is an inclusive practice that considerably enhances and fosters the implementation of inclusive education in our secondary schools.

Obanya, (2017) holds that a Tripartite Curriculum for Total-Person Skills is the way forward today in inclusive classrooms if inclusive education must succeed. According to him, Education as promoted by most formal institutions, tends to be one-sided that they emphasize the acquisition of hard, easy to qualify and measure skills. This is seen in the

content and orientation of conventional subject disciplines and the demands made on learners in the course of formal examinations and certification. Emphasizing the hard skills could lead to the development of cognitive intelligence, the conventional mark of the educated person. However, going to from mere qualifications to the more worthwhile concept of “personal qualities” requires the development of other “intelligences”, Emotional intelligence, inculcated through the soft skills, is needed to develop that which is human in human beings or us. In addition to this, Imaginative Intelligence (inculcated through go-getting skills) is required to enable the learner think beyond the immediate, explore and apply ideas to create something new. This is very interesting in inclusive settings as it enable every child to show his or her hidden talents by creating one thing or the other as in every disability, there is ability. Table 7 outlines the major components of these three intelligences. These intelligences constitute the humane skills that education would have to develop in learners who can help to create a more humane future in which the head would be acting in concert with the heart and the hands. For this to happen there has to be more bridge-building among various areas of knowledge. Teaching would have to be more responsive to learners’ needs, while learning has to become fun. Individual subject disciplines could remain, but the goal of teaching and learning them must shift from mere subject mastery to personality development and self-actualization for contribution to societal wellbeing.

Table 7: A Tripartite Life Skills Set for A Total-Person Education

HARD SKILLS	SOFT SKILLS	GO-GETTING SKILLS
Cognitive Intelligence	Emotional Intelligence	Imaginative Intelligence
<ul style="list-style-type: none"> • Self-Expression Skills(Oral, written, etc.) • Logical Reasoning Skills(for analysis and problem solving) • Computational Skills(for mathematical reasoning) • Design/Manipulative Skills(for purely technical reasoning and action) • Conceptual Skills(for generating ideas and translating them into ‘action maps’) 	<ul style="list-style-type: none"> • Character formation skills(for strengthening the total person) • Intra-personal Skills(for the individual to understand his/her personal strengths and weaknesses, as well as possibilities/potentialities) • Inter-personal skills(for understanding and ‘teaming’ with others) • Lifelong learning Skills(knowledge-seeking skills) • Perseverance Skills (for seeing ideas and projects through to fruition) 	<ul style="list-style-type: none"> • Creative thinking skills(thinking out of the box) • Ideational fluency skills(proclivity in generating novel ideas) • Opportunity-seizing skills(perceptivity in making the best of opportunities) • Experiential learning skills(making the best use of the lessons of experience; ever working on new ideas) • Idea-to-product (or ideas conversion)skills (Ease and passion for turning ideas into products skills, ability to apply head-hands-heart)

Source: Obanya, (2017)

Educating for All Talents

As figure 21 indicates, there is a generic talent (common to all humane intellectual expressions), while every human being tends to be specifically talented in specific areas. There are at the same time exceptional cases of multiple-talented individuals. Most education programs tend to have a narrow focus in that they address the purely intellectual type of talent. So teachers should therefore make sure that they balance their teachings so that they will be able to assist every Individual in their classrooms to develop his or her desired talent.

In this light, a more sustainable future, more humane world, would promote inclusive education in the most comprehensive sense of the term. Teachers as key actors in the teaching learning process should do everything at their reach to facilitate inclusive education so that children of all ages in all places and in all imaginable life conditions should have unconditioned access to education. Furthermore, children exhibiting a wide variety of not-strictly intellectual talents should not be excluded from education. Every talent would have to be identified, nurtured and employed in the services of society, combining with all other talents to create and sustain a more humane world.

Most African countries and Cameroon is no exception are in fact in dire need of an education policy re-thinking that caters for all talents. Leadership and community service talents which helped traditional society to move through difficult times were not emphasized in what became known as ‘western education’. The same is true of talents that emphasize the use of hands. According to Obanya, (2017) teachers should use their instructional strategies to bridge this gap in order to build and nurture humane, socially-responsive citizens. We hold that for many decades today, teachers’ teachings have targeted just a few talents in some non-disabled students and as a result of this, left many other children in the cold especially those with challenges. With curriculum adaptations of the learning environments notably classroom management adaptation, instructional adaptation and assessment adaptation, this situation has got to change for education is supposed to build a whole person especially that in every person there is at least an inborn talent. It is therefore the responsibility of the teacher to use his teachings to awaken inherent talents in all learners for the advancement and betterment of inclusive education. Another major gap that inclusive education has to bridge is the gap between jobs and skills because children are potential future workers who largely have what it takes to change the world. In this perspective teachers have to properly adapt their teaching methods to students learning styles and developmental stages in order to awaken and develop hidden talents in them so that every child identifies his/herself in one or more of the various job skills out there. It is in this perspective that the Cameroonian head of state in his 2023 traditional speeches to the youths said:

“Don’t. Above all, give up. On the contrary, arm yourself with your intelligence, your wisdom, determination, your skills and your talents to meet the challenges of the present and the future. Education, I have already had the opportunity to tell you, is essential in this respect. What good would it do you if you were talented but if you weren’t

organized? What good would it do you to be smart if you get discouraged at the first difficulty?

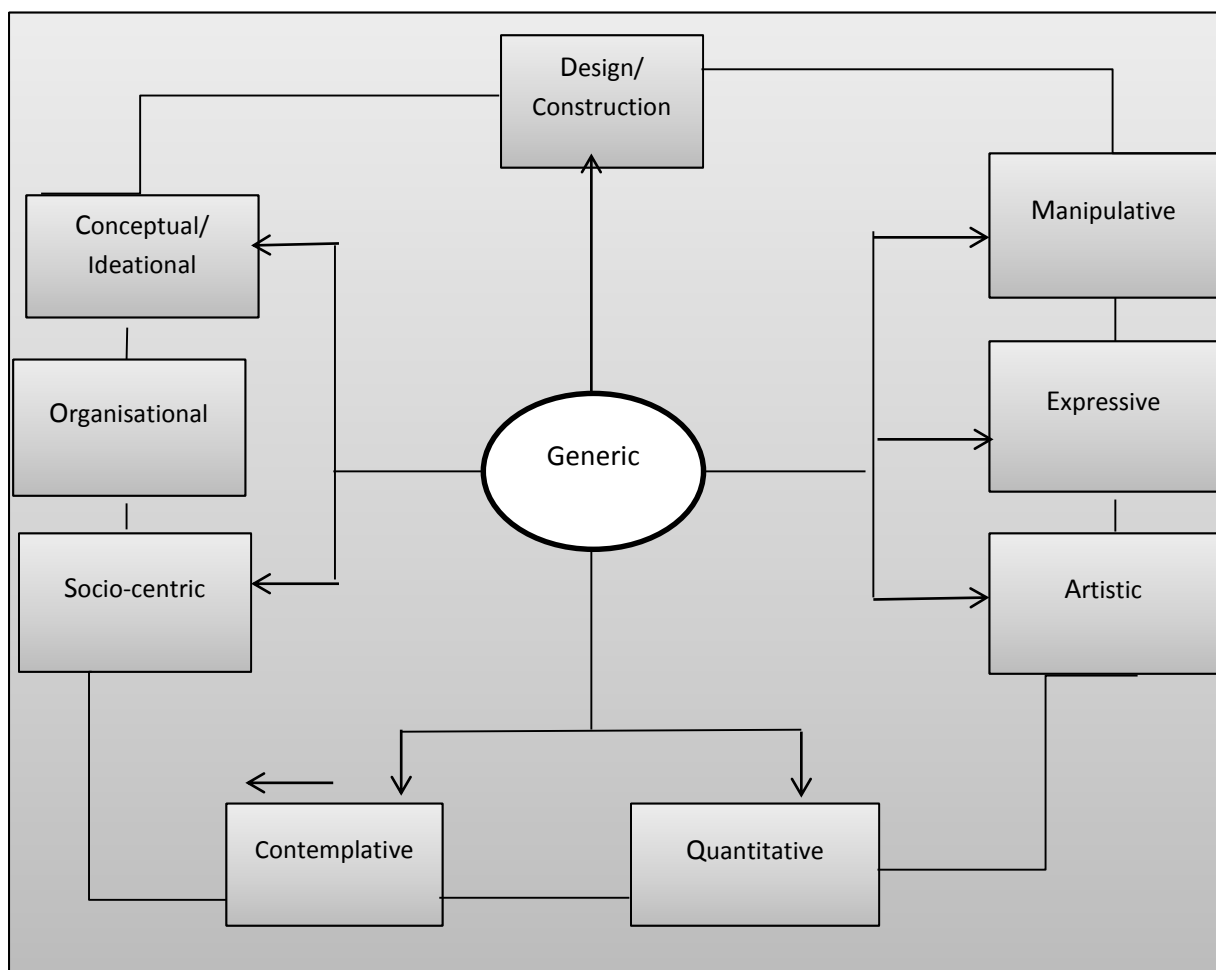


Figure 21: A Variety of Human Talents that Education Should Address

Source: Obanya, 2017

Education for All calls for proper implementation of inclusive education so that all benefits from it and this means carrying all students with their different talents on board in the way that all must benefit from it. The prevailing practice is to a restrictive curriculum that gives prominence to supposedly intellectual talents. What we have failed to recognize is that intellectual talents take a variety of forms, each of which deserves to be cultivated through education. Our failure to recognize this fact is a major explanation for poor demand for formal education in some segments of the society. This is particularly relevant to students' drop out, especially those with challenges in developing countries and Cameroon is no

exception. Obanya holds that this is equally relevant to the mass failure phenomenon in the overall examination-dominated education system. <

These talents are manifested everywhere in our societies, and as table 8 shows, every one of these talents is of special importance to the society and is of practical utility to nation building. The middle column of the table outlines the behavioral manifestations of each type of talents and these are all traits that most societies in Africa do appreciate. Column three indicates that the talents do have some measure of social utility. Therefore, if they are not diligently promoted through education, society would be losing out on many dimensions of development. One way of promoting inclusion by educating for all talents is to evolve education policies that lay emphasis on developing all possible varieties of talents through widening the scope of educational provisions. This calls on teachers to sing not just cognitive songs but to equally learn how to sing affective and psycho-motor ones. These would take such forms as:

1. Due emphasis to non-academic activities in schools (drama, physical activities, creative arts, music, manipulative activities, etc.). These of course do not necessarily constitute subjects on the school time-table; they are more frequently used as strategies for teaching and learning.
2. Provision of mechanisms for identifying the special talents of every student.
3. Provision of special teachers whose task is to cater for the unique talents of every learner.
4. provision of out of class learning activities centered around clubs and societies, where children can exercise the various talents.
5. Giving appropriate reinforcement to the exercise of special talents.
6. Ensuring that every child engages in out-of- class learning activities, to ensure that no potential talent is denied for expression.
7. Not encouraging early and narrow specialization in subject choice among students.

This way, education will enable every child to among other things have something doing in order to earn a living and thus come out of a jobless situation which Bezagwa, (2019 b) describes as a satanic altar or workshop where nation destruction is planned. It is up to the teacher to match the teaching process with various learning domains notably cognitive, affective and psychomotor domains so that every child identifies his or herself with a life earning skill or skills as a jobless person is a great danger to the society as Voltaire, (1778) says:

Le travail éloigne de nous trois grands

Maux : l'ennui, le vice et le besoin.

This could be translated into English language as work distances us from three major evils notably boredom, vice and need. Teachers therefore have to use instructional adaptation to meet the needs of diverse learners in the classroom so that every child feels the sense of belonging in an inclusive classroom for the betterment of inclusive education. More importantly, real curriculum readjustment should be carried out from form four so that more series notably music, farming ,craft and sports should be added to general English secondary school curriculum so that every student especially those with challenges finds a skill in which to express his or her inborn talent. Such children who may not be successful in cognitive domains may be very successful in the affective and psycho-motor domains, e.g., become star singers, star footballers and successful farmers or artists.

Table 8: Manifestation and Social Utility of the Various Talents

TALENT TYPE	BEHAVIORAL MANIFESTATIONS	SOCIAL UTILITY
i-Conceptual/ Idea	<ul style="list-style-type: none"> • good at generating ideas • shines with abstract thinking • scientifically inclined 	<ul style="list-style-type: none"> • human progress has been driven largely by ideas
ii-Design/ Construction	<ul style="list-style-type: none"> • skilled in turning abstract constructs to concrete technical and social tools • enjoy refining and remolding 	<ul style="list-style-type: none"> • inventions, designing and re-designing have always contributed to changing the world
iii-Manipulative	<ul style="list-style-type: none"> • delight in handling of tools and gadgets • adapt in using the hands 	<ul style="list-style-type: none"> • human hands have always helped in harvesting and transforming the Work of nature
iv-Expressive distinguishes	<ul style="list-style-type: none"> • skilled in verbal communication • known for persuasive skills • public relation expertise • outstanding linguistic facility 	<ul style="list-style-type: none"> • language human kind from all other animals • language is our tool For logical thinking, Social communication And problem-solving

v.Socio-centric	<ul style="list-style-type: none"> • out/going/extroverted • crowd-loving/crowd-pulling • never acting alone thing 	<ul style="list-style-type: none"> • man and woman are social beings • team spirit the in-In today's world of work
vi-Organizational	<ul style="list-style-type: none"> • order-prone • always ensuring that things work according to Plan/that things fit into a difference Mold 	<ul style="list-style-type: none"> • order is set to be the first law in heaven • management often human affairs
vii-Contemplative	<ul style="list-style-type: none"> • introverted and engaged in deep and critical thinking • able to influence by thinking Out of the box 	<ul style="list-style-type: none"> • out-of-the box thinking is key to discoveries and inventions • creativity helps Competitiveness in Today's knowledge Economy
viii-Quantitative	<ul style="list-style-type: none"> • at home with figures, shapes and quantities • communicates readily in Graphic terms 	<ul style="list-style-type: none"> • quantitative reasoning illuminates analytical thought and aids analysis and problem-Solving
ix-Artistic	<ul style="list-style-type: none"> • Enhanced sensibility to creative endeavors in all forms. 	<ul style="list-style-type: none"> • Arts in all its forms-enliven the soft (human) side of human beings • Arts- its enjoyment and appreciation- brings us closer to the beauty of nature.

Sources: Obanya, (2017)

In the same perspective, Tchombe;(2019) holds that in the Process of Teaching and Learning, some components come into play as the teacher prepares a lesson in a way that it will meet the needs of every learner. A teacher could master well what he/she has got to teach but the transmission method inhibits the successful application and thereafter, the learners remain without a change in behavior. Besides, teaching as a transaction is not done in a vacuum, the learners must be present with their diverse characteristics notably age, family backgrounds, thoughts, objectives and visions and therefore the lesson must be capable of arousing their interests in order to address their needs. This could be done from setting and announcing the objectives of the lesson before the lesson proper as most students

show more interest when they are given specific reasons why they must master this or that learning activity or their expectations are raised before the lesson is presented.

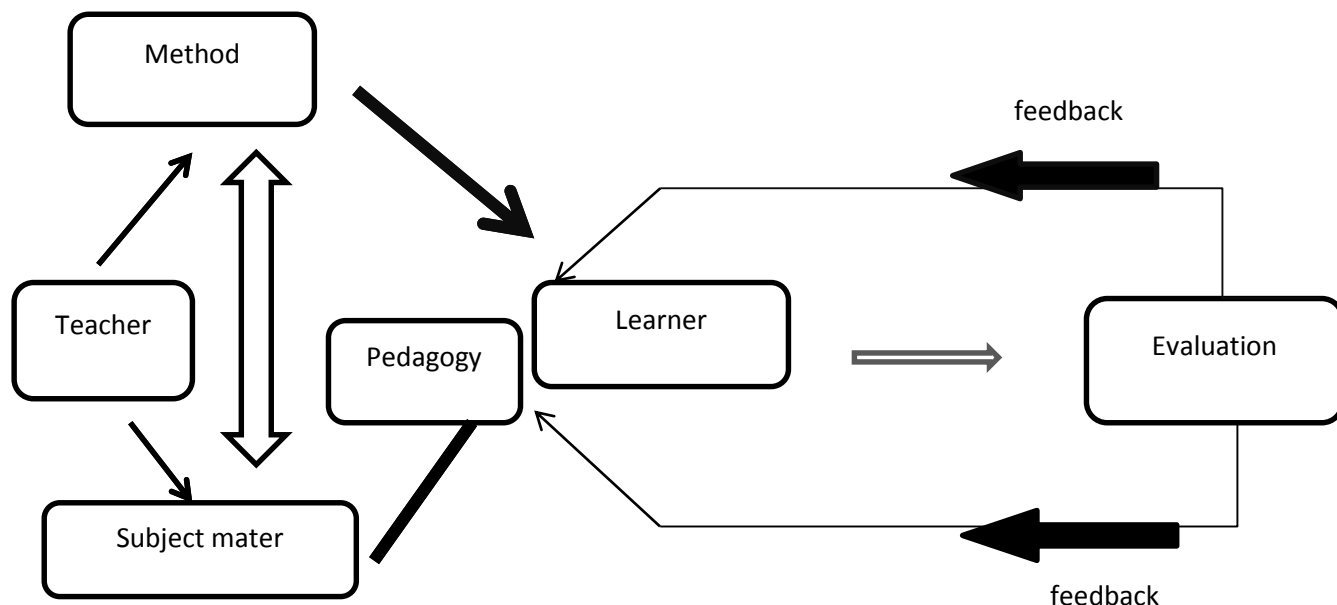


Figure 22: The Process of Teaching and Learning

Source: Researcher initiative (2023)

According to Tchombe (2019), the relationship between teaching and learning is an example of two processes embedded in a reciprocal act. This implies that during the transformation process, there is an active exchange of knowledge, ideas between the actors involved. The teacher (lesson conceiver) observes certain teaching techniques and gives opportunities to the learner to undergo different phases. Tchombe (2019) outlined the recommended learning phases and teaching techniques thus the following table.

Table 9: Presentation of Learning Phases (process) Within Lesson Structure and Technique

LESSON STRUCTURE	TEACHING TECHNIQUES	LEARNING PHRASES
Introduction	Highly directive	Motivation
Presentation	More interactive	Apprehension, acquisition, retention
Application	Individual/group interaction	Recall, generalization, performance
Conclusion/Evaluation	Directive	Feedback

Source: Adopted from Tchombe (2019): Psychology parameters in teaching. *An African perspective to learning as a process for cognitive enhancement.*

Table 9 above presents the teaching-learning process involved in a lesson. It involves the various steps, the techniques and learning phases that enable a more active transformation of the learner to a more skillful human capital. All these occur successfully only when the teacher has undergone training and acquired specific cognitive behaviors that guide pedagogic activities and enhance student-centeredness in the process of transformation. During teaching, the focus is on enhancing and empowering the students as the primary target. Quality education is one that effects changes in the participants and therefore enhances them. It is based on this that the quality of teaching-learning is judged based on knowledge enhancement, abilities and skills acquired by the learner (Hervey & Knight,1996; Endeley,2015; Chaffi,2017; Manfouo et al.,2023) .

According to the Cameroon Reference and Guidelines in Education (2018), institutions ensure that programs are delivered based on student-centred learning and teaching, in a way that encourages students to play an active role in the learning process including in its development and the evaluation of student's achievement. Students' centred learning strategies employ practices like stimulation, motivation, self-reflection, roll call and feedback in learning

In Cameroon, a set of guidelines are given to orientate teaching-learning in schools. Teaching must respect and take into account the diversity of students and their needs, offering flexible employment pathways. This becomes most vital in education owing to the continuous homogenous organization made up of people from diverse origins, religion, and faith working towards different career visions. In teaching, emphasis must be made on education planning which must be clear with the existence of coordinated progress in schools, preparation sheet for the course (challenging situations, exercises, practice, case study) and details on the number of summative/formative evaluation per semester communicated to learners.

The reference guide further stipulates that teachers should consider and use different teaching modalities or strategies including where appropriate, lectures or theoretical, individual and group work, tutorials and practice lasting 25% to 30% at the overall duration of the teaching course in general education. By this, importance is highly attached to creativity, self-confidence and extra intelligence for the teacher to meet-up with job exigencies. To resolve this, a call is made still to the institutions to enhance internal empowerment and reinforcement of workers. As the teachers are encouraged to use with flexibility, a variety of pedagogic methods, the system is expected to regularly evaluate and adjust these teaching modalities and pedagogic methods.

Furthermore, every institution that is gauging towards the attainment of quality must consider devising a clear and flexible policy of teaching materials like teaching aids with each of them having a model applicable to the different courses in the system. The syllabus should define the pedagogic objectives, content, learning method, evaluation of teaching, and teachers within and by the end of the year. This becomes strengthened by the conducive relationship that reigns between teachers and students. After teaching, come tutorials which are mostly done in student group works, with a focus on edifying content bearing course reminders, biographic references, and assignments.

The process of teaching-learning can never be completed without evaluation at different levels of learning. Most university policies recommend that evaluation should be student-centred methods. It is in these bases that the Cameroon reference guideline in education (2018) states guidelines for students-centred evaluation. These guidelines hold that: the various types of evaluation to be implemented as part of the training should be specified and communicated to all stakeholders (teacher's platform, students guide), in the form of tests or exams. The evaluation criteria and methods, as well as the grading system, must be made public in advance and respected. They further state that the evaluation should enable students to benefit from feedbacks.

In most higher institutions, given that there are no specific schools for higher institution teachers training, teachers who do not master pedagogy simply teach to the extent that by trying and error, they master the subject matter in a given course. Most of time, this is done through teacher centered learning as teachers may not master where to include students' activities. To such teachers, their role is just to pour out knowledge as the expression goes to empty vessels (students) and this is an inefficient and unproductive method used in an institution that quests for quality. It is in this light that some researchers like Batt, & Valcour, (2003) as cited in Akareem, et al. (2016) resumes higher education quality as by who and how students are taught rather than by what students learn. An effective teacher is knowledgeable in pedagogy. He/she is aware of the fact that just talking or pouring knowledge means that the teacher has organized the learners' environment in such a way as to make it possible for them to learn. This organization of the environment could be in the form of talking directly to the learners, asking them to find out things from people around them, encouraging them to explore their environment, experimenting and so on, (Nicodamus, 2007; Tchombe, 2019).

2.2.3 Research Question 3:

How does assessment adaptation of the learning environment significantly influence the implementation of inclusive education?

This research question was set to determine the influence of assessment adaptation on the implementation of inclusive education. In order to answer this question, the works of the following writers were reviewed: Guha, (2016); Orlume et al.,(2019); Fuchs, (1995); Suzanne, (2017); Sara, (2018); Morgen Mhaka-Mutepfa et al., (2011); Ekema,(2012); Nana et al.,(2012); Shey,(2020).

According to Guha, (2016) assessment adaptations are commendable and indispensable changes made in assessment in order to level the playing ground or testing conditions for all types of learners in the learning environment in order not to prevent those with learning disabilities from showcasing their abilities to show their real skill levels. However, assessment adaptations are not intended to alter or lower the standards or expectations for a test or discipline, or to provide an unfair advantage to learners with challenges. No, on the contrary the *raison d'être* of assessment adaptation is to assess in all domains of child development notably cognitive, affective and psychomotor domains so that each student has something to work on and thus feels a sense of belonging in the classroom and this greatly enhances and fosters the implementation of inclusive education in our secondary schools.

According to Orluwene et al., (2019) assessment adaptations are modifications and accommodations which the teacher makes in connection with assessment processes in order to meet the needs of diverse learners in the classroom. They hold that most assessments in our secondary schools are mainly cognitive and as a result of this exclude most learners with challenges from the process as their educational needs are not generally met. For instance, some students can be assessed in drawing while others are assessed in singing. Some common types of assessment adaptations include but not limited to;

- Time adaptation: This calls for adapting the time allocated and allowing for learning, task completion and testing. For example: A teacher can individualize a timeline for completing a task; pace learning differently (increase or decrease) for some students.
- Response adaptation: Teachers can adapt how learners response to instruction or tests. For example, written or oral responses should be optional. Also allow students to show knowledge with hands-on activities. Use books and materials with large prints.
- Setting adaptation: Adapt the number of items that the learner is expected to complete. For instance, reduce the number of exercises for some learners or allocate

more time for some learners so that they can complete their work. In this perspective, in Geography, some students may be asked to locate just the regions of Cameroon while others locate these regions and their capitals.

- Difficulty adaptation: Adapt the skill level, problem type, or the rules on how the student might approach the work. For instance, read all the test items clearly and loudly and repeatedly. Allow calculators for Mathematics problems; simplify directions; change rules to accommodate students' needs.

According to the works of Fuchs, (1995) and Shey, (2020), assessment adaptations enable the teacher to assess different students differently and in all the domains of child development while adapting tasks to children developmental stages of child development so that each learner especially the ones with challenges will recognize themselves in the exercises and hence develop interest in the teaching learning process for the betterment of inclusive education. But it is worthwhile noting that the kind of adaptation technique chosen by the teacher must allow learners with challenges to effectively showcase or demonstrate their learning during the evaluation process. These evaluations should play off students' abilities and reduce the influence of their weaknesses, so that they can unveil or awake their innate greatest potentials.

According to the work of Suzanne, (2017) every learner is unique especially learners with disabilities and so are their strengths and needs. It is in this light that she insists that teachers have got to know their learners very well in connection with their strengths and needs so that they will be able to select suitable assessment adaptations for them because students will respond differently following the kind of adaptations offered to them. Similarly, as each assessment is different so shall the assessment technique be different for a technique which is effective for one assessment may not be effective for another one. In line with the above, she provided some examples of assessment adaptation for students with challenges that support the implementation of inclusive education in secondary schools notably:

-For students with writing difficulties (dysgraphia), they can have access to a scribe or speech-to-text technology; use spell-checker text software; use word prediction software; to help with spelling and to ease the process of generating idea; use a method of demonstrating their learning other than the traditional pen and paper; videos; mind maps; comics; Bristol boards; models; complete the evaluation as fill in the blanks style page; so that the students just have to put in the required information.

-For students with difficulties organizing their ideas and time, chunk the information into smaller sections so that a learner can complete over a number of different class periods. Chunk the questions into smaller steps, and in a logical order for the task required. Use counts down timer to assist students manage their time.

-For students with other memory difficulties, provide the following items:

- a) A word bank related to the assignment;
- b) A formula list related to a mathematic test for students with dyscalculia;
- c) A glossary (either with images or written definitions, depending on the learner's strength);
- d) A reference page for calculations processes (division, multiplication, how to use a protractor) for students with dyscalculia;
- e) Provide students with dyscalculia with devices like calculators for Mathematics, for they will still need to justify their answers on papers;
- f) For problem solving, read the said problem clearly, slowly and aloud;
- g) For students with reading difficulties (dyslexia), they can listen to assessment questions using text-to speech technology. If this technology is not available, somebody can help him/her read the questions aloud.

According to the study carried out by Sara, (2018), rigid assessment of all learners in now day's classrooms does not take into consideration the diversity needs of all learners and as such constitutes a great deal to the implementation of inclusive education in many a secondary schools. She holds that assessment rules must be adapted if it has to meet the diversity of needs of all the members of the classroom. Besides, adapted assessment that meets the interest of every learner enables them to awake their inborn talents inherited in them and thus demonstrate that in every disability there is ability. According to her, to adapt assessment for learners with visual impairment, the teacher can:

-Adapt test materials as students with limited vision have problems reading and responding to traditional paper-based tests. With this in mind, the teacher has to consider the following tests designs when adapting assessment materials:

- 1) Large prints
- 2) Wide line spacing
- 3) More spacing between words
- 4) Tactile graphics
- 5) Simplified instructions and test

6) High contrast between the text and back ground (e.g., black text and bright white paper)

-Modify Assessment Method

In a situation where modified materials are not sufficient to assist learners with visual impairments, the teacher can adapt assessment methods by reading the test aloud and giving the concerned learners the option of oral answers. Such students could be given scribes which will help them answer their questions.

-Adapting the Testing Environment

Apart from adapting assessment materials and methods, the teacher can think of adapting the testing environment for learners with visual impairments. Such students may perform better when they are provided a quiet testing environment which is free from noise and distraction to them.

Adapting the Testing Time

Another adaptation is to give students with visual impairments extra time to complete their work. For instance, if the time allocated for the test is 30 minutes, Students with visual impairments may be provided 50 minutes. Furthermore, students with visual trouble should sit near the front of the room or closest to instruction in a well lighted area; have a large desk or table space to compensate for any other extra equipment, have seat near an electrical outlet to plug in any appliances and finally have flexibility to move around the class as required in order to get a better look.

According to the works of Bryant, (2017), Endeley, (2015) and Shey, (2020), effective assessment adaptation for inclusive education should not just touch one common domain of child development as it is the case in most of our secondary schools but should cover all the three domains of child development notably cognitive, affective and psychomotor domains as children may succeed differently in different domains and not just in the cognitive domain. For instance, drawing, coloring and counting ten pineapples is a cognitive and psychomotor learning activity which can be used to assess normal and disabled learners. While normal learners are drawing, coloring and counting ten pineapples, their counterparts with disabilities are drawing and coloring pineapples. This way, both learners with and without challenges will have something to happily carry home for the betterment of inclusive education.

According to the work of Morgen Mhaka-Mutepfa and Joseph Mahlakane Seabi (2011) developmental assessment will enable teachers to assess diverse learners equitably. Developmental assessment is a process through which information is obtained in a way to provide answers to developmentally related questions and to generate appropriate intervention strategies. It is the process of gathering information about the strengths and weaknesses in a learner's abilities, levels of functioning and learning characteristics, which is inclusive of what parents, caregivers and peers as holders of potential and actual gatherers of valuable assessment data do (Nsamenang, 2009). It is an ongoing process, which ought to be conducted in a collaborative manner. Great emphasis is put on the process given that usually collateral information is gathered from many individuals, notably, the parents, teachers, and other professionals who may have assessed the learner.

Inclusive education policy requires that a practicing teacher, just as any other specialist, should have a better understanding of a learner's temperament and cultural background. This understanding provides a fresh way of thinking about the learner, family and social relationships, given that it reframes how one interprets the learner's behavior and affects the way one thinks about the reasons for his/her behavior. For instance, one might view a shy and slow-to-warm-up learner as sensitive and thoughtful, rather than as unfriendly and unmotivated. The overall *raison d'être* of developmental assessment is to promote interactions which will enhance and foster the learner's development and learning hence a multi-disciplinary approach should be adopted in order to resolve the many problems or challenges which African countries face. Professionals should take great care and responsibility to properly assess learners' strengths, needs and challenges following the decisions which are based on assessment results especially in inclusive classrooms so that no learner is frustrated

According to the work of Volante and Fazio (2007), training student- teachers to effectively manage and carry out developmental assessment of their learners will have a ripple effect within the education system. Development assessment of students learning and behavior helps teachers in drawing up effective intervention programs for students who are experiencing problems or who are challenged through the use of reported results. Teachers therefore plan feedback and effective interventions which may lead to typical development of their learners. Development assessment equally helps in enhancing and sustaining effective learning especially in inclusive classrooms and thus facilitating the implementation of inclusive education. The three types of evaluation notably: diagnostic or pre-formative, formative and summative also help teachers in producing effective information and feedback

which can be used to make commendable interventions and decisions during the students' learning process. These assessments equally assist parents or caregivers to make informed decisions concerning their children education.

In her work ,Daisy, (2015) did recall that teaching is a noble profession and teachers must have a clear understanding of their subjects in order to avoid being criticized by their students as this is usually one of the main sources of conflicts between teachers and students. Daisy insists that teachers' conduct in the 21st century should enhance and foster learners' academic performance especially in situations where students with challenges are concerned as this will go a long way to facilitate the implementation of inclusive education in our schools.

According to the work of Mongwaketse (2011), the general mood of teachers was that of dissatisfaction when describing the nature of curriculum and meeting the learning needs of students with challenges. There was evidence in the data that the vast majority of teachers believed that the curriculum was examination oriented and as a result of this, their teaching was focused on running after the objectives in order to cover all of them before examination time and this is not workable in a diverse classroom. This kind of situation where teachers work under examination pressure is a great barrier to the implementation of inclusive education as in an inclusive class, students learn at different paces. The wide held view amongst teachers was that meeting the needs of students who have challenges was not possible given the circumstances surrounding the nature of the curriculum. Teachers here agree that there is need for pedagogic adaptation of the curriculum at the levels of teaching methods and strategies as well as programs and objectives in order enhance and foster the implementation of inclusive education. We believe that the act of teachers rushing through the syllabus to meeting objectives because of the examination pressure actually constitutes a great barrier to the implantation of inclusion education. There is therefore an urgent need for teachers to carry out the pedagogical adaptation of the curriculum in order to meet the diversity of needs of all learners, especially those with learning disabilities.

According to the work of Wheymeyer (2006), the nature of the curriculum coupled with pressure to cover the whole curriculum content is a big hindrance to inclusive education practices. Teachers indicated that they have no choice but to employ teacher centred methods. For example, 'This observation concurs with the view of Wheymeyer and Angran (2006); Ekema,(2012) and Endeley, (2015) who warn that this type of curriculum approach has serious drawbacks because the instructional practices used do not promote access to the general curriculum for students with disabilities. When analyzing the finding of the nature of

curriculum teachers described, it can be located within operating with a curriculum which is prescriptive in what they have to teach. This view does not agree with the views of Saracho and Spodek (1994) who argue that educators need to separate the curriculum content of education (what we teach) from the process of education (how we teach). Taking this approach [what we teach] may limit children's choices and opinions in learning, as well as teachers' teaching autonomy in curriculum development (Ekema,2012; Shey, 2018; Chaffi,2017). Varga, (1997); Jipson (1991) argues that one set of curriculum guidelines cannot effectively summarize the needs of all children. Supporting this view, one school of curriculum theory argues that 'examination oriented curriculum demote teachers from scholars and intellectuals to technicians in service to the state teachers have been forced to abdicate this authority by the bureaucratic protocols that hold them 'accountable' but which in fact, render them unable to teach' (Pinar, 2004; Nana et al.,2012). They are unable to teach because according to Tabulawa (1998) what the teacher knows and thinks has been disregarded; he refers to this as a 'technician approach'. In other words, teachers have been reduced to nothing but implementers and in most cases it is even hard for them to implement given the conditions they work under (Tabulawa, 1998; Varga, 1997; Ekema,2012; Shey, 2014; Bezangwa,2019b).

This study equally revealed that teachers felt they do not have a voice in the curriculum development. Maruatona (1994) confirms this by pointing out that the Curriculum Development Division in the Ministry of Education [Botswana] is responsible for developing curricular and teaching strategies with little or no input from the practicing teacher. But this situation is a little bit different in Cameroon where teachers are consulted and even asked to make proposals in curriculum development process though at the final stage their proposals are generally not taken into consideration (Ekema, 2012). The implication is that teachers felt a separation between themselves and the curriculum. They felt they did not 'own' the curriculum, it belonged to someone else, in this case 'the policy maker'. Tabulawa (1998) therefore cautions that the role of the teacher in this regard is to adopt and implement what was developed by the bureaucrats. Failure to have a voice in curriculum development seemed to have reduced teachers to become over-reliant on a prescribed curriculum. The paradox of such over-reliance is that the teacher is allowing someone else to decide how and what he/she should teach.

Findings from the work of Mukhopadhyay (2011) indicated that most teachers who took part in it alleged that they felt-ill-equipped to teach in inclusive settings. In particular, they reported that they lacked competence (to work within an inclusive setting), knowledge

(to be able to identify learners who have LD), necessary skills (make curriculum adaptations for learners who have LD) and training to adequately serve these learners. Most of the teachers mentioned that they did not receive any formal training to specially address the needs of learners in an inclusive classroom. Similar findings were also expressed by teachers in studies conducted by Pottas (2005) in South Africa and Bezangwa,(2019b) in Mbalmayo Cameroon in which they reported that teachers lack adequate knowledge, skills and training for effective implementation of inclusive education. Similar views were also expressed by teacher trainees in the studies conducted by Mukhopadhyay et al (2011) in Botswana and Chaffi,(2017) in Cameroon in which they explored the level of teacher trainees' preparedness for inclusive education. These findings are supported by the argument of many authors like Dove (1986); Ekema,(2012); Nana et al.,(2012); Shey,(2014) who argue that training in specific skills must be supported by a kind of general education which enables teachers to apply and adapt their knowledge and skills in all the varied conditions of teaching and learning which they will meet.

Glat and Oliveira (2007) support this by cautioning that for school inclusion to be real, the regular class teacher has to be alerted and trained (both psychologically and intellectually) to change his or her way of teaching and adapting what he or she is going to teach in order to meet the needs of all children. At the centre of implementing inclusive education in schools is the need for the availability of trained teachers in inclusive education to sustain the intended pedagogic change in inclusive classrooms. Jackson et al (2000) explains that teachers must have skills in communication, collaboration and cooperative learning strategies and they should have confidence to use those skills. In their study Mukhopadhyay et al (2011) found that teacher trainees were concerned about the limited knowledge on various aspects of meeting the learning needs of students with disabilities. Their participants indicated that they are 'half baked' (not yet ready to function in inclusive settings). Agbenyega (2007) in his study to examine teachers' concerns and attitudes to inclusive education in Ghana like Ekema,(2012) and Bezangwa,(2019b) in Cameroon found that teachers perceived their professional knowledge and skills as inadequate to effectively teach students with disabilities in regular schools.

Without the necessary training in special education, teachers felt less confident in their ability to effectively teach and include learners with varying abilities. One of the problems identified by participants of the study was lack of knowledge (of how to teach learners who have LD in inclusive settings), requisite skills (in making curriculum adaptations) and competence on the part of teachers to drive the implementation of inclusion

of these learners in the six schools visited in connection with Agbenyega's study.. *'If it was somebody with more knowledge [knowledge in dealing with learners who have LD] I think they would have done better, I wanted to explain but didn't know really what to say and how'* (Teacher A School D). While another said: *'We need more training to be able to identify these learners'* (Teacher B School B). *'Urge government....to give us some training so that there is more delivery'* (STLD school B). The majority of the respondents of the study did not have training in special education except three teachers who had a Diploma in Special Education, awareness course in special/inclusive education and Degree in Education, It was interesting to observe that while three were STLDs in schools visited, none of them had a qualification in special education and they revealed *'I have not been trained on special education. I haven't got any formal training'* (STLD School E). STLDs who were interviewed reported that they did attend an induction workshop after they were promoted to the post of STLD.

When probed further into their responses specifically on the objectives and the content of the induction workshop that they had attended, it emerged that the content of the workshop did not equip them with skills they perceived they required to be a teacher consultant in inclusive settings. This was also confirmed by data from document analysis of school development plans which did not reflect any inclusive education implementation workshops in their schools. It was evident from the data that participants in this study emphasized their lack of skills and competence in working in inclusive settings. Asked about what could be done to ensure that teachers are equipped with knowledge and skills to effectively implement inclusive education, one common response was *'Full training for teachers'* (Teacher A School D). They noted that as part of the problem of their not having the knowledge and skills for teaching learners who have LD within inclusive settings, this left them with feelings of despair *'...when you don't have the skills, [pause] like of teaching the slow learners... total [basically] we are just fumbling... but we try to include them'* (Teacher B School D).

These findings add on to existing literature Glat & Oliveira, (2007); Fonkoua,(2018); Manfouo et al.,(2023) that acknowledge the importance of training on the part of teachers as 'key actors' in the implementation of inclusive education. UNESCO (2003) underscores this by cautioning that if inclusive education is to be sustainable, training must be planned, systematic and long term, while Darling-Hammond & Skyes (2003) remind us that reform is rendered effective only if teachers have knowledge, skill and commitment to the reform. The opinions from teachers raise the issue the impact of formal and informal

training have on teachers regarding implementing inclusive education. These opinions tally with the observation from O'Brian & Ryba (2005) who pointed out that without a coherent plan for teacher training in the educational needs of children with special needs, attempts to include learners would be difficult and that teacher training helps in the formation of positive attitudes towards inclusion. Training as the above authors have pointed out equips teachers with knowledge, skills and competence and can affect attitudes. Some studies have argued that the attitude of a teacher is a more important predictor of successful inclusion than the teacher's training (Englebrecht & Fortin, 1998; Swart, Englebrecht, Eloff & Pettipher, 2001; Ekema,2012; Nana et al., 2012; Tanyi,2016; Chaffi, 2017; Bezangwa, 2019b).

Downing (2007) takes it further by pointing out that as much as additional training is one of the key priorities required for inclusive education, the attitude of the teacher remains the pivotal centre upon which inclusive education revolves. On the same token, another observation about the importance of teachers' attitude over and above their training was made by Scholz et al (2002) and Wiszenski (1995) by alleging that attitudes not only set the tone for the relationship between teachers and students with disabilities but they also influence the attitudes of non-disabled students. Carrington (1999), however, criticizes the effectiveness of staff development programs and argues that they have not been successful in bringing about attitude and belief change; hence if teachers could be supported and guided in trying new strategies and seeing positive outcomes, then a tremendous attitude change could be seen. Having discussed that, the implication sourced from the findings here is to rethink teacher training. Official statements of goals and aims for teacher training from international bodies like UNESCO (International Conference of Education, 2000) indicate that the roles and functions expected of the teacher today are to prepare the future teacher not only for his instructional role but also for the variety of role and functions demanded from him by the society and the development of education. Teachers are usually the key element in the implementation process because they are the people who will implement, adapt or reject the innovation and therefore, their training needs to be ongoing and developmental not of a one-off nature (Carless, 1997; Manfouo et al.,2023).

This view is supported by the recommendations from the Meyer Report by Meyer (2001) which acknowledges the need for additional support, training and expertise for general education teachers to equip them with the necessary knowledge they need to take on their role as inclusive educators. Describing the issue of skills, participants in the studies carried out by Mukhopadhyay et al (2009) in Botsawana, Ekema,(2012) in Fako-Buea Cameroon and Bezangwa,(2019b) in Mbalmayo-Cameroon also indicated that they lack skills required for

inclusive classroom settings, they alleged that they did not have in-depth knowledge about other areas apart from the ones they majored in during training when it comes to training which teachers advocated for in this study, Bayliss (1998) explains that teachers should be trained how to acquire the 'generic' teaching skills that allow them to modify their practice in ways that meet the needs of all learners within 'inclusive' frameworks.

However, many researchers have expressed concerns about the inadequacies of the teacher training programs in many countries [especially in Africa] (Obeng, 2007; Chireshe, 2011; Pottas, 2005; Manfouo et al., 2023)). Their main concern is the fact that these programs have continued with a categorical teacher training model. As Kisanji (1993) explains this model emphasizes 'specialist teachers' and 'specialist placement' and clearly does not favor inclusive practices in both Botswana and Cameroon. Mukhopadhyay et al (2009) confirm this by pointing out that the University of Botswana offers specialization in four areas: Mental retardation, learning disabilities, visual and hearing impairments. They continue to explain that the current program at the University of Botswana was inclined towards preparing specialized teachers with limited emphasis on inclusive education. Slee (2001) argues that educating teachers in these codes formalizes exclusionary special education discourses as the official knowledge of difference which teachers eventually bring into the teaching and learning process.

In the case of Botswana, the Revised National Policy on Education - RNPE (1994) stressed the need to have a new kind of teachers who could teach pupils with a wide range of abilities. The question that follows is: 'Is their preparation adequately equipping them to cope with classrooms containing a wide diversity of learners? In his study exploring the teacher-training model used in Botswana, Tafa (2001) concluded that 'the dominant model of teacher training is behaviorist and he advised that there is need for the Ministry of Education to unpack the 1977 learner-centred Education Policy which has remained largely ignored, and develop a harmonized and synchronized philosophy of democratic participative education system informed by a constructivist view of curriculum knowledge'. Still in Botswana Brandonb et al (2000) investigated the effect of teaching practice on students' perception of the usefulness of the training that they received. The authors concluded that perceptions does not vary as a result of engagement in the classroom and that programs are perceived as being only moderately useful in students to become teachers.

Dart (2006) used the reflections of graduates to explore their view on SEN program at Molepolole College of Education in Botswana. They rated the course highly, particularly with regard to the exploration of their own attitude towards pupils with disabilities and

learning difficulties. However, they also highlighted the fact generally they do not feel empowered to be able to offer support to pupils in classrooms who need support with their learning. This is concluded by Prophet (1995:139) when asking the question ‘Is it the case that they (graduates) are not receiving enough exposure to methodologies such as ‘group work’ and student centred teaching that are called for in the current curriculum thinking or is it rather that the culture of the school is so powerful and sticky that innovative practice the student teachers are introduced to in pre-service training are quickly discarded in the face of reality of the classroom?’

I challenge that having teachers who do not feel they have the knowledge and skills necessary to effectively teach diverse learners in inclusive classrooms may create an inevitable barrier to the implantation of inclusive education. Teacher education should be informed by the realities of what is happening in classrooms; innovations that work elsewhere will not necessarily work in all situations, so there is a need to contextualize teacher training. This can only happen if government, policy makers and teacher trainers can be freed from the mindset of believing that ‘everything good’ is from western cultures.

According to Adeniyi and Kuku, (2017) conventional classroom teachers are pedagogically incompetent to properly manage and assist learners with challenges to attend their potentials. This is because they are all ill-equipped with the right training that will bring about holistic approach to teaching. This pedagogical incompetence will not only further discourage the already discouraged students but compound their learning problems thereby making learners to develop greater gap between achievement and potentials. Besides, the hidden nature of learning disabilities makes modern teachers to believe that some learners willfully decide not to learn because of reasons best known to them. This actually gives teachers more difficult work to do when delivering instructional contents to their learners. Effective teaching can be achieved if there is curriculum adaptation of teaching methods, strategies and the overall programs. It is only by doing so that the needs of all learners could be met. The problems of learners with challenges could be compounded without adaptation of conventional curricula to meet the need of all learners. Taking into consideration the diverse nature of our learners, pedagogical adaptation of the curriculum is vital for the implementation of inclusive education in our secondary schools.

According to Ahuja, (2017) assessment adaptation of the curriculum is vital in inclusive classrooms as it enables teachers to assess different learners differently so that at the end of the day every learner has at least something to boast of and to carry back home. This is

a commendable source of motivation of learners especially those with challenges. He insists on the following assessment adaptations;

- a) Audio tapes, electronic texts, or a peer helper to assist with assigned readings.
- b) Access to computer for written assignments (use of word production software, spell-checker, idea generator)
- c) Alternatives to written assignments to demonstrate knowledge and understanding
- d) Advance organizers/graphic organizers to assist with classroom presentations
- e) Extend time to complete assignments and tests
- f) Support to develop and practice study skills; for instance, in a learning assistance block
- g) Use of computer software which provides text to speech/speech to text capabilities
- h) Pre-teaching key vocabulary or concepts; multiple exposure to materials
- i) Working on provincial learning outcomes from a lower grade level
- j) Reduction of the number of examination items for some learners with challenges.

He holds that teachers should carried out these adaptations in order to differentiate assessment and materials in order to create flexible learning environments which are not only welcoming to diverse learners but greatly facilitate the implementation of inclusive education in secondary schools. Furthermore, he talks of additional help to students with severe disabilities depending on the nature of the examination where a laboratory technician or reader may also be appointed to assist such candidates during the examination. Such assistance is indispensable for this type of learners' active participation in examinations. Besides, he emphasizes on the presence of non- professional support personnel. According to him, caregivers may at times be required to help candidates into the examination hall and find their seats while other situations may demand that caregivers remain with candidates for comfort and motivation as they write.

2.3 Theoretical Framework

This study falls within the area of the education of students with disabilities and specifically the way these categories of students perceive classroom management adaptation, instructional adaptation, and assessment adaptation learning environments in Cameroon. A

research carried out by Chamg & Antonio (2005), shows that most students with disabilities learn and perform better when exposed to the richness of the general education curriculum, as long as the appropriate strategies and accommodations are in place.

These researchers identify six theories which are used for this study and which provide a basis for the education of students with disabilities. These theories are:

- The theory of Multiple Intelligences by Gardner
- The facilitation Theory by Roger
- The developmental theory of learning in African cultural circumstances by Nsamenang
- The Observational Learning Theory by Bandura
- The Theory of Perception, Intellect and Personality by Willing.
- The Hierarchy of Needs /motivational Theory by Maslow

These theories are chosen because they focus on the wellbeing and education of learners with disabilities. With the help of these theories, teaching and learning activities can be designed and implemented by teachers to improve the performance of students with disabilities in a supportive learning environment. These activities take into consideration individual differences among learners and work towards including all the learners in the educational programs in friendly and enabling learning environments. These theories are briefly presented below as they relate to the relationship between classroom management adaptation, instructional adaptation and assessment adaptation learning environments of the school and the implementation of inclusive education.

2.3.1 The theory of Multiple Intelligences by Howard Gardner

A theory appropriate to use in the education of students with disabilities is the Multiple Intelligences (MI) theory by Howard Gardner (1983, 1993). The MI asserts that each individual possesses distinct forms of intelligence in varying degrees. What characterizes each individual is this uniqueness. According to Gardner (1983), this theory has emerged from recent cognitive research and ‘documents the extent to which students possess different kinds of minds and therefore learn, remember, perform and understand in different ways.

Where individuals differ is in the strength of these intelligences-the so-called profile of intelligences, and in the ways in which such intelligences are invoked and combined to carry out different tasks, solve diverse problems, and progress in various domains’’. Gardner argues that ‘students learn in ways that are identifiably distinctive so they would be better

served if disciplines could be presented in a number of ways and learning could be accessed through a variety of means”. Gardner in the MI theory cites seven forms of intelligence as follows: Visual-Spatial, body-kinesthetic, musical, intrapersonal, intrapersonal, linguistic and logical-mathematical. These learning styles are presented below.

Visual-spatial intelligence

Students who have this type of intelligence think in terms of physical space, as do architects, engineers, sculptors and sailors. They are very aware of their environments. They like to draw, do jigsaw puzzles, read maps, daydream and process information best using pictures, visuals and imagery. They have a sense of direction and the ability to think and plan in three dimensions. They have active imagination and ability to use ‘mind-maps’. This group of students can be taught using guided imagery, playing with patterns and design. In addition, mind-mapping, taking pictures and photos, drawing, painting, sculpturing, watching and making videos are teaching and learning strategies for them. Also, charts graphs, changing teaching location, rearranging the room to suit the subject or project, giving or taking visual/spatial instruction are more effective learning strategies for students with this type of intelligence.

Body-kinesthetic intelligence

Students with this type of intelligence use their body effectively because they have a keen sense of body awareness. They like movement, making things and touching. They communicate well through body language, through their muscles, sensation and movement. For example, for athletes, dancers and actors, their bodies are their avenues to learning and understanding any content or subject. They prefer self-expressions. They can be taught through hands-on learning, acting out, role-playing, drama, playing sports, playing physical games, miming using physical gestures and exercise. Changing seats and moving to different learning situations, creating new room arrangements, standing or moving while listening, learning a topic or idea with a physical gesture associated, taking things apart and tinkering, finger writing on palms or back, are some teaching and learning strategies which could improve the performance of students who have body-kinesthetic intelligence.

Musical intelligence

Students who have this type of intelligence learn best through sound, rhythm and music. They love music, but are also sensitive to sounds in their environments. They may

study with music at the background. For example, the entertainers and musicians. They can be taught by turning lessons into lyrics, speaking rhythmically, using recall activities, singing, clapping, slapping, memory games, chants and raps. New ideas can be set to familiar tunes, using musical instruments and composing music.

Interpersonal intelligence

These groups of students process information through relatedness to others. It is in relationship to and with others that they best understand themselves and the world. These students learn through interaction. They have many friends and empathy for others. For example, counselors, ministers and teachers. They can be taught through group activities, seminars, dialogues, creative writing, role-playing, simulation and practicing empathy. They like win/win competition, peer teaching, quizzing and giving feedback.

Linguistic intelligence

Students who have this type of intelligence prefer to process information through words and language as opposed to pictures. They love words. For example; the writer, orator and attorney. They have highly developed auditory skills. They like reading, playing word-games and making up poetry or stories. They can be taught by encouraging them to see words, read books together, improve on their vocabulary, creative writing, writing and reading reports/essays, talking and giving dictation, lecturing, impromptu speaking and keeping a diary or journal.

Logical-mathematical intelligence

Students with logical-mathematical intelligence love reasoning and calculation. They think conceptually, abstractly and are able to see and explore relationships. They like to experiment, solve puzzles and ask cosmic questions. For example, the scientific philosopher. They can create order out of chaos by analyzing, grouping and categorizing. They recognize relationships, connections and patterns more easily. They can be taught through logic games, investigations, sorting and classifying objects or ideas, comparing and contrasting, using symbols and formulas, use of ‘‘what if questions’’, and solving mathematical problems. They need to learn and form concepts before they can deal with details.

Kluth, P. Statut, D. & Biklen, D. (2003, p.18), state that a popular teaching mantra in diverse classrooms is, ‘if they can’t learn the way we teach them, let’s teach them the way they can learn’’. They add that students with and without disabilities will be more engaged,

retain more, learn in deeper way, and use higher-order thinking skills when they have opportunities to investigate course content through different avenues. The philosophy is especially important for today's inclusive classrooms. MI theory concept helps in a number of ways in an inclusive setting: It helps to diversify instruction, it aids students in becoming empowered and in finding bridging techniques and study skills, it is a tool for understanding self and other, it taps into natural talents and helps to create a state of "flow" which is highly centered on-task, it helps to validate many teachers' qualitative or intuitive assessments of students.

The educational popularity of the MI theory is related to the basic needs of teachers as they try to create more inclusive, affective and effective instruction. Teachers who subscribe to the MI theory appear more likely to meet the needs of greater variety of learners. Classrooms that honor this theory typically provide a differential curriculum, offer a wide range of activities, allow students to express knowledge and expertise through multiple modes, and respect a variety of learning styles (Udvari-Solner & Thousand, 1996). For this reason, many of those promoting the education of students with disabilities suggest the use of the MI theory as a framework for curriculum, instruction and assessment (Flalvey, Givner & Kimm (1995), Udvari-Solner & Thousand (1996). The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.

For the MI implementation strategy, it is important to teach subject matter through a variety of activities and projects. To this end, to fill the classroom with rich and engaging activities that evokes a range of intelligences. Also, to encourage students to work collaboratively as well as individually to support both their "interpersonal" and "interpersonal" intelligences. Assessments should be integrated into learning and students, especially those with disabilities, need to play an active role in their assessment. By offering students a number of choices for "showing what they know" about a topic, teachers create more meaningful projects and authentic presentations. The following two types of classroom teaching strategies have their own complex structures and variations, yet they both all conducive to tapping into the multiple intelligences of your students. Simulations are powerful models of teaching because they teach students how to master concepts and learn to be effective in pursuing goals. In presentations, the student must not only understand what is being presented, but to whom it's being presented, and apply different presentation strategies.

Helping teachers, students, and parents realize that there are multiple ways to learn and those they possess multiple types of intellectual strengths and life skills, it is but one reason to consider the Theory of Multiple Intelligences for teaching students with disabilities. Rather than defining intelligence in terms of IQ scores, Gardner offered an alternative view. He suggested that intelligence be described as the combinations of psychological and biological characteristics that enable individuals to solve problems or create products that are valued in one or more cultures (Gardner, 1999). This suggests that thinking, problem solving and creating are valued differently depending on the family and community in which individuals live, learn and work. Not only can MI increase confidence and enthusiasm for learning, it can also improve students' academic achievement and change teachers' perceptions of the learning abilities of their students. MI unveils academic strengths and honors alternative ways of learning, which can be highly helpful when educating all students, including those identified for special education service.

The MI theory fits in this study on students with disabilities and their perception of the learning environment because teachers who use it can create more inclusive, affective and appealing instruction. This theory also fits into a multicultural curriculum not only because it reaches a variety of learners, but because it is sensitive to cross-cultural interpretations of intelligence. Educators need to increase the opportunity to maximize the individual potential of every student in all social and cultural settings and create classrooms where learners experience a sense of love and belonging. It can help teachers to achieve more diversified instructional techniques and meet the needs of many different types of learners easily. This theory can also be helpful in reinforcing teachers' recognition that students have differing aptitudes in different subject areas.

In addition to Gardner's Theory of multiple Intelligences, Daniel Goleman (2005), identified another type of intelligence which he calls Emotional Intelligence (EI). The Theory of EI is a new way of thinking about the ingredients of life success. It has been regarded as 'a ground-breaking, paradigm-shattering idea', one of the most influential business ideas. Most scholars regarded the intelligence quotient (IQ) as the sole acceptable measure of human aptitude but research on wellbeing put forth by Goleman and others has proven that EI trumps IQ primarily in those 'soft' domains where intellect is relatively less relevant for success-where, for example, emotional self-regulation and empathy may be more salient skills than purely cognitive abilities. While our EI determines our potential for learning the fundamentals of self-mastery and the like, our emotional competence shows how much of

that potential we have mastered in ways that translate into on-the-job capabilities. According to this same author, competence models for leadership typically consist of anything from 80 to 100percent EI. He adds that “managers of co operations are hired for their intellect and business expertise and fired for the lack of EI”. Student with disabilities often have emotional problems, thus social and emotional studies could be included in the curriculum in their early elementary years so that they could learn how to control their emotions and also for future leadership especially at their work places.

Intelligence Quotient

Afred Binet, a French psychologist who developed the first intelligent quotient (IQ) test, designed the Binet-Simon intelligence scale in order to identify students who needed special help in coping with the school curriculum. He argued that in proper remedial educational programs, most students, regardless of background could catch up and perform quite well in school. However, Binet says, to base the concept of intelligence on IQ test scores alone is to ignore many important aspects of mental ability such as creativity and emotional intelligence. The level of intelligence can make a student with disabilities to be a faster or a slower learner.

Traditionally, faster learners or giftedness has been identified by a high score on an intelligence test. Terman (1954) cited in (Nkeng 2011), operationally defines gifted learners as those individuals who score in the top 100% on the Stanford-Binet or have IQ of 130 or above. Children who score 70-85 are dull, 50 is considered borderline mentally retarded and one with an IQ of below 20 is considered severely mentally retarded and consequently slower learners. Mental retardation can occur at the prenatal, natal and postnatal stages of a child’s life. (Ekema, 2012; Shey, 2014).

Marland (1972) cited in (Nkeng 2011), asserts that the term “gifted and talented children” means children possessing demonstrated or potential abilities in areas such as intelligence, specific academic or leadership ability or in performing ,visual arts and who by reason thereof, require services or activities not ordinarily provided by the school. Characteristics of gifted or faster learners include: large knowledge base, good memory, usually varied interests, highly developed verbal skills, ability to process information rapidly and accurately, flexibility in thinking with ability to see many points of view, persistence, awareness of relationships among diverse ideas, ability to generate original ideas, enjoyment of abstract idea, intense opinion of emotions, sensitivity to feelings of self or others, concern for global issues like war and hunger and finally a sense of humor. However, Emotional

Intelligence has been found to wash out IQ when it comes to predicting who, among a talented pool of candidates within an intellectually demanding profession will become the strongest leader (Goleman, N.(2005). Sometimes, learners with challenges are too agitated and troublesome and may lightly turn the classroom into a chaotic learning environment which is not less than a jungle if the spirit of high emotional intelligence is absent in the teacher and the other members of the learning environment (Bezangwa, 2018b).

2.3.2 The Facilitation Theory by Carl Rogers (1965)

Carl Rogers and others have developed the theory of facilitative learning i.e the humanistic approach. The basic premise of this theory is that learning will occur by the educator acting as a facilitator, that is, by establishing an atmosphere in which learners feel comfortable to consider new ideas and are not threatened by external factors (Laird 1985). Rogers believes that ‘’. The most significant learning is changing one’s concept of oneself. Facilitation fits well in the education of students with disabilities as both the teacher and the learner participate for maximum learning to take place. For example, facilitative teachers are: able to listen to learners, especially to their feelings; inclined to pay much attention to their relationship with learners as to the content of the course; apt to accept feedback both positive and negative and to use it as a constructive insight into themselves and their behavior.

On the other hand, following the facilitation theory, learners are encouraged to take responsibility for their own learning and also provide much of the input for the learning which occurs through their insight and experiences. Both experiential and facilitation theories believe that learning is viewed as a personal act to fulfill one’s potential. The goal is to develop self-actualized people in a corporative supportive environment. Facilitation occurs through the teacher’s attitudes in his personal relationship with students. Rogers suggests three attitudinal qualities necessary for facilitative practice of students by teachers. These so called core conditions or attitudes include: realness, prizing, acceptance, trust and empathy.

Realness

This means that the teacher is being himself, not denying himself. The teacher has to be a real person aware of his feelings and able to communicate them appropriately, no matter how exactly he feels. He should not just be a role in the play of education, ‘’a faceless embodiment of a curricular requirement or a sterile tube though which knowledge is passed from one generation to the next. The attitude being expressed in being real must be attitudes of respect, warmth, caring, liking and understanding’’. The teacher must not pretend to be all-knowing and perfect, since the students know that cannot be the truth.

Prizing, acceptance and trust

This refers to teacher's caring about student's feelings i.e. one that supports learning as well as issues disturbing it. It is the trust and prizing of his capacity and abilities as a human being. Teachers should prize all students not for their positive or negative characteristics, but because they are all valuable human beings. This prizing can manifest as listening to what students are saying, but not necessarily as listening to evaluate, but listening to learn ideas, thoughts and feelings. Prizing can also manifest through responding to what the students say. This is commendable in inclusive classrooms especially when teachers listen attentively to challenged learners and value their opinions. This alone is susceptible of creating and strengthening the spirit of self confident and belonging in this category of learners which greatly motivate them to learn (Ekema, 2012; Taneyo et al., 2012; Shey, 2014; Endeley, 2015; Bezangwa, 2018b) .

Empathy

This is being able to walk in others shoes. This means that a teacher can understand students' perspective on the process of learning and their reaction from the inside. The accent here is to understand, not judge or evaluate. Empathy enables teachers to understand the reasons that led the student to certain behavior or an answer, but also to understand his emotional situation that needs to be solved in order to enable significant learning. The theory fits in this study because students with disabilities greatly need a facilitator to scaffold their learning. When facilitators are real or genuine persons, entering into a relationship with learners without presenting a front or façade, they are more likely to be effective. It means that they come into direct personal encounter with the learners, meeting them on a person-to-person basis. The facilitator's prizing or acceptance of the learner is an operational expression of his/her confidence and trust in the capacity of the human organism. In a classroom with students with disabilities, if the teacher has the ability to understand the student's reaction from the inside, has a sensitive awareness of the way the process of education and learning seem to the student, there is the likelihood that significant learning and emphatic understanding would occur. Reported positive results of Roger's theory in practice include: fewer disciplinary problems in the classroom, better knowledge and IQ test scores, usage of higher levels of thinking, fewer acts of vandalism, positive self regard, increase in creativity and others.

2.4.3 The Developmental Theory of Learning in African Cultural Circumstances by Nsamenang (2011).

A Bame Nsamenang single handedly developed this developmental theory in African cultural and circumstances. He knows that as the cradle of humanity, Africa has successfully practiced childrearing and education within the framework of Africa culture for centuries. Nsamenang insists that education in African family traditions is one in which older generations, especially parents, sought and still seek to pass on what they have learned or inherited to their off-springs. They also put in place culturally appropriate strategies for children to acquire it by themselves. Learning here according to him translates “ coming into possession of”. This process of acquiring knowledge and skills occurs everywhere. Much learning happens without the notion of “passing on” or “ imparting”, as when an infant comes into awareness of a specific woman as his own mother; a girl and boy realize themselves as sister and brother or a toddler cherishes one food item and not others. Another example is when somebody experiences a friend as being more helpful to her or him than a relative. The western-type of education, especially schooling which is adopted difficultly in Africa applies narrowly to “ deliberate passing on” or imparting of knowledge and skills. Africans view education broadly as a process and an outcome that seeks to and actually orient children to the universe and into gradual and systematic learning of the art and science of living and the responsibilities linked to developmental social statues and their livelihoods. For instance, a preadolescent is expected to show more responsibility, ability, maturity and evidence of accumulated learning than a toddler. These kinds of learning are cast in the social history, culture, language, institutions, and daily family routines and ethnic policy.

Developmental Processes and Outcomes

Processes are series of operations, events, or steps which lead to the attainment of specific outcomes or results. Developmental processes are defined as the combination of forces (notably genes and maturation) and factors (namely nutrition, mother’s health status, exposure to new knowledge or experiences, child’s living conditions, etc.) which are put in place or initiated at conception or thereafter and which operates in the course of a child’s life to produce observable and assessable changes in the child at various developmental stages by both caregivers and experts. One of the examples of the developmental processes outcomes is learning. Nsamenang,(2011) concludes that the interaction between the aforementioned forces brings about or produces developmental change in the child.

There are two important developmental forces notably maturation and sociocultural factors. Maturation is built into heredity or the genetic make-up that is endowed by or inherited from the father and mother when a baby is conceived. This means that genes prepare every child to grow and develop at a certain rate and to a certain body size, but this largely depends on environmental inputs, like diet quality, physical safety, care, social and emotional security, play materials or stimulation in general and most importantly the nature of the learning experiences to which the child is exposed.

What is Developmental Learning?

Developmental learning is defined as knowledge and skills acquisition which is crucial to children survival and development, that they do not possess at birth (Nsamenang, 2008). It means that children are not born with the knowledge and competences that they will use in order to make sense of life and cope with the world but they are ready to learn (Nsamenang, 2008a). Heredity, 50% of which every child inherits from each parent, prepares children to learn and transmit culture and to acquire knowledge and competences during their development. Essential elements of this kind of learning can be achieved without the usual sense of classroom and schools (Bruner,1996). Every society makes the learning of survival knowledge and self-fulfilling accomplishments possible by conceiving of human nature within the cultural meaning systems and organizing development and learning in the context of that cultural image,(Nsamenang, 2008b).

Typical examples here are those of Nso people in the north west and the Bangwas in the south west regions of Cameroon where parents prepare their next generations from the positioning of keen awareness of children's maturation to grow into or to learn knowledge and skills. In the above-mentioned places, they like the vast majority of other African parents who actualize this belief in their parenting practices that assign house hoods and other livelihood tasks to children from an early age, (Nsamenang,2008a). The Nso like the Bangwa believe that children possess inborn and natural force, capability or ability to learn by imitation or imagination. The Nso people like the Bangwas, use storytelling and riddles to awake their children's imagination and learning of calculations and moral values. The Bangwas like the Nso people of Cameroon, incorporate children as active participants and important contributors to family life from their early years of life, this is a practice component of the African school of life (Moumouni, 1968). The definite strategies and mechanism through which the children are reared into the acceptable ways of their societies or educate themselves and their children or peers the cultural ways of their communities and

of the world differ throughout ethnic communities. In this light, the role of parents, teachers, other adults, siblings or peer mentors in developmental education of the school of life is to:

- Guide children to understand and accept the rightful adult identity and the models toward which they are being prepared. This ties with the implementation of inclusive education as in every inclusive classroom, learners need to know themselves, their origins, values and traditions, and the reasons why they are in school so that they can be motivated to learn.
- Communicate standards of valued behavior and virtue. It is in line with inclusive education practices which require that rules and regulations should ensure peaceful co-existence of all learners in inclusive schools so that learners with disabilities feel safe, confident, happy and willing to learn.
- Alert and sensitize children to pro-social attitudes and virtues and to guide and ensure their acquisition of socio-cultural values (Nsamenang, 2004). An inclusive classroom is a typical society in miniature. It is therefore important for learners to note and understand that their classroom is the reflection of the society in which they are going to live upon completion of their studies. In this situation, they have the obligation of love and respect for themselves especially that everyone is a potential person with disabilities.

2.4.4 The Observational Learning Theory by Bandura (1977)

Observational learning is also vicarious learning (Bandura, 1977). Bandura calls the process of observational learning, modeling and provided four conditions, namely, attention, retention, motor reproduction, and motivation. This theory ties squarely with our study, because the learner's attention is an indispensable condition for learning to take place especially in inclusive classrooms where it is not easy at all to get all learners attentive. The theory's central concept is reciprocal determinism, whereby the interacting factors in learning are both cognitive and environmental, acting on learners' behavior (Bandura, 1977). These determine not only the learner's emotional reactions but equally the learner's beliefs, expectations and behavioral manifestations. According to Bandura, learning is copying, modeling, observing and imitating but with some awareness of what is involved. Bandura, (1977) holds that observational learning requires continuous reciprocal interaction between cognitive, behavioral and environmental factors. It is worth noting here that observation is very important in childhood/adolescent hood and is crucial for children's stimulation especially in inclusive classrooms where lots of educational media are used. Generally, short

stories, charts, near-real/real objects make learners attentive and receptive in almost all learning environments (Bezangwa, 2019a).

Bandura, (1977) opines that in observational learning, the learner learns by observing others' behaviors. The potentials and power of observational learning were advocated by Dewey (1997). As we observe the external, we also engage in self-observation which is internal to us. Bandura,(1997) refers to this as self-efficacy appraisal if this is done against set standards or established goals, such as lesson objectives. Two sources of self-efficacy appraisal are common among students; awareness of one's actual performance and when students are influenced vicariously as they see peers reinforced in their successful task performance. Social learning theory demands teacher-guided facilitation of learners' interaction in cooperative learning. In this way students' ability to retain information through social interaction is reinforced as they engage in cooperative learning with peers. In this perspective, the teacher should capitalize on the common place expression of " I am poor or good in this or that subject" to set learners on interactive learning from peers (Tchombe, 2006).

'Take for instance, a learner is asked to go up to the board and correct an identified problem in an assignment, whereas the rest of the class observes. Teachers should highlight when the learner uses the rules and steps to be followed correctly. If necessary, the teacher can increase the difficult level of the problem. In doing this and encouraging the learner, the teacher is shaping the learner's ability to solve for instance, a mathematical problem whereas the rest of the class learns by observing, following and perhaps interacting with the learner and teacher. The apparent lesson here is that the teacher is making the learners responsible for their own learning and encouraging peer tutoring. Observational learning is a commendable way of teaching most learners especially in inclusive classrooms as it generally enables the teacher to easily sustain learners' attention which is vital for retention. The teacher should therefore always sustain pupils/students attention, focus on the specific behavior for retention and put in place strategies to help learners perform what they observed. Learners, especially those with disabilities and difficulties expect motivation. Teachers should motivate them in order to successfully meet set goals.

Albert Bandura (1977), the main proponent of the Observational Learning Theory states that behavior is learned from the environment through the process of observational learning. He states the importance of observing and modeling the behaviors, attitudes, and emotional reactions of others. He believes that humans are active information processors and

think about the relationship between their behavior and its consequences. Observational learning could not occur unless cognitive processes were at work.

According to Bandura, the components for observational learning are as follows: (a) attention, including typical circumstance (individuality, affective valence, perplexing, usualness, functional value) and mindful characteristics (sensory, roomy, provoke level, incise set, past reinforcement); (b) retention which includes: representative coding, union, symbolic rehearsal, motor rehearsal, (c) motor reproduction, which contains physical strengths, self-observation of procreation, truth of feedback; and (d) motivation which are domestic, vicarious and self-support .

Most human behavior is learned observationally through modeling: from observing others, one forms an idea of how new behaviors are performed, and on later occasions, this coded information serves as a guide for action. This is perceived in a learning environment of students with disabilities because modeling is being presented by the teachers. As there are different type of learners in a learning environment, Bandura stated, ‘‘the Observational Learning Theory has been applied extensively to the understanding of aggression and psychological disorders, particularly in the context of behavior modification’’ (Bandura, 2003). It is also the foundation for the method of behavior modeling where the student’s perceptions of their environment become apparent. Bouhaimed, Gibbins & Owens (2008), stated that when students experience a change in their learning environment from a special to regular classroom, their perception of academic success could be affected. Their educational climate can be a positive component in the educational experience of a classroom (Bouhaimed, Gibbins & Owens (2008, p.207). Sometimes the perception of the environment by the students improves because the method of delivery for instruction was different allowing students to enjoy the academic activities.

The Observational Learning Theory has become perhaps the most influential theory of learning and development especially in teaching students with disabilities. While rooted in many of the basic concepts of traditional learning theory, Bandura believed that direct reinforcement could not account for all types of learning. His theory added a social element, arguing that people can learn new information and behaviors by watching other people. Known as observation learning (or modeling), this type of learning can be used to explain a wide variety of behaviors. There are three core concepts at the heart of the Observational Learning Theory. First, is the idea that people can learn through observation. Next is the idea that internal mental states are an essential part of this process. Finally, it recognizes that just because something has been learned, it does not mean that it will result in a change in

behavior. These concepts are good teaching strategies which can be used to educate students with disabilities.

In addition to influencing others psychologists, Bandura's Observational Learning Theory has had important implication in the field of education. Today, both teachers and parents recognize the importance of modeling appropriate behaviors. Others classroom strategies such as encouraging children and building self-efficacy are also rooted in the Observational Learning Theory. In order for teachers to teach their students well they need to know their students and their learning styles. They need to know the best strategies of teaching in order to help them to become better learners. When the teacher accommodates their teaching to those of students, it helps to level the playing ground in the classroom and we, the researchers hold that this is very commendable in a an inclusive classroom as it is susceptible of making them active, attentive and receptive. Leveling the playing ground makes students with disabilities have a sense of belonging and a better chance of being successful within and without the classroom. Students, especially younger students, do not know or recognize their learning styles and therefore it is the educator's job to find out those preferred styles and help accommodate their teaching to those styles (VanKlaveren, K., Buckland, T., & Williamson, J. (2002). Once students realize their learning style and know how to make things fit their needs, they will become more proficient learners and perceive the learning environment positively.

Albert Bandura's Observational Learning Theory has equally influenced peer education. According to him, children learn through direct experience; indirectly, by observing and modeling the behavior of others with whom the individual identifies, and through training that develops confidence in the individual whose behavior will be exhibited (Bandura, 1986). Based on these premises, peer educators can become role models whose behaviors can influence those of their peers, with whom they interact. This surely enhances and fosters the implementation of inclusive education in our secondary schools. In connection with the above mentioned ideas, we the researchers hold that teachers can greatly facilitate the implementation of inclusive education in their classes if they model every behavior, use role play teaching method as well as numerous colorful educational media for all these things will make the learners especially those with challenges attentive and receptive.

2.4.5 The of Perception, Intellect and Personality by Willing (1988)

When dealing with various spectrums of the learning environment, a theory is developed that address the ideas of perception, intellect, and personality. The ideas in the Theory of Perception, Intellect and Personality are proposed by willing (1988). The theory

identifies that learners are classified into two categories which are field independent (Analytical) and field dependent (Concrete). Willing discovered that people differ from each other in the way they “perceive both their environment and themselves” (Town, 1993). People who are either field dependent or field independent differ in human relations, learning styles, and information processing. For example, field independent or analytical people in processing information find it relatively easy to detach an experience (perceived) item from its background, have a tendency to show traits of introversion, and left hemisphere strengths, while the field dependent or concrete people experience items as fused with its context, show traits of extraversion and right hemisphere strengths. People choose to discover new ideas and opinion through their own learning style. A person’s learning style is developed through how a person feels that they learn best.

Educators should develop strategies for students with disabilities that allow the students to interact with the rest of the class (York, 2008). Some strategies may be as simple as standing directly in front of the student they are going to be next. Simple strategies such as these can provide a better learning environment for students with disabilities, which allow them to express their personality in the learning choices they make. Students with autism, visual and physical disabilities, for example, thrive in environments that provide structure. The language learning classroom may be structured a certain way, but the structure of language itself is ambiguous and may be the cause for disability in language learning for the students. Teaching students with these disabilities to communicate is often done through prompting, which involves the teacher saying a phrase and the student repeating the same phrase. This type of structured learning may work well for beginning language and communication skills, but educators should strive to wean students off prompting and teach them to speak at their own will. Along with difficulty in communicating, students with these disabilities also have problems with social activities and events. The ambiguity of language may pose more of a problem in social events because the students are unable to decide how to act and respond to the language of others. Providing these students with social stories is a strategy that allows the students to see a social event taking place in the story, and helps them learn how to react in that event. Every student’s brain functions differently and processes information differently. Due to this, students have different types of learning styles. Once the teacher can understand the disability and the preferred learning styles of the student, they can better adapt to that student.

Teacher need to learn strategies to increase student achievement in order to help them function at the same level as their peers. When students know how to change things into the format that they learn best, students with disabilities can fully take charge of their education. If educators can teach students to be more reflective about their learning and actions, they can retain more information. When students are reflective about what they do in the classroom and how it affects other students then impulsive behavior will diminish, Which makes for a more conducive learning environment. The more flexible students are about the things that happen around them, the more focused they can be on the important information (Ehrman & Leaver, 2003). For example, if an autistic and physically disabled student needs to stay after school to make up a test, then he or she might get thrown off by the upcoming change in their daily schedule and not be able to focus their attention on what is important in the classroom.

Student's whose learning styles are more versatile and utilize many different types of learning styles will be more proficient learners (Zhao, 2007). If students think that they are just auditory learners and believe that they cannot learn any other way, then they are not going to learn that way at all.. Students with disabilities have to be open to new experiences and be willing to try learning and using different learning styles even if it is not their preferred one. Every person has different ways of processing and storing information. Students with disabilities often have a disability because they do not learn the same way other students do. When the teacher is knowledgeable about these different ways of processing they are able to show students patterns and different strategies to help them learn. This is not only helpful to student with disabilities but also regular education students. Just because one student does not learn the same way as another student does not mean that they are any less intelligent. It is the teacher's job to tap into that intelligence and find different ways for the students to express themselves.

Willing as well as Piaget, state that cognitive change takes place only when previous conceptions go through a process of dis-equilibration in the light of new information (Gruber & Vaneche, 1977). Learners make sense of the new information by attempting to assimilate it into existing knowledge. When determining what subject content to cover in the classroom, the teacher will need to determine what skills the student will need in future classes to determine its importance, as well as, to what previous material one can relate the lesson to create knowledge (Sze & Cowden, 2009). If a learner is unsuccessful at assimilating the information, they will accommodate it by restructuring their present knowledge (Slavin,

2007). Rather than having students memorize the lesson, learning needs to incorporate the student's past experiences into the classroom. It is the learning which makes children most happy in themselves that also makes them most likely to succeed (Sze & Cowden, 2009). For the learner, this concept remains relevant.

It is important to teach students how to make learning activities fit into their learning styles. If a student is a visual learner, encourage them to draw a picture in order to help them solve a word problem. If they are auditory learners, they may want to read a question aloud to themselves in order to help them understand the problem. The first step in order to help students help students thereafter help themselves is to have them identify their learning styles. Once they know their learning styles they can start to learn ways to change what they are learning in order to accommodate them. This theory is not only helpful to student with disabilities but also to regular education students.

The Hierarchy of Needs/Motivational Theory by Maslow (1943)

Abraham Maslow(1943) developed a positive theory of motivation which argues that while people seek to meet basic needs, they seek to meet successfully higher needs in the form of a pyramid. The hierarchy of needs theory is one of the main concepts that guides this investigation in connection with the effects of the environment on education especially inclusive education. Maslow motivational theory (1970) is a hierarchy of needs, which includes: a) physical needs, b) safety needs, c) belongingness and love needs) esteem needs, e) self-actualization needs and f) transcendence.

The physical necessities are : oxygen, food, water, and constant body temperature. Clothing and shelter also provide necessary protection. They are the strongest needs because if a person were deprived of them, the physiological needs would be primary in the person's search for satisfaction. When satisfied in the environment, the learner's perceptions about the lieu is secured and established. When students with disabilities are present in a learning environment, they often display the signs of insecurity and the need to be safe. This is why safety needs are commendable conditions for the implementation of inclusive education in a learning environment (Ekema, 2012; Nana et al., 2012; Shey, 2014; Endeley, 2015). When learners with challenges are together with their peers, it enables them to feel and have the intellect of belongingness which makes them feel at home and thus greatly motivates them to go an extra mile in order to give the best of themselves for their educational successes (Bezangwa,2018a). They learn well when they feel a sense of belongingness and security. When love and affection are present in the environment, these overcome the feelings of fear,

frustration, loneliness and alienation which usually scarce challenged children away from inclusive classroom environments (Nkegoa, 2015; Bezangwa,2019b).

Self-actualization as described by Maslow is, ‘a person’s need to be and do that which the person was born to do’ (Simons et al,1987). It is when for instance, a teacher must teach, a doctor must help the sick, and a coach must guide his players to play well. The person has a direction to use the skill he has in order to promote that particular talent. Maslow(1970) identifies fifteen necessary characteristics to become self-actualizer. They include: they perceive the reality of efficiency and can tolerate uncertainty, accept themselves and others for what they are; Spontaneous in thought and action; problem-centered not self-centered; unusual sense of humor; able to look at life objectively; highly creative; resistant to enculturation; but not purposely unconditional; concerned for the welfare of humanity; capable of deep appreciation of basic life experience; establish deep satisfying interpersonal relationships with few people’s experiences; need for privacy; demonstrate attitudes; strong/ethical standards. Maslow however adds that self-actualization is a matter of degree ‘‘ there are no perfect human beings’’.

The hierarchy of needs by Maslow highlights the complexity of human needs and serves as the framework for learners’ feelings in the classrooms especially in those classrooms where challenged learners are found. Besides, learners need to be motivated(Maslow, 1970; Morano et al,2003; Reutzet et al, 2004; Tambo, 2012). Maslow holds that teachers must learn about their learners’ interests, hobbies, likes and dislikes in a classroom. As children learn differently in the classroom environment, teachers have to utilize various teaching methods in order to meet the needs of all the learners especially those of the challenged learners.

More specifically, Maslow’s third and fourth levels of the hierarchy, belonging and esteem are addressed in the classroom learning environment. The hierarchy of needs serves as the framework for learners’ feelings in the classroom. When learners with disabilities are present in a learning environment they usually display the signs of fear and insecurity and the need to be safe. Love and affection can overcome all these negative aspects of the learning environment and install confidence and the desire to learn in them.

Maslow stated that the causes that prevent people from upward in the direction of self-actualization are the obstacles put in their way by society and one of which is education. Maslow makes suggestions concerning how the customs of education can change from its normal person stunting methods to a person’s growing plan. Maslow states that each individual needs to have the appropriate education in order to become the mature self-

actualizing person of his own kind. Maslow suggests that learners must be shown that they are valued and respected in the classroom and the teacher should create a supportive environment but this however contrasts with the attitudes of many a teachers in our today classrooms who have no respect for their learners up to the extent of telling them:

I do not care whether you understand or not
You are too dull. You are as dull as your
Parents. Whether you know or you do not
Whether you pass or not, I have my salary
Every month, (Bezagwa, 2019b)

The application of the hierarchy of needs in the school learning environments will support learners in general and those with challenges in particular and especially the way in which they adjust to the learning environment and the society at large.

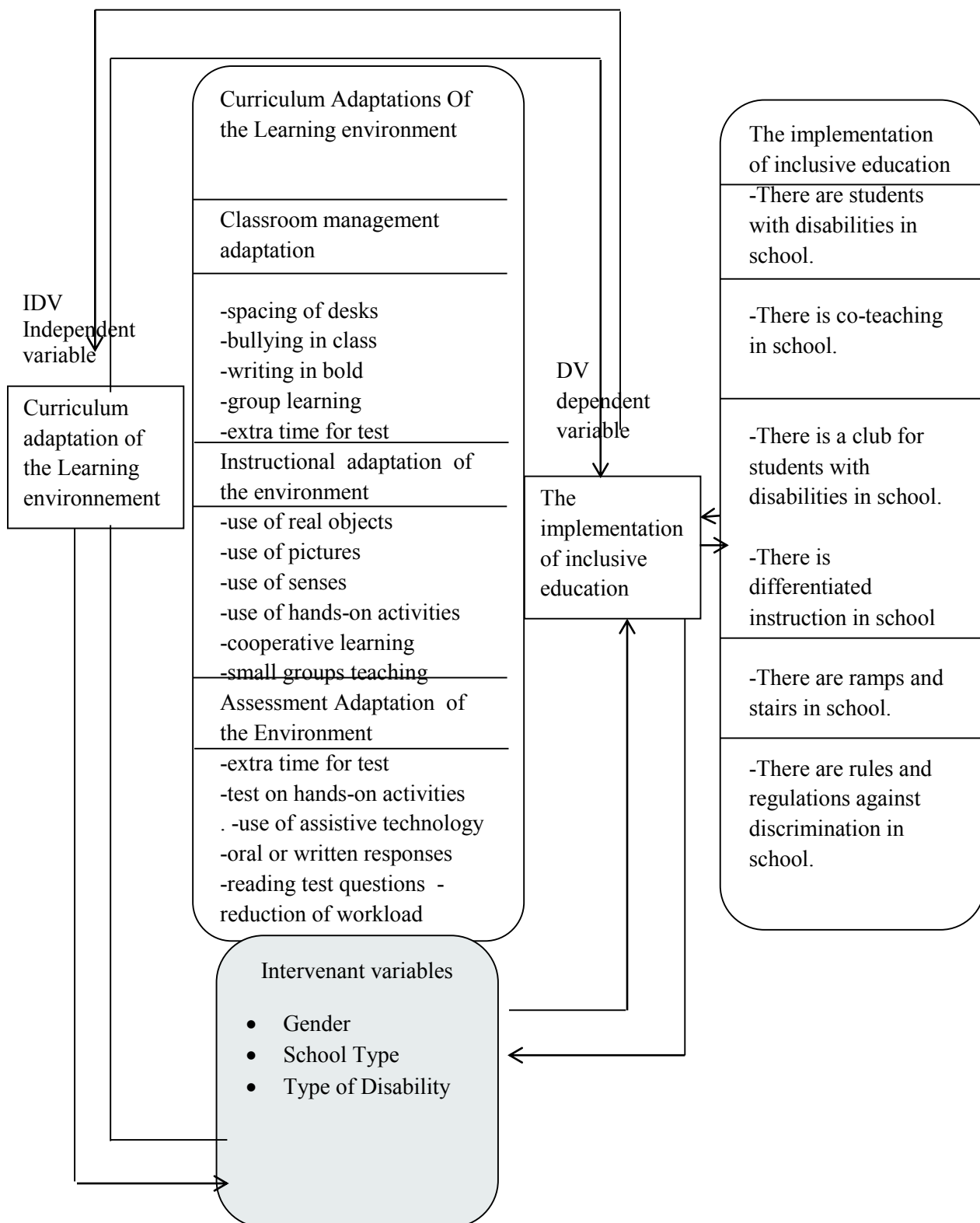


Figure 23: Conceptual Diagram: Relationship amongst Independent, Dependent and Intervening variable

Summary

Chapter two reviews related literature for this study. It is divided into three main parts notably conceptual review, theoretical review and empirical review. The conceptual framework is analytical, and identifies different inclusive education concepts and organizes ideas used in the investigation. It is made up of classroom management adaptation, instructional adaptation and assessment adaptation as well as inclusive education related terms. The Theoretical review Identifies six theories of learning namely the theory of multiple intelligence by Howard Gardner (1983-1993); the facilitation theory by Carl Rogers (1965); the Developmental theory of learning in African cultural circumstances by Nsamenang (2011); the Observational learning theory by Bandura (1997); Perception, Intellect and Personality theory by Willing (1988) and The Hierarchy of needs/motivational Theory(1943) which give a psychological and philosophical backing to the investigation as they carefully describe the type of curriculum adaptations of the learning environment susceptible of making various types of learners in inclusive classrooms feel the sense of belonging, find happiness and the desire and motivation to learn. The empirical review showed clear and pertinent pictures of what has been written by other researchers about our topic and thus their findings on curriculum adaptation of the learning environment of the school and the implementation of inclusive education. The empirical review squarely supports the objectives of the study. In this chapter we showed controversies in views and the gaps which our investigation filled. This chapter thus provides foundation knowledge on our topic, identifies areas of prior studies in order to avoid duplication, and awards credits to other researchers, brings out inconsistencies and gaps in previous research works.

CHAPTER THREE METHODOLOGY

3.0 Introduction

Research methodology is vital for all types of investigations especially that the researchers have the responsibility to systematically indicate the various techniques and steps used in order to arrive at the presented results and conclusions. Research methodology is thus the precised procedures and techniques which are used to identify, select the process and analyze information about an investigation. This chapter brings forward the techniques and instruments used to arrive at the data presented. They are described under the following headings;

- Research design
- Area of study
- Population of the study
- Target population
- Sample
- Sampling technique
- Measurement instrument and development
- Validation of research instruments
- Administration of the instruments
- Procedure for Data analysis
- Operationalization of variables
- Ethical considerations
- Chapter summary

3.1 Research Design

Research design according to, Amin,(2005); Nworgu, (2015) is a plan or blueprint that specifies how data relating to a given problem should be collected and analyzed. It provides the procedural outline for the conduct of any given study (Asika, 2012). On his part, Nana, (2012) defines research design as the logical plan of a research work which is a general presentation that can apply to various types of research even though the content of its various components is specific to research type. According to the researchers, a research design refers to the structuring of a study whose raison d'être is to identify variables and their influence on

one another. Besides, it helps the researcher to collect data which will enable him test hypotheses or answer researcher questions.

Following a review of literature in connection with curriculum adaptations and the implementation of inclusive education in secondary schools in Yaounde Municipality, the researchers chose the survey cross-sectional research design in the context of this study. This survey cross-sectional approach was selected as the researchers found out that it was the best method for identifying and explaining the influence of curriculum adaptations on the implementation of inclusive education in secondary schools in Yaounde Municipality as it enables the researcher to find out the perception of the learning environment by both learners with or without disabilities in Yaounde municipality. A cross-sectional survey collects data to make inferences about a population of interest at a given point in time (Kendra, 2015). According to Amin, (2005); Nana, (2012); Nworgu, (2015) this survey research design is recommended for a study that requires learners' opinions on their perception of the learning environments because it is oriented towards gathering data from a sample of population.

3.2 Area of Study

The area of study is Yaounde Municipality. It is the head quarter of Mfoundi Division, the head quarter of the centre region of Cameroon and the political capital of the Republic of Cameroon. Yaounde is located in the south of the center region of Cameroon and at 250km east of the Biafra Bay. Yaounde is limited in the West with Mbankomo subdivision, in the east with Mefou Afamba division, in the south with Mefou Akono division and in the north with Okola sub division.

This lieu of hills is made up of three major topographic units notably the barrier of inselbergs in the North West dominated by the Mbam Minkom (1295m), Nkolodom (1221m) and in the South West with Eloumden (1159m) mountains; a set of hills from 600 to 700m of altitudes and plateaus; and valleys called Elobis, rivers like Mfoundi, Ekozoa, Biyeme and Mfou. In the administrative centre of the city of Yaounde is found the Municipal lake created between 1951 and 1952.

Yaounde, the country of the "Ewondos" was "fondée en 1889 par les Allemands" et "structurée en 1916 par les Français". This means that Yaounde was founded in 1889 by the Germans and structured in 1916 by the French. Yaounde is also the country of his Royal Majesty Charles Atangana who built his Efoulan palace from 1904 to 1910.

Yaounde is popularly known as “La ville de sept collines” Meaning the town of seven hills. These “sept collines ancestrales” or seven ancestral hills which protect Yaounde municipality are Akok Ndoué (967m), Mbog Ndum (900m), Minloa (966m), Ebamnila (1005m), Messa (1015m), Mbankolo (1096m) and Fébé (1073m).

Yaounde which is our area of study is made up of seven sub divisions notably Yaounde 1, Yaounde 2, Yaounde 3, Yaounde 4, Yaounde 5, Yaounde 6 and Yaounde 7. The population of Yaounde municipality in 2019 stood at 4 100 000 inhabitants about 1/5 of the Cameroon population. It has a surface area of 184km².

In Yaounde Municipality, there are 291 public, denominational, and lay private secondary schools, spread through out the seven sub divisions from Yaounde 1 to Yaounde 7. Yaounde Municipality houses alone about 1/6 of Cameroon secondary schools population. Besides, Yaounde has the seat of some specialized institutions namely Lycee Bilingue de Nkoloton , ESEDA and LACOLOMBE etc. According to the statistics from the Ministry of Social Affairs (2019), 975 students with challenges took part in official examinations in Cameroon and of this number, 105 of them came from Yaounde alone, largely more than the numbers from the South, East and Adamawa regions put together.

3.3 Population of the study

According to Amin,(2005); Nana, (2012); Nworgu, (2015) population as used in research refers to all members or elements, be they human beings, animals, trees, objects, events etc of a well-defined group. A researcher may define his or her population as all hunters in Nyong and So’o division. Population according to Babbie (1973) is the totality of specified elements about which the researcher intends to make some inferences through the study of the sample. According to these researchers, the population of a study refers to the entire group of persons, events or objects of interest which a researcher intends to investigate in order to draw conclusions from the sample. In the context of this investigation, the population is all the English secondary school students in Yaounde municipality. This involves all the general secondary school students from 29 government secondary schools, 15 denominational secondary schools and 265 lay private secondary schools in Yaounde municipality. A population is classified into target and accessible populations. From the beginning of the 2020/2021 school year report for students in English general secondary schools in Yaounde municipality, there is a total of 142603 students there, (69048 males and 73555 females) as shown on table 10.

Table 10: population of the study

Type of school	Number of schools	No of students		
		Males	Females	Total
Public	29	28321	29682	58003
Denominational	15	4982	5518	10500
Lay private	247	35745	38355	74100
		69048	73555	142603

3.4 Target Population

According to Isangedighi, (2005); Amin,(2005); Fraenkel and Wallen, (2006); Nana,(2012), target population refers to the actual population to which the researcher intends to generalize his findings. For instance, if the researcher wants to study primary school teachers' attitudes towards inclusive education in Meme Division, the target population will be all the level 3 primary school teachers in Meme Division. In the context of this study, the target population is all the form five students from 29 Government, 15 denominational and 265 lay private general secondary schools in Yaounde Municipality.

3.5 Accessible Population

According to Amin, (2005); Nana, (2012); Nworgu, (2015) accessible population refers to the population of human beings, animals, or objects which is available or accessible to the researcher. This is the population from which the researcher carefully and realistically selects his or her respondents for the study's sample. According to McLeod (2019), accessible population refers to the total group of individuals from which the sample is drawn. This is usually the portion of the population to which the researcher has proper access, and this could be a subset of the target population. In the context of this study, it is made up of students from 4 public secondary schools, 2 denominational secondary schools and 37 lay private secondary schools in Yaounde Municipality.

Table 11 : Accessible Population

Type of School	Number of Schools	No of students		
Public	4	5598	6058	11656
Denominational	2	769	874	1643
Lay private	37	6953	7847	148000
Total	43	13320	14779	28099

3.6 Sampling

According to Amin, (2005); Nana, (2012); Dudovski, (2018), sampling refers to a principle that specifies conditions and guides the process of selecting elements of a population to take part in a study and to contribute as sources of primary data. Sampling is therefore a commendable tool for research studies as the population of interest is generally consisted of many individuals and hence the need to considerably reduced it in order to facilitate the required findings. A technique known as a random sampling technique is therefore needed at this section which requires special members of the group.

Table 12: Distribution of schools and sample of schools

Type of school	No of schools	Sample of schools for study (15%)	No of student			Sample size by Krejcie and Morgan (1970)
			males	females	total	
Public	29	4	5598	6058	11656	
Denominational	15	2	769	874	1643	
Lay private	247	37	6953	7847	14800	
Total	291	43	13320	14779	28099	266

1.7 Sampling Technique

Yaounde Municipality has 7 Sub Divisions which the researcher considered small to select some and drop some. In line with Olatunji and Igbokwe, (2005) and Krejcie and Morgan, (1970), smaller populations are considered as samples. In the context of this study, the 7 subdivisions of Yaounde Municipality constitute the sample of the subdivisions.

The sampling method used to select the schools was the multi-staged sampling techniques 15% of the total population of each type of school was selected. In selecting public secondary schools in the 7 Sub Divisions that make up Yaounde Municipality, the

names of all the secondary schools there were written out on cut slips of papers which were later on all folded and put in a carton. A child randomly picked out 4 of them which were unfolded, read and recorded as the selected public secondary schools for the 7 sub divisions of Yaounde Municipality.

The same procedure was used to select denominational secondary schools for the study and 2 secondary schools out of 15 were selected. As for the selection of lay private secondary schools for the study, the same procedure was employed and 37 out of 247 secondary schools were selected. In summary, 4 public, 2 denominational and 37 lay private secondary schools were selected for the study.

The *raison d'être* for choosing these institutions above was that secondary schools owned by the state, denominations and private individuals have their various goals and objectives. They have different visions, missions and philosophies and part of their teachers have been trained in state, denominational or lay private teacher training colleges. This can influence the implementation of inclusive education. It is thus necessary for all these types of secondary schools and their students to be part of the study.

Sample

Sample here refers to the students to whom the researcher actually administered his instruments to. According to Amin,(2005); Olatunji and Igbokwe,(2006); Nana, (2012); Agborbechem,(2020) a sample is a portion of a given population that has been carefully selected for an investigation. They hold that a good sample should be representative of the population and usually, it ranges from 10 to 20 % for big populations.

Table 13: Distribution of sample by type of school, gender and sample size

Sub division	Public schools									Denominational schools									Lay private schools									Total
	Disability									Disability									Disability									
	None		Mental		Visual		Physical		Total	None		Mental		Visual		Physical		Total	None		Mental		Visual		Physical		Total	
	M	F	M	F	M	F	M	F		M	F	M	F	M	F	M	F		M	F	M	F	M	F				
Yde 1	8	4	2	1	3	1	3	2	24	-	-	-	-	-	-	-	-	-	6	7	-	-	2	2	2	3	19	43
Yde 2	11	10	0	0	1	1	0	0	23	-	-	-	-	-	-	-	-	-	6	7	0	0	0	0	0	0	13	36
Yde 3	11	12	0	0	7	4	3	1	38	3	1	0	0	1	1	1	0	7	10	10	0	0	2	2	0	1	10	55
Yde 4	13	8	2	1	3	1	3	2	33	0	0	0	7	0	2	0	1	10	3	3	0	0	3	1	1	0	11	54
Yde 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	9	0	0	0	0	0	0	15	15
Yde 6	5	1	0	0	3	5	2	1	17	4	3	0	0	1	1	1	1	11	4	4	2	1	1	4	0	3	19	47
Yde 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	11	0	0	0	1	0	2	16	16
Total	48	35	4	2	17	12	11	6	135	7	4	0	7	2	4	2	2	28	37	51	2	1	8	10	3	9	103	266

Source: Field data

3.9 Validation of the research Instruments

The researcher verified the validity and the reliability of the used instruments through various methods. Validity means the appropriateness of the instrument whereas reliability refers to its consistency in measuring whatever thing it is intended to measure. Validity is the amount of systematic or built-in error in measurement whereas reliability refers to random error in measurement (Asika, 2012). Face, content and construct validities were assured through careful selection of items on the questionnaire and interview guide supported by empirical evidence and by theoretical principles. Further validity was assured by consulting and presenting these research documents to the supervisor who read and modified the questions before recommending that they be used.

The researcher equally presented these research instruments to a group of experts for confirmation before they were implemented. The results of the responses from both supervisor and panel of experts were used to calculate the face, content and construct validity index. Validity index was calculated with the help of five judges who established a validity index for every item. If for instance, four judges agreed that the item was valid, the inter-judge coefficient of validity was calculated using the formula below.

$$\text{Validity index} = \frac{\text{Numer of judges who declared item valid}}{\text{Total number of judges}}$$

The researcher did this for all the items of the instruments and thereafter, an average was computed for both instruments using the formula below.

$$\text{Average validity index} = \frac{\text{Number of items declared valid}}{\text{Total number of items}}$$

The computed validity index for the study stood at 0.8 and this means therefore that for each item, 4 judges out of 5 agreed that it was valid ($4/5 = 0.8$). According to Amin, (2005), Olatunji, and Igbokwe (2006); Nana, (2012) for a research instrument to be considered valid, this average index should be 0.7 or above. With this appropriate validity index of 0.8, the researcher administered the instruments to students with or without challenges in regular secondary schools in Mfoundi Municipality.

Reliability of the Research Instruments

According to Adesina (2016); Agborbechem,(2020), reliability refers to the degree of consistency between two sets of scores or observations with the same test or equivalent forms of the test. Therefore, a reliable measuring instrument yields similar results when different people administer it and when alternative forms are used. Even when conditions for

making the instrument change, the results of the test should not change. According to Asika (2012), reliability refers to the consistency between independent measurements of the same phenomenon. Reliability is therefore stability, dependability and predictability of a measuring instrument. It is the accuracy of a measuring instrument. The researcher describes the reliability of a research document as the degree of consistency with which the instrument measures whatever it has to measure. This quality deals with the truthfulness of the instrument-whether the instrument tells different things on different occasions. A test may be measuring something other than what it has to measure, but if it does that consistently, that kind of test though not valid is reliable. It is in this light that Nworgu (2015) holds that a test may be reliable but not valid. He equally insists that once a test is valid (i.e. measures what it is supposed to measure), there is the tendency for it to be reliable.

In the context of this study, reliability was assured using test-retest reliability. The researchers administered the questionnaires twice; the second was administered seven days after the first to the same students. The results the researcher obtained from both tests were correlated to evaluate the test stability over time. In this study, the stability reliability coefficient (alpha) was 0.954 indicating complete absence of error. The interview guide had the same treatment and hence the same score 0.954. This indicated that the instruments were reliable. Amin, (2005); Asika, (2012) agree that if an instrument is really reliable, the coefficient should be 1 or close to 1(0.954). If the coefficient is.00 it indicates no reliability. With his authorization to carry out the research from the University of Yaounde I, Faculty of Education, a letter demanding an interview guide, a consent form and an explanatory cover letter ready, the instruments were ready for administration. According to Borg and Gall (1983); Asika, (2012); Olatunji and Igbokwe, (2006). Contacting participants before administering a questionnaire has been found in many studies to ameliorate the response rate.

Table 14: Reliability coefficient

N°	Variables	No of items	X	DS	Reliability estimates
1	Classroom management adaptation	10	31,26	5,3	0,944
2	Instructional adaptation	10	29,82	5,16	0,951
3	Assessment adaptation	10	32,21	5,58	0,983
4	Implementation of inclusive education	10	35.5	5,28	0,938
Total					0,954

3.10 Administration of the Instruments

The researcher took the questionnaires personally to selected schools where he administered them directly to selected participants. Before distributing the questionnaires in each class, the researcher addressed the students and attended to those with different disabilities with the concerned schools. For the blind students, their different items were read orally and their response, were tick for them by the researcher.

Anonymity was assured as respondents were asked not to write their names or anything that could identify them on their questionnaires. Respondents were asked to answer questions based on their educational experiences. At the end, a few of the participants with and without disabilities were interviewed. The researcher administered these instruments within a period of two months one week in the seven sub division of Yaounde Municipality in the Centre Region of Cameroon. The distribution of the questionnaires was done in 42 regular secondary schools as indicated on table 15

Table 15: Distribution of questionnaires in public, denominational and lay private schools

Sub division	Public schools	Deminational schools	Lay private schools	Total
Yaounde 1	24	-	19	43
Yaounde 2	23	-	13	36
Yaounde .3	38	7	10	55
Yaounde 4	33	10	11	54
Yaounde 5	-	-	15	15
Yaoude 6	17	11	19	47
Yaounde 7	-	-	16	16
Total	135	28	103	266

Source: Field data

As the collection of data for this study went on for more than two months, there was some possibilities of attrition (loss of participants) which could lead to some bias in the research sample. Anyway, attrition was reduced to its minimum with the use of these means: participants were well informed about the study and emphasis was made by the researcher on its importance.

Before they started participating in the questionnaire, an understanding with them was assured to complete their part in the research. One of the problems faced was to identify

learners with challenges. The researcher discussed with the participants about the importance of this study to their education if their educational problems were identified and thereafter, solutions were found. There was equally prompt verification of data, careful record keeping and a systematic follow-up procedure. Care was also taken at all stages of data collection, processing and analysis in order to control attrition. There was space, data and methodological triangulation in data collection. The return rate of questionnaire was 100% as they were collected immediately participants finished answering them.

3.11 Measurement Instruments and development

The research instruments which were used in this study are a questionnaire and an interview guide. These research instruments were done thanks to the help of other review from the literature to profile curriculum adaptations and the implementation of inclusive education. The items of the questionnaires were adopted from UNESCO (2006) toolkit for the creation of inclusive, learning-friendly environments checklist whereas the interview guide was constructed with the help of Ostroff (2006) that relates to students questionnaire. The above-mentioned research instruments enable students to examine their school environments, policies, administrative support, teachers' skills, knowledge and attitudes, academic content, assessment, co-curricular activities and their communities.

In this study, these ideas have been used with curriculum adaptations and the learning environments for proper implementation of inclusive education. Such adaptations include classroom management adaptation, instructional adaptation and assessment adaptation. Each type of curriculum adapted environment provided a number of items to which secondary school students with or without challenges were asked to respond to by ticking their level of agreement on a four point likert scale (strongly agree, Agree, disagree and strongly disagree): These instruments were in both French and English languages.

The general objective of the study is to determine the influence of curriculum adaptation of the learning environment on the implementation of inclusive education in Yaounde Municipality-Cameroon. From this, the researcher constructed statements and questions to modify the existing learning environments notably the classroom management adaptation, instructional adaptation and assessment adaptation.

These statements and questions were meant to measure students' perception of their learning environment using an interval / ratio likert scale. Students opinions related to these environments were equally measured. The same procedure was used for the interview guide.

It was a structured conversation that related principally to aspects not touched in the questionnaire. With regards to the classroom environment and other real life stories and experiences of learners with challenges, the mixed method used was at the same time quantitative and qualitative. This approach is inclusive as Greene, Caracelli & Grahalm, (1989); Amin, (2005); Nana, 2012)who state that a mixed method enriches and elaborates understanding of the subject under study. It equally reflects good and replicable results.

3.11.1 Questionnaire

Considering the cultural and educational knowledge about Cameroonian Schools, and School sub systems as well as factors that have been identified through the literature review on students' opinions about inclusive education in previous studies, the principal instrument developed and used in this study was a questionnaire. (See Appendis 1). The first part of this instrument contained items of socio-biological aspect (personal data) and the second part contained questions on students' opinions towards inclusive education. The questionnaire was made up of 30 items that assess scores for factors of the physical, pedagogic learning environments as well as the teacher/student relationship. Part I of section B is a likert scale and contains statements of curriculum adaptations and the implementation of inclusive education. In the likert scale section of the questionnaire, respondents responded on a 4-point likert scale anchored by strongly agree, agree, disagree and strongly disagree for each item. A neutral response was not included in an effort to elicit the students' response only regarding agreement and disagreement with the statements. The respondents were therefore expected to indicate the degree of agreement or disagreement with each of the statements. Each degree of agreement or disagreement was given a numerical score and the respondents total score was computed by summing up these scores from all the statements.

The instructions required the respondents to place a tick () in the column that best describe his or her opinion. Apart from these 30 questions in the likert scale, there were 3 open-ended questions in part 2 of section B.

3.11.2 Interview Guide

A semi-structured interview guide (see Appendix 2) was used at the same time with the questionnaire. The researcher used the interview guide because it is considered as a key instrument in gathering data for qualitative researcher (Best and Kaln, 1993; Coll and Chapman, 2000; Amin,2005). The interview enables the students with or without challenges to give their opinions and express their feelings in their own words. A semi-structured

interview was chosen in this study because it brought in more flexibility to both the researcher and the respondents (Freebody, 2003; Rose and Cole, 2003; Amin,2005; Nana, 2012).

Interview questions were formulated according to Ostroff (2006) sample of subjective experience of the learning environment which was divided into physical, emotional and mental aspects. The physical, pedagogic and social learning environments at the secondary educational levels in regular schools, which are not touched in the questionnaire, were incorporated into these three aspects mentioned. The physical aspects contained like general health situation of the interviewee, whether he/she has been victim of any physical abuse and equally to find out if the facilities offered in their school were suitable to enable them learn well and provide examples if any. The emotional aspects enable the interviewees to describe their relationships with their friends and teachers and if they feel a sense of belonging or not in the learning environment.

The mental aspects were to find out the learning experiences of students with challenges in their different classrooms and the treatment they get from their teachers and peers without challenges. The interview was concluded with a general item that need students with challenges to narrate some real life experiences in their classrooms when they had been very poorly treated as a result of their challenges.

An android phone was used to record this interview session. All the interviews recorded were transcript, edited verbatim into a profile and thematic analysis was done to allow for a greater degree of accuracy. The researchers equally took down some notes as the interview was in process in order to improve the quality of the analysis.

3.11.3 Pilot Study

After eliminating all possible problems and errors identified in the questionnaire, a pilot test was carried out among 50 students who were randomly selected from some secondary schools in Yaounde Municipality, who did not constitute participants for the study.

Their responses enabled us among other things to determine the aptness of the questions and to facilitate the solution to possible problems with the administration of the instrument. Questions that posed understanding difficulties were thus restructured, re-phased or simply removed. The final questionnaire was appropriately modified and approved by the supervisor to be administered by the researcher on the study population. The interview guide was pilot-studied the same way.

3.12 Procedure for Data Analysis

The researcher used a questionnaire and an interview guide to collect data. He used both qualitative and quantitative methods of data collection. Data collected and coding done before entering into the computer. The questionnaire contained 40 closed-ended items with responses on a four-point scale as shown on the table below.

Table 16: Format and weighting of responses

Type of statement	Response			
	Strongly Agree	Agree	Disagree	Strongly Disagree
Positive	4	3	2	1
Negative	1	2	3	4

Source: Researcher initiative

From the above weighting, any participant who responded to a positive statement by ticking strongly Agree, scored 4 points, Agree, scored 3 points, disagree, scored 2 points and strongly disagree, scored 1 point. For negative statements, any participant who ticked strongly disagree, scored 4 points, disagree scored 3 points, Agree 2 points and strongly Agreed 1 point.

Inferential statistics were used to analyze data while content analysis was used on items on the interview guide. In this investigation, content analysis was used to produce descriptive information on some weaknesses of the school learning environments and to cross-validate research findings. The responses were categorized into three main themes representing the three learning environments identified in the study notably the classroom management adaptation, instructional adaptation and assessment adaptation learning environments. .

Data collected from interviews were transcribed, checked and analyzed using a coding technique. During data analysis, keywords were used to identify recurring themes which help in the discussions and interpretation of data (Rose and Cole, 2002; Asika, 2012; Olatunji and Igbokwe, 2006; Amin, 2005; Nana, 2012). The taped data was replayed several times for careful study. It was also evaluated by another researcher in order to allow the calculation of a reliability coefficient for the interviewed data.

With the data entry and editing phase done, the presentation of data was given using tables, graphs, pie charts, bar charts and histograms in different situations. Comments followed data presentations for proper understanding. Data collected and analyzed enabled

the researcher to compare the existing learning environments in Yaounde Municipality with those proposed by UNESCO toolkit and government texts in Cameroon in order to make recommendations for the redress of the observed irregular situation or closure of the gaps.

Table 17: Procedure for Data Analysis

Hypotheses	Types of data collected	Statistical total
Hypothesis one There is a significant relationship Between classroom management adaptation and the implementation of inclusive education in secondary schools in Yaounde Municipality Independent variable: classroom management adaptation Dependent variable: implementation of inclusive education	Continuous	Person product moment correlation
Hypothesis two: there is a significant relationship between instructional adaptation and the implementation of inclusive education in secondary schools in Yaounde municipality Independent variable: instructional adaptation Dependent variable: implementation of inclusive education	Continuous	Pearson product moment correlation
Hypothesis three: there is a significant relationship between assessment adaptation and the implementation of inclusive education in secondary schools in Yaounde municipality Independent variable: Assessment adaptation Dependent variable: Implementation of inclusive education	Continuous	Pearson product Moment correlation

3.14 Operationalization of Variables

In order to make sure that the concepts which are used are similar with their measurement, the variables were operationalized and presented following the opinion of students with or without disabilities on the present learning environments of their secondary schools. The variables are operationalized in the table below.

Table 18: Description of variables and modalities, measurement scale, test statistics and questionnaire items.

Hypo theses	Independent variable	Indicators	Modalities	Dependent variable	Indicators	Modalities	Measurement scale	Test statistics	Questions		
There is a significant relationship between classroom management adaptation and the implementation of inclusive education in secondary schools in Yaounde municipality.	Classroom Management Adaptation	-Group Learning	SD	Implementation of inclusive education	-Visual impaired students	SD		Pearson product moment	1	2	3
		Peer tutoring	D						4	5	6
		-Bullying - nicknaming	A						7	8	9
		-Instructional materials	SA						10	3	1
									34	35	
									36	40	
There is a significant relationship between instructional adaptation and the implementation of inclusive education in Yaounde	Instructional adaptation	-Use of games to teach	SD	Implementation of inclusive education	-Ramps and stairs - differentiated instruction - co-teaching	SA			11	12	
		-use of real objects	D						13	14	
		-Cooperative learning - teaching in small groups	A						15	16	
		-use of simple	SA						17	18	
									19	20	
									32	33	
									37	39	

3.13 Ethical Consideration

Learners with challenges are a set of learners to be handled carefully in order to get the correct information during research. They generally have the impression that people want to mock at them. In this connection, ethical considerations are very important for the successful carrying out of the research. According to Roberts, (2000); Amin,(2005); Asika, (2012); Nana, (2012), ethical guidelines and codes do not provide the answers to redress all kinds of challenges or risks that occur when doing research with students but generally lead to asking the correct kinds of questions. In the context of this study, the following ethical issues were taken into consideration.

Participation was purely voluntary as students were given the right to say ‘no’. Informed consent was got in writing in the case of questionnaire and verbally in the case of interview from both students and their parents or guardians. They were made to understand in each situation that the information needed was to be used just for academic purposes. Anonymity and confidentiality were respected by removing the names and other identifying information once they were no longer important. Audio recordings were wiped after transcripts had been made and checked. Both French and English Languages, play, patience and time were some tact which was used to get reliable information from students during interview. The researcher put on a positive attitude and a neutral expression while interacting with all students. His name and contact were given to participants to enable them ask follow-up questions if they find it necessary.

Summary

The research design used for this study was the survey cross-sectional survey design. This survey cross-sectional design was chosen because the researcher felt that it is the best method for identifying and explaining students’ opinions on the learning environments of secondary schools in the 7 sub divisions that make up in Yaounde Municipality.

The research instruments used were a questionnaire made up of open and closed-ended items and an interview guide adopted from UNESCO (2006) toolkit for creating inclusive learning Friendly Environment Checklist and Ostroff (2006) Voice of children questionnaire respectively. The items on the questionnaire were rated on a four point likert scale (strongly Agree, Agree, Disagree and strong disagree) scale from 4-1. Validity of instruments was verified by presenting them to the supervisor who read them and modified where necessary and equally to another group of experts for confirmation. On its part, reliability of these instruments was verifies through the test- retest technique which consisted of giving items twice to the same participants. A sample of 50 students for the representative

of the population, were administered the instruments for pilot testing. This enabled the researcher to test the level of understanding of the items by the participants.

The researcher got an authorization from the University of Yaounde 1 and the authorities of the concerned schools, in order to administer the instruments. The administration of the questionnaire and the interview was done personally and with a great level of confidentiality by the researcher with a period of two months one week. The return rate was 100% as they were collected immediately the participants finished answering them. Data collected was edited before entering into a computer. Both descriptive and inferential statistics were used to analyze using the «statistical package for the social sciences program» (SPSS). The inferential statistics used were the student t-test and analysis of variance (ANOVA) to verify the hypothesis at a significance level of 0.05.

Content analysis was used on the open-ended questions. Data collected from interview guide were analyzed using coding technique. Tables, pie charts, bar-charts, as well as histograms were used to present data and comments followed thereafter for clarity. Besides, a table showing how variables in the study were operationalized, the modalities, the indicators of the learning environment, measuring scale, the test used and if the hypotheses tested were accepted or rejected. Finally, some ethical considerations were made during the administration process of the research instruments in a bit to ensure full participation of respondents for the study.

CHAPTER FOUR

PRESENTATION OF RESULTS

The study aims at determining the influence of curriculum adaptation on the implementation of inclusive education in English secondary schools in Yaoundé municipality.

Specifically, the study studied three specific objectives as follows:

1. To determine the extent to which classroom management adaptation influences the implementation of inclusive education in English secondary schools in Yaoundé municipality
2. To examine the influence of instructional adaptation on the implementation of inclusive education in English secondary schools in Yaoundé municipality
3. To determine the influence of assessment adaptation on the implementation of inclusive education in English secondary schools in Yaoundé municipality.

The results of the statistical analyses of data gathered for this study are presented in this chapter. The presentation of the data was done following the trends of the four hypotheses directing the study. The chapter is therefore presented under the following outlines:

General Description of Data/Variables

Hypothesis-by-Hypothesis presentation of Result

Summary of Results

4.1 General Description of Data/Variables

This study was designed to examine the influence of curriculum adaptation on the implementation of inclusive education in English secondary schools in Yaoundé municipality. Descriptive data analysis for all variables in the study are presented using the SPSS print out in Tables that follow.

Table 19: Descriptive Statistics

Descriptive Statistics			
	Mean	Std. Deviation	N
CLASSROOM MANAGEMENT	22.8534	6.76932	266
INSTRUCTIONAL MANAGEMENT	20.4774	7.11850	266
ASSESSMENT MANAGEMENT	18.6504	7.23422	266
IMPLIMENTATION OF INCLUSIVE PRACTICES	19.8759	7.06437	266

Table 20: Correlations

		CLASSROOM MAMAGEMENT	INSTRUCTIONAL MANAGEMENT	ASSESSMENTMA NAGEMENT	IMPLIMENTATION OF INCLUSIVE PRACTICES
CLASSROOM	Pearson Correlation	1	.104	-.116	.15
MAMAGEMENT	Sig. (2-tailed)		.089	.060	.405
	N	266	266	266	266
INSTRUCTIONAL	Pearson Correlation	.104	1	.076	.191**
MAMAGEMENT	Sig. (2-tailed)	.089		.219	.002
	N	266	266	266	266
ASSESSMENT	Pearson Correlation	-.116	.076	1	.78
MAMAGEMENT	Sig. (2-tailed)	.060	.219		.058
	N	266	266	266	266
IMPLIMENTATIO	Pearson Correlation	.051	.191**	.116	1
N OF INCLUSIVE	Sig. (2-tailed)	.405	.002	.058	
PRACTICES	N	266	266	266	266

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

The scores obtained were analyzed, presented and interpreted to accept or reject each of the four null hypotheses guiding this study at 0.05 level of significance and 264 degrees of freedom.

4.2 Data Analysis and Interpretation

The data was analyzed hypothesis by hypothesis depending on the kind of data collected for each variable in each hypothesis. The following hypotheses were analyzed at 0.05 level of significance.

General Hypothesis

In order to answer the above research questions and to examine the influence of curriculum adaptation on the implementation of inclusive education in English secondary schools in Yaoundé municipality, three hypotheses are tested using the Pearson Product Moment Correlation Analysis. The hypotheses are:

1. Classroom management adaptation does not significantly influence the implementation of inclusive education in English secondary schools in Yaoundé municipality
2. instructional adaptation does not significantly influence the implementation of inclusive education in English secondary schools in Yaoundé municipality
3. Assessment adaptation does not significantly influence the implementation of inclusive education in English secondary schools in Yaoundé municipality

H₀: Classroom management adaptation does not significantly influence the implementation of inclusive education in English secondary schools in Yaoundé municipality

H₁: Classroom management adaptation significantly influences the implementation of inclusive education in English secondary schools in Yaoundé municipality

H₀: Instructional adaptation does not significantly influence the implementation of inclusive education in English secondary schools in Yaoundé municipality

H₂: Instructional adaptation significantly influences the implementation of inclusive education in English secondary schools in Yaoundé municipality

H₀: Assessment adaptation does not significantly influence the implementation of inclusive education in English secondary schools in Yaoundé municipality

H₃: Assessment adaptation significantly influences the implementation of inclusive education in English secondary schools in Yaoundé municipality

Hypothesis One

H₀: Classroom management adaptation does not significantly influence the implementation of inclusive education in English secondary schools in Yaoundé municipality

H₁: Classroom management adaptation significantly influences the implementation of inclusive education in English secondary schools in Yaoundé municipality

The independent variable in this hypothesis is Classroom management adaptation, while the dependent variable is the implementation of inclusive education in English secondary schools in Yaoundé municipality. The scores of the independent variable were

gotten from the responses recorded from the ten (10) items of a four- point Likert-scale questionnaire that measured Classroom management adaptation. The scores of the dependent variable were got from the ten (10) items of a four-point Likert scale questionnaire that measured the implementation of inclusive education in English secondary schools in Yaoundé municipality. Considering that the data collected from both the independent variable and the dependent variable are all continuous data, the statistical analysis technique used to test this hypothesis was the Pearson Product Moment Correlation analysis.

The formula using deviation from the mean method is;

$$\Gamma_{xy} = \frac{n \sum xy - \sum x \sum y}{\sqrt{[n \sum x^2 - (\sum x)^2][n \sum y^2 - (\sum y)^2]}}$$

Where x is the independent variable, y is the dependent variable and Γ_{xy} is the correlation coefficient for x and y

The result of the analysis is presented in Table 20

Table 21: The result of the analysis

Pearson Product Moment Correlation analysis of influence of Classroom management adaptation on the implementation of inclusive education in English secondary schools in Yaoundé municipality (N= (266)

Variable	$\sum X$	$\sum X^2$	$\sum Y$	$\sum Y^2$	$\sum XY$	Γ_{xy}	p-value
Classroom management adaptation (X)	6079	151069			122775	0.15	
implementation of inclusive education (Y)	5287	118309					0.012

$p^* < 0.05$; $df = 264$; critical $\Gamma_{xy} = 0.113$

The result of the analysis reveals that the calculated Γ_{xy} -value of 0.15 is higher than the critical Γ_{xy} -value of 0.113 at 0.05 level of significance with 264 degrees of freedom. Also, the p-value of 0.0120 is lower than 0.05. With the result of this analysis, the null hypothesis was rejected and the alternative hypothesis retained. This result therefore means that Classroom management adaptation significantly influences the implementation of inclusive education in English secondary schools in Yaoundé municipality.

Since Classroom management adaptation significantly influences the implementation of inclusive education in English secondary schools in Yaoundé municipality, a further

exploration of the relationship showed that the $\Gamma_{xy} = 0.151$ was high and positive. This indicates that the better the Classroom management adaptation the better the implementation of inclusive education in English secondary schools in Yaoundé municipality.

Hypothesis Two

H₀: Instructional adaptation does not significantly influence the implementation of inclusive education in English secondary schools in Yaoundé municipality

H₂: Instructional adaptation significantly influences the implementation of inclusive education in English secondary schools in Yaoundé municipality

The independent variable in this hypothesis is Instructional adaptation, while the dependent variable is the implementation of inclusive education in English secondary schools in Yaoundé municipality. The scores of the independent variable were gotten from the responses recorded from the ten (10) items of a four- point Likert-scale questionnaire that measured Instructional adaptation. The scores of the dependent variable were got from the ten (10) items of a four-point Likert scale questionnaire that measured the implementation of inclusive education in English secondary schools in Yaoundé municipality. Considering that the data collected from both the independent variable and the dependent variable are all continuous data, the statistical analysis technique used to test this hypothesis was the Pearson Product Moment Correlation analysis.

The formula using deviation from the mean method is;

$$\Gamma_{xy} = \frac{n \sum xy - \sum x \sum y}{\sqrt{[n \sum x^2 - (\sum x)^2][n \sum y^2 - (\sum y)^2]}}$$

Where x is the independent variable, y is the dependent variable and Γ_{xy} is the correlation coefficient for x and y .

The result of the analysis is presented in Table 22

Table 22 : Pearson Product Moment Correlation analysis of influence of Instructional adaptation on the implementation of inclusive education in English secondary schools in Yaoundé municipality (N= (266))

Variable	$\sum X$	$\sum X^2$	$\sum Y$	$\sum Y^2$	$\sum XY$	Γ_{xy}	p-value
Instructional adaptation (X)	5447	124969			110804	0.191*	
implementation of inclusive education (Y)			5287	118309			0.020

$p^* < 0.05$; $df = 264$; critical $\Gamma_{xy} = 0.113$

The result of the analysis reveals that the calculated Γ_{xy} -value of 0.191 is higher than the critical Γ_{xy} -value of 0.113 at 0.05 level of significance with 264 degrees of freedom. Also, the p-value of 0.020 is lower than 0.05. With the result of this analysis, the null hypothesis was rejected and the alternative hypothesis retained. This result therefore means that Instructional adaptation significantly influences the implementation of inclusive education in English secondary schools in Yaoundé municipality.

Since instructional adaptation significantly influences the implementation of inclusive education in English secondary schools in Yaoundé municipality, a further exploration of the relationship showed that the $\Gamma_{xy} = 0.191$ was high and positive. This indicates that the better the instructional adaptation the better the implementation of inclusive education in English secondary schools in Yaoundé municipality.

Hypothesis Three

H₀: Assessment adaptation does not significantly influence the implementation of inclusive education in English secondary schools in Yaoundé municipality

H₁: Assessment adaptation significantly influences the implementation of inclusive education in English secondary schools in Yaoundé municipality

The independent variable in this hypothesis is Assessment adaptation, while the dependent variable is the implementation of inclusive education in English secondary schools in Yaoundé municipality. The scores of the independent variable were gotten from the responses recorded from the ten (10) items of a four- point Likert-scale questionnaire that measured Assessment adaptation. The scores of the dependent variable were got from the ten (10) items of a four-point Likert scale questionnaire that measured the implementation of inclusive education in English secondary schools in Yaoundé municipality. Considering that the data collected from both the independent variable and the dependent variable are all continuous data, the statistical analysis technique used to test this hypothesis was the Pearson Product Moment Correlation analysis.

The formula using deviation from the mean method is;

$$\Gamma_{xy} = \frac{n \sum xy - \sum x \sum y}{\sqrt{[n \sum x^2 - (\sum x)^2][n \sum y^2 - (\sum y)^2]}}$$

Where x is the independent variable, y is the dependent variable and Γ_{xy} is the correlation coefficient for x and y

The result of the analysis is presented in Table 22

Table 23 : Pearson Product Moment Correlation analysis of influence of Assessment adaptation on the implementation of inclusive education in English secondary schools in Yaoundé municipality (N= (266))

Variable	$\sum X$	$\sum X^2$	$\sum Y$	$\sum Y^2$	$\sum XY$	Γ_{xy}	p-value
Assessment adaptation (X)	4961	106393			109181	0.78	
implementation of inclusive education (Y)	5287	118309					0.000

$p^* < 0.05$; $df=264$; critical $\Gamma_{xy} = 0.113$

The result of the analysis reveals that the calculated Γ_{xy} -value of 0.78 is higher than the critical Γ_{xy} -value of 0.113 at 0.05 level of significance with 264 degrees of freedom. Also, the p-value of 0.000 is lower than 0.05. With the result of this analysis, the null hypothesis was rejected and the alternative hypothesis retained. This result therefore means that Assessment adaptation significantly influences the implementation of inclusive education in English secondary schools in Yaoundé municipality.

Since assessment adaptation significantly influences the implementation of inclusive education in English secondary schools in Yaoundé municipality, a further exploration of the relationship showed that the $\Gamma_{xy} = 0.78$ was high and positive. This indicates that the better the assessment adaptation the better the implementation of inclusive education in English secondary schools in Yaoundé municipality

Summary of Results

1. Classroom management adaptation significantly influences the implementation of inclusive education in English secondary schools in Yaoundé municipality. Hence the better the Classroom management adaptation the better the implementation of inclusive education in English secondary schools in Yaoundé municipality
2. Instructional adaptation significantly influences the implementation of inclusive education in English secondary schools in Yaoundé municipality. the better the instructional adaptation the better the implementation of inclusive education in English secondary schools in Yaoundé municipality
3. Assessment adaptation significantly influences the implementation of inclusive education in English secondary schools in Yaoundé municipality. Hence the better the

assessment adaptation the better the implementation of inclusive education in English secondary schools in Yaoundé municipality

4.3 Summary table of results

Results from testing of hypotheses

Table 24: Summary of Results and their Implications to the Implementation of Inclusive Education in English secondary schools in Yaounde municipality.

Hypothesis	Test used	Results	Decision	Implication of Result
1-Ho: Classroom management Adaptation does not Significantly influence the Implementation of inclusive Education in English secondary Schools in Yaounde municipality	Pearson Product moment Correlation	Classroom management significantly influence the implementation of inclusive edu	Null hypothesis rejected and alternative hypothesis accepted	The better the type of classroom management adaptation the better the implementation of inclusive education in English secondary Schools in Yaounde Municipality
H1: Classroom management Adaptation significantly influences The implementation of inclusive Education in English secondary Schools in Yaounde municipality				
2-Ho: Instructional adaptation Does not significantly influence The implementation of inclusive Education in English secondary Schools in Yaounde municipality	Pearson Product Moment Correlation	Instructional adaptation significantly influence the implementation of inclusive education in English secondary in Yde municipality	Null hypothesis rejected and alternative hypothesis accepted	The better the instructional adaptation the better the implementation of inclusive education in English secondary schools in Yaounde Municipality
H1: Instructional adaptation Significantly influences the Implementation of inclusive Education in English secondary				

Schools in Yaounde municipality

3-Ho: Assessment adaptation	Pearson	Instructional	Null hypothesis	The better the
Does not significantly influence	Product	adaptation	rejected and	assessment adaptation
The implementation of inclusive	moment	significantly	alternative	the better the
Education in English secondary	correlation	influences the	hypothesis	implementation of
Schools in Yaounde municipality		Implementation	accepted	inclusive education
		Of inclusive		in English secondary
		Education in		schools in Yaounde
		English secondary		municipality
		Schools in Yaounde		
		Municipality.		

H1: Assessment adaptation
 Significantly influences the
 Implementation of inclusive
 Education in English secondary
 Schools in Yaounde municipality

4.4 Findings from the Interview

This interview was carried out in order to triangulate the information collected from the main research instrument, the questionnaire. The researchers were interested in this interview as data were collected through direct verbal interactions with respondents. Some of the aspects touched during this interview were the physical, emotional and mental aspects as well as some real life experiences of the participants. Seventeen participants took part in the interview which held at Government Bilingual High School Nkol-Eton Yaounde in the centre region of Cameroon on the 18th of May 2022.

The interviewees consisted of seven students with visual impairments, three students without disabilities, four students with auditory impairments and three students with physical disabilities. Government Bilingual High School Nkol-Eton manages the largest number of students with challenges in Yaounde municipality. Besides, it houses students from a special education secondary school, ESEDA Yaounde. Findings gathered from this interview are presented below.

Physical Aspects: First of all the fact that there are challenged students in this school is clear testimony that this school is up to an extent safe, friendly and supportive of inclusive education. Three out of the seventeen respondents reported that they are usually sick. For

instance, they are taken to hospital at least twice a month. The fourteen others reported that they are sick as any other human being could be sick. Despite the apparently safe school environment for challenged learners, some of them however recall some painful situations of abuse like deliberately placing obstacles on the ways of students with visual impairments so that they hit their legs and fall for mockery sessions or laughing opportunities. Besides, the thirteen challenged students reported that some of their mates without disabilities nickname them on the basis of their disabilities and bully at them and sometimes call them witches and wizards. On their part, the four non-disabled students reported that some of their mates with disabilities are sometimes very funny and provocative. For instance, in situations whereby they have more marks than some of their non-disabled peers, they mock at them and call them lazy students and this of course usually spark bitter quarrels between them. In the course of these quarrels displaced words are used by both parties. Eleven of the participants reported that some teachers speak very fast and do not write in bold letters so that they can see and read the written words correctly, situations which keep them asking most of the times, “ what did the teacher say?” or “ which letter or word is that”. They added that this situation does not only sometimes disturb their neighbors, but hinders them from taking active part in class activities.

Despite of these isolated negative situations mentioned above, participants with challenges agreed that their mates without disabilities are generally kind to them. For instance, they carry their school bags, copy notes for them, take them back home, explain concepts to them and include them in their learning and playing groups. Besides, they help them move round the school campus and climb stairs.

Emotional Aspects

Twelve participants out of fourteen reported that their relationship with their teachers and peers are very good. They reported that they feel a sense of belonging and communicate well within or without the school environment with each other. Ten of the respondents opined that teachers considered their challenges whenever they are teaching and explain to them what they do not understand. They hold that their teachers hate discrimination and punish discriminatory issues severely. Besides, they are empathic and encourage all the students to work harder and hold on to their studies despite obstacles especially those with learning disabilities and difficulties.

Generally, most of their classmates are friendly, welcoming and supportive as they study, play and share things together. Some of them even visit their peers with challenges at home.

Mental Aspects

Thirteen of the respondents agreed that they take active part in class activities as they ask questions when they do not understand a concept and answer their teacher' or peers' questions. Two of the participants opined that they neither answer nor ask questions because they fear that the teacher will shout at them for giving wrong answers or that their peers will laugh at them for not giving the correct answer. Two other participants responded that they wish to take active part in class activities but that they could not because they do not generally hear the teacher well and sometimes the words on the board or chart are not clear enough for them to read.

Most of them opined that they enjoy the learning experiences offered by some teachers and non-disabled peers as their explanations are clear, simple and usually followed by concrete and real life examples. Besides, they always advise students with challenges to be courageous and confidence in their abilities to work as there is ability in every disability, in order to succeed with their studies as only education generally builds good citizens capable of socializing in constant changing societies.

Asked whether teachers consider their challenges when giving time to copy notes, do assignment or write examination, seven agreed and ten disagreed. The respondents however proposed some inclusive practices which they considered acceptable for inclusive education. They recommended that:

1. Teachers give students with challenges more time to copy notes or write tests/examinations.
2. Teachers read out test/examination questions clearly and loudly.
3. That teachers give simple and clear instructions
4. That question papers should be typed in bold characters.
5. That teachers who dictate test questions should speak clearly and slowly.
6. That teachers should take courses in Braille in order properly help students who write in Braille.

Real Life Situations of Inappropriate Treatment of Students with Learning Disabilities and difficulties.

Some students recounted situations where they have been inappropriately treated by their non-disabled peers as a result of their challenges as listed below:

Peer A: I have visual impairment but I am very intelligent in class and some of my peers dislike me for that and call me all types of names just because I am better than them in school work.

Peer B: One day we had a test in class, the teacher read out a question but I did not hear him well. My neighbors refused to help me and I failed the test badly.

Peer C: One day I was coming out of the class and hit my right eye side on the door as I could not see well and my friends laughed and mocked at me the whole day.

Summary of Findings from Interview

The results of the interview guide tie squarely with those of the questionnaire. The implementation of inclusive education in secondary schools calls for changes and modifications in educational processes: Students, especially those with learning disabilities and difficulties want to learn, to acquire knowledge necessary for their socialization in constant changing societies. After all, it is generally said that people perish because of lack of knowledge. Like Kane, (1961):

L'école du blanc ou je pousse nos enfants tuera en eux ce
que nous aimons le plus mais elle leur permettra d'apprendre a
lier le bois au bois et a construire les demeures qui résistent
au temps et à avoir raison sans avoir raison.....

Cheik Hamidou Kane is saying here that the white man school where their children are being sent to learn will destroy the best part of them (believe and faith in Allah as well as discipline) but will teach them how to use wood to build timeless houses and to be right without being right (use military power to make laws, exactly as the whites did to Africans during colonization). In a nutshell, a vast majority of students with challenges like Biya, (2023) unanimously agreed that the learning environments of their secondary schools notably classroom environment; instructional environment and assessment environment are below expectations and suggest that they undergo appropriate changes and modifications which will remove darkness there which make them slippery and thorny so that they become more friendly, joyful, supportive, enabling and lovely so that every learner feels a sense of belonging and be sufficiently motivated to learn.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter deals with the discussion of findings of the study, their implications as well as conclusions. Some recommendations are equally made to different educational stakeholders. The chapter ends with a summary.

5.1 Discussion of Findings

The findings of this study as presented in chapter four, are grouped into four headings notably:

- 1- The extent to which classroom management adaptation influences the implementation of inclusive education in English secondary schools in Yaounde municipality and the corresponding hypotheses notably:

Hypothesis one

Ho: Classroom management adaptation does not significantly influence the implementation of inclusive education in English secondary schools in Yaounde municipality.

H1: Classroom management adaptation significantly influences the implementation of inclusive education in English secondary schools in Yaounde municipality

- 2- The influence of instructional adaptation on the implementation of inclusive education English secondary schools in Yaounde municipality and the corresponding hypothesis notably:

Hypothesis Two

Ho: Instructional adaptation does not significantly influence the implementation of inclusive education in English secondary schools in Yaounde municipality.

H1: Instructional adaptation significantly influences the implementation of inclusive education in English secondary schools in Yaounde municipality.

- 3- The influence of assessment adaptation on the implementation of inclusive education in English secondary in Yaounde municipality and the corresponding hypothesis notably:

Hypothesis Three

Ho: Assessment adaptation does not significantly influence the implementation of inclusive education in English secondary schools in Yaounde municipality.

H1: Assessment adaptation significantly influences the implementation of inclusive education in English secondary schools in Yaounde municipality.

- 4- The means which are needed to improve the implementation of inclusive education in English secondary schools in Yaounde municipality.

The following discussions are open on the above-mentioned headings.

The extent to which classroom management adaptation influences the implementation of inclusive education in English secondary schools in Yaounde municipality.

The researchers were interested in finding out how classroom management adaptation influences the implementation of inclusive education in English secondary schools in Yaounde municipality. From the results obtained and presented in table 20; it is quite evident that classroom management adaptation significantly influences the implementation of inclusive education in English secondary schools in Yaounde municipality because the null hypothesis was rejected while the alternative hypothesis one was retained. This implies that the better the classroom management adaptation, the more, students with challenges and their parents develop love for inclusive education and the easier the implementation of inclusive education in English secondary schools in Yaounde municipality. These researchers like Tchombe & Ekema, (2011); Shey,(2018a); Taneyo et al., (2018); Orluwene et al., (2019); Bezangwa, (2019b) discovered that classroom management adaptation significantly influences the implementation of inclusive education in most English secondary schools learning environments and equally emphasized that the teacher as the main actor in the implementation of inclusive education, needs to be really knowledgeable and this calls for proper training that embodies self-respect and respect for learners; mastery of inclusive education practices, hard work and responsibility (Ekema,2012; Nana et al.,2012; Fonkoua, 2018; Endeley, 2015; Shey,2014; Manfouo et al.,2023). But teachers' effectiveness which depends on their well-being lie squarely in the hands of their employers namely the government, denominational school managers and lay private school proprietors who generally do not put their interest and those of their family members into consideration and this is one of the biggest stumbling blocks to the implementation of inclusive education proper. Some of these teachers' problems include and not limited to poor salaries, non-integration into the public service, irregular payment of salaries, non-respect of career's profile in appointments and non-payment of family allowances.

It is in this light that Tambo, (2003); Endeley, (2015); Shey,(2018b) hold that classroom management which is what the teacher does in the classroom in order to create and maintain a friendly learning environment that enhances and fosters the teaching learning process for all types of learners in the classroom so that each and every one of them can

actively take part in the learning activities, is indispensable today for a commendable implementation of inclusive education in secondary schools because without a calm, friendly, welcoming and supporting classroom environment, the objectives of lessons can hardly be achieved as chaotic classrooms can only produce chaotic results. In the same perspective Bezangwa, (2019b) equally opines that classroom management adaptation which refers to the modifications of decisions and actions which the teacher takes in his or her classroom in order to create and sustain a friendly, supportive and welcoming classroom environment that motivates every type of learner to develop love for education and thus learn well in order to increase his or her chances for success, is vital these days more than ever before for the smooth implementation of inclusive education in secondary schools as nation building calls for the participation of every citizen especially those who are doing something to earn a living as the result of the skills they acquired through education. In the same light, the University of Buea, (2008) holds that classroom management adaptation which is just the modification of sets of decisions and actions which the teacher and the school authorities undertake in order to establish order and discipline for the maintenance of conditions that facilitate effective teaching and learning in the classroom or during an outdoor learning activity, is crucial for the implementation of inclusive education in secondary schools as a classroom is a habitat of many a diverse learners and as a result of this, calls for flexible managerial techniques so that everyone feels a sense of belonging to it.

This is because students in general and those with challenges in particular perform well in class when their mates consider them as full members of the class or when they themselves feel the sense of belonging to the group (Tchombe & Ekema, 2011; Obanya, 2017; Shey, 2020; Manfouo et al., 2023). Besides, a chaotic classroom environment is not an ideal place for the teaching learning process. It is a jungle where stronger students or students from rich family backgrounds oppress or bully weaker ones or those they hate and do not intend to see around them, especially students with challenges. If this type of classroom spares away ordinary students, then what about those with challenges who are generally fragile and timid as a result of their disabilities. For as Rotimi, (1971) says: “if crocodiles can eat their own eggs, then what can they not do with eggs of other animals?”

While insisting on the importance of proper classroom management adaptation on the implementation of inclusive education, UNESCO (2004) opines that inclusive education calls for positive attitudes in the classroom which are susceptible of transforming it into a supportive, friendly, welcoming and enabling learning environment for the well-being and success of every learner. This agrees with the findings of this investigation which hold that classroom management adaptation significantly influences the implementation of inclusive education in English secondary schools in Yaounde municipality. It therefore implies that it is

up to every teacher and or school authority to adapt their classroom management techniques in order to welcome and assist every student with disabilities or a disability. These findings also tie with those of Bezagwa, (2019b) which hold that without classroom management adaptation, all the goodness of inclusive education will disappear in a violent, noisy and disrespectful classroom and darkness as well as enemies of inclusive education will thus rush in. It is therefore up to the teacher as the head of the classroom to create and maintain an orderly and loving learning environment for the goodness of all the learners especially those with challenges.

The findings of this study equally tie with those of Snowman and Bichler (2001) who insist that classroom management adaptation is indispensable in inclusive classrooms as it sets flexible working conditions that guide and protect every learner's interest in class especially those with learning disabilities and difficulties. As a result of the vital role played by a commendable classroom management adaptation in the implementation of inclusive education in secondary schools in Yaounde municipality as elsewhere on the African continent, classroom management adaptation is a must if inclusive education must be implemented in our secondary schools.

Based on the findings of this investigation, these researchers like Philip (2016); University of Buea, (2008); Tambo, (2012) and Santrock,(2001) insist that classroom management adaptation is very important in the implementation of inclusive education because of the following vital points:

Without a calm, friendly, welcoming and supportive classroom the objectives of the lesson can hardly be achieved. It is therefore in this perspective that the teacher has to plan his management strategies while planning his lesson. For instance, creating learning groups like cooperative or peer groups; writing in bold; using real objects or pictures; paying special attention to some learners etc., In order to create and maintain a friendly classroom, the teacher has the task of building and reshaping the characters of his learners and this calls for tact and good managerial skills. In this light, he makes sure that every learner is called by his or her name rather than being called by nicknames on the basis of their disabilities. Besides, he should prescribe bullying. Games are commendable methods for reforming learners' behaviors, previewing and reinforcing learning because active learning formats that are concerned with movements and manipulations are really motivating and engage learners in discussions, exploration, respect of self and others, and repeated practice. From our knowledge of psychology, we know that children are different and learn at different paces. They learn differently and react differently to different situations. Taking cognizance of this,

the teacher needs to add more time to some learners in order to allow them complete their own tasks. Besides, he has to reduce test items for others.

An effectively managed classroom motivates children to spend more time on their school work and less time on non-school activities or non-goal directed activities. For example, when students work in groups, especially in mixed abilities ones, they are not idle and as a result of this, use their school time well.

When a class is properly managed, learners are occupied with one learning activity or the other and as a result of this, have no time left to quarrel, discuss their adventures and tell love stories. Classroom management adaptation approach teaches students the act of responsibility and thereby increases their habits of taking initiative and self-discipline. Established norms in the classroom, enables learners to take more responsibilities towards themselves and thereafter towards others and this creates a responsible classroom suitable for inclusive learning activities. Effective classroom management adaptation enables the teacher to know that he has diverse learners who work at different paces and who cannot for instance, solve the same number of problems like others. The DOs and DON'Ts contain in the actions and decisions taken by the teacher for effective classroom management intensify positive learners' relationships and teacher student relationships for peaceful coexistence in the learning environment.

The findings of this investigation squarely match with those of Snowman and Bichler,(2001), who say and maintain that classroom management adaptation is indispensable in inclusive classrooms as it sets flexible working conditions that guide and protect everyone's interest in the classroom especially those with learning disabilities and difficulties. As a result of the important role play by classroom management adaptation in the implementation of inclusive education, as earlier mentioned, Arends, (1990) on his parts holds that classroom management adaptation is the back bone of inclusive education and proposes the following classroom management approaches which according to him are essential ingredients for putting in place of a veritable implementation of inclusive education in secondary schools. Some of these classroom management approaches are: The Authoritarian Approach; Instructional Management Approach; Behavior Modification Approach; The Social and Emotional Climate Approach and the Group Processes Approach.

The Authoritarian Approach:

It is an approach whereby the teacher strictly controls learners' behavior by establishing rules and regulations and making sure that they are respected to the letter. He achieves this by:

a) Making and enforcing laws; the teacher tells the students rules and guidelines which spell out what is acceptable and what is not good attitude in the classroom. Students have to participate actively in making classroom rules and regulations which must be:

-Realistic

-Reasonable and necessary

Clear and comprehensible

-Consistent with instructional and learning goals

Compatible with school rules and must not be too many-

b) Giving directives: They are statements or commands the teacher uses to tell the learners what they should or shouldn't do. They should be simple and describe in a non – threatening way what the learners are expected to do. The learners should see and understand the need for the teacher's instructions.

c) Using soft reprimands: The teacher and the learners will benefit considerably if the teacher has effective speaking skills. A soft reprimand refers to a mild or soft kind of punishment, which is expected to make students desist from bad habits to effective classroom management. Following this approach, it is the teacher's ability to prepare and conduct lessons. These lessons should gain students' attention. They should motivate the students and prevent boredom and misbehavior.

d) Managing the flow of classroom activities: The teacher should be able to move students smoothly from one activity to the next one. He or she should be capable of maintaining smoothness and continuity in learning activities. Besides, the teacher should avoid 'slowdown' in order to reduce students' misbehaviors in the classroom.

e) Establishing classroom routine: A routine refers to a fixed and regular way of doing things. At the first meeting with his or her learners, the teacher let them know what they have to do. For instance, being punctual to class.

f) Giving clear directives: The teacher should give clear directives which are understood by all members of the class. For instance, answer two questions from section A and one from section B.

g) Boosting students' interest: The teacher should pay extra attention to motivate students with learning disabilities and learning difficulties and those who may show signs of

bareness or restlessness. Monitors progress actively by moving round the classroom and asking probing questions and praising students on their efforts or improvements.

h) Providing hurdle help: A hurdle refers to a difficulty or an obstacle to overcome. The teacher has to help learners when they are in difficulties as difficult tasks generally lead to frustration and disorder in the class.

i) Using proximity control: This kind of control requires that the teacher moves quietly closer to a disruptive learner and redresses the situation without the other learners being aware of it. It makes the disturbing learner understand that the teacher has noticed his or her disorder practice. For example, a student knocking another one's back.

j) Using isolation and exclusion: The teacher can isolate or exclude a student because of his serious misconduct.

The Instructional Management Approach:

This approach holds that classroom management depends on teachers' ways of planning and delivering lessons. Here it is believed that if teachers take good care of their planning and teaching, then classroom management will take care of itself. Teachers therefore have to make their lessons interesting so that learners will find pleasure and interest in them and thus learn without knowing that they are learning. It is a key approach in classroom management as it keeps students occupied with their learning activities. Strategies for using the instructional management approach include:

- g) Providing relevant and interesting content
- b) Planning for environmental changes
- c) Avoiding unnecessary interruptions
- h) Handle overlapping situations tactfully. For instance, if a student is suddenly ill and need to be taking to the hospital.
- i) Planning the classroom environment: The classroom environment has to be orderly, friendly and supportive.
- j) Paying attention to students' placement in class: Serious and careful attention need to be given to the way students are placed in class as some of them have hearing and sight difficulties and as a result of this, cannot be placed anyhow in class. Others too have movement problems and require special attention. And still, some disruptive learners should be placed where the teacher will have a close eye on them.

The Social-Emotional Climate Approach:

The social and emotional climate approach takes precedence over other aspects in this approach. This approach was derived from counseling and clinical psychology. It holds that the best way to achieve successful classroom management is by taking care of interpersonal relationship. Classroom management adaptation will be achieved where there is a positive teacher-student relationship and student-student relationship. It is therefore the teacher's duty to encourage friendly relationships among students in order to promote happiness which makes every child feels at ease and eager to learn. According to Tchombe, (2012); Tambo, (2012); Adewale,(2016); Philip, (2016); Obanya,(2017) there are pre-conditions for effective learning. Such interpersonal relationships and positive socio-emotional climate can be attained by:

- a) Communicating effectively with students by making sure that every person or directive is clear and understood.
- b) Trying to understand a student from his or her point of view. This enhances and fosters the spirit of social acceptance in the student.
- c) Accepting students as they are with all their bad and good qualities.
- d) Teachers must always endeavor to be themselves other than trying to be what they are not.
- e) Becoming personally involved with the students.
- f) Establishing democracy in the classroom by treating students as responsible individuals capable of intelligence, decision-making and problem solving.
- g) Boost students' interest (motivate them)
- h) Provide hurdle assistance to learners.
- i) Planning for changes that may be required
- j) Planning the classroom environment notably sitting positions.

The sitting environment will improve classroom management adaptation when :

-the congestion in higher traffic areas (where students are found most of the time) is removed or reduced. Distractions and disruptions usually occurred when those places are congested.

-the teacher can easily see all the students from a glance

-the often used material is easily available to avoid distraction and loss of concentration.

Teachers usually shout:'' where is the duster'' and this in the middle of the class.

-the teacher makes sure that students can easily observed whole class presentations or can see the board well from whatever position they are sitting or working by writing in bold letters or figures.

Group-process approach

Proponents of this approach hold that classroom management problems will be solved if teachers establish proper classroom groups and ensure their proper functioning. This includes:

-Setting group rules and procedures and following them strictly.

- Expectations: This has to do with the view about one another and it is very important in inclusive classrooms where some of them fear they are not full members of the class. According to Santrock,(2001), if the students feel that the teacher wants them to misbehave, they will do so. On the contrary, if he clarifies what he expects from the task, the students will work hard on the task and concentrate less time on non-task activities.
- Leadership: If the leadership roles in a group are well distributed and not monopolizes by the teacher or one student, the students will work well on the group tasks.
- Attractions: This refers to the friendship patterns or arrangements in classrooms groups. Once people tend to be attracted by others, they develop positive inter-personal relationships and concentrate on tasks and this greatly facilitates the implementation of inclusive education. As a matter of facts, this helps to maintain effective classroom management for the good of inclusive education.
- Norms: These are standards that the group has established for itself. Productive group norms are essential to group effectiveness. Such norms like being punctual, obedient, focused, less noisy and active all help to improve classroom management for the goodness of all learners especially learners with challenges, for the goodness of inclusive education.
- Communication: Effective communication means that the receiver correctly interprets the message which the sender wants to send across. Effective classroom management will be achieved if communication is successful in the classroom learning environment. For this to be done, the teacher has to go an extra mile to get to that other category of learners notably special education needs learners, learners with auditory or visual problems. This calls for modifications of traditional communication methods in the classroom in order to reach out to learners with challenges so that they too feel a sense of belonging to the class and thus work happily.

- Cohesiveness: The collective feeling with each other in class is a sign of togetherness, oneness and friendship among learners. When learners are cohesive, there are little classroom management problems and the milieu is peaceful and suitable for the implementation of inclusive education.

Classroom management adaptation in a nutshell refers to the activities the teacher carries out in the classroom environment in order to create suitable and friendly conditions which make every learner feels the sense of belonging, happy, attentive, active and receptive in class. It is therefore very important for a successful implementation of inclusive education in secondary schools as a chaotic classroom environment is a great barrier to the implementation of inclusive education in secondary schools.

The influence of instructional adaptation on the implementation of inclusive education in English secondary schools in Yaounde municipality

One of these researchers' worries was to find out the influence of instructional adaptation on the implementation of inclusive education in English secondary schools in Yaounde municipality. From the results obtained and presented in table 22 it is really clear that instructional adaptation significantly influences the implementation of inclusive education in English secondary schools in Yaounde municipality as the null hypothesis was rejected while the alternative one was retained. This means that the more appropriate the instructional adaptation, the better the implementation of inclusive education in English secondary schools in Yaounde municipality. These findings match with those of Adewale, (2016); Reis et al, (1992); Corno and Snow, (1986); Tambo, (2012); Tchombe & Ekema, 2011; Nana et al.,(2012); Endeley, (2015),Fonkoua,(2018); Manfouo et al.,(2023) which hold that successful educational outcomes depend on adapting teaching to individual differences among learners as those with disabilities demonstrate a broad range of difficulties which call for adaptation of the general education curriculum. Generally in this situation, each student displaces his or her learning abilities, learning styles and learning preferences in a unique manner. As a result of this, the type of adaptation needed or required as well as the program in which the adaptations will be carried out are determined individually within the school curriculum. In this light, instructional adaptation refers to any modification or adjustment to the general education program in order to enable students with challenges to participate in and benefit from learning activities and experiences based on the content standards.

However, as Reis et al.,(1992); Nana et al.,(2012); Guha, (2016) and Ahuja, (2017) put it, for these activities to be suitable for learners with challenges, adaptation to certain

aspects of these activities is called for and may take a variety of ways or forms. For instance, adaptations structure students learning in a more explicit and systematic way than some unchallenged students may require. While other adaptations provide alternative ways to students to acquire or demonstrate their knowledge while they are developing related language acts proficiencies like listening to a text on tape, using software to read a text aloud or to dictate responses, using a graphic organizer to structure thinking and writing. In the same line, UNESCO (2005) opines that instructional adaptation involves changes and modifications in content, approaches, structures and strategies, with a common vision which is to cover all children with the appropriate age range and a conviction that the responsibility of the regular school system to educate all children depends largely on instructional adaptations of the regular school curriculum.

The findings of this investigation equally agree with those of Jane, (2001); Endeley,(2015); Khamari et al.,(2019) who hold that many students with or without disabilities cannot succeed without instructional adaptations and that the key to success in the classroom lies in having appropriate adaptations. They hold that some adaptations are simple as moving a distractible learner to the front of the class or away from the window. Some other adaptations may be concerned with changing the way the material is presented to the learners or the way learners respond to show their learning. They further insist that instructional adaptations need to be individualized for students depending on their needs and personal learning styles and interests. This enables students to benefit from general education curriculum and other learning materials and activities and to show what they have learned. As the learners experience success in the classroom, motivation and learning increase, and the overall learner's outcomes improves.

According to Jane, (2001) some examples of adaptation concern group work where the teacher can teach learners how to be effective peer tutors, how to work in group in cooperative learning groups, and organize and organize the group well so that students learn, from each other; proper use of wheelchair mobility where the teacher should find out the chair width and turning radius in order to create space between rows, furniture and centers that are wide enough for the learners to walk well and comfortably. In regular classroom, there are students with or without disabilities and in order to provide learners with disabilities significant access to curriculum and instruction based on the content, standards, instructional adaptation may be needed but adaptations are not always intended to alter or compromise the content and standards. Instead, adaptations are intended to provide learners with disabilities opportunities to maximize their strengths and compensate for their differences, (Jane, 2001;

Endeley, 2015; Khamari et al., 2019). In the context of this investigation, the relationship between instructional adaptations and the implementation of inclusive education lies in realistic instructional methods and the way they could be modified in order to meet the diverse needs of diverse learners in inclusive classrooms today. An instructional method refers to a “pattern of teacher behavior that is recurrent and applicable to various subjects matters” (Tchombe,2004).

According to Tambo, (2003) an instructional method refers to “a standard procedure for presenting subject matter and organizing teacher-learner interaction during learning”. No matter the definition one takes two things are crystal clear as standard procedure as described by Tambo would also mean a pattern of teacher behavior that is recurrent all in a bit to present subject matter. Whatever definition a teacher takes, it is worth noting that the worth of a method lies in its extent to facilitate the achievement of objectives. These instructional methods are inherent in two main teaching approaches notably teacher centered approach which refers to a more traditional teaching method that focuses on the teacher as instructor and guide and it is usually referred to as direct instruction, deductive teaching or expository teaching and the learner centered approach usually called discovery learning, inductive learning or inquiring learning which places stronger emphasis on the learner’s role in the teaching learning process. In order to provide students with disabilities or challenges meaningful and effective access to curriculum and instruction based on expected content standards, adaptations are called for.

In the light of this investigations results, Renzulli et al.,(1992); Khamari et al., (2019) hold that instructional adaptations are indispensable for the implementation of inclusive education and are not intended to change or compromise the content standards. On the contrary, adaptations are intended to provide students with disabilities or challenge the opportunity to maximize their strengths and compensate for their learning difficulties. This is why Renzulli et al., (1992) hold that consistence with the expectations that learners with challenges take part in general education curriculum is the requirement that the Individualized Education Programs (IEPs) of learners with challenges reflect the core content standards and the general education curriculum. Children with challenges demonstrate a broad range of learning, cognitive, communication, physical, sensory, and social/emotional differences which may require adaptations to the general education program as each learner manifests his or her learning disabilities or challenges, learning style, as well as learning preferences in a unique way and so therefore, the kind of adaptation required and the program

in which the adaptation will be implemented are determined individually within the individualized Education Program (IEP) or planning processes.

Adaptation is any adjustment or modification to the general program in order to enable students with challenges to participate in and gain from learning activities and experiences based on the core curriculum content standards; and show understanding and application of the content standards. Adaptations to teaching enable learners with challenges to learn the general education curriculum, participate actively and effectively in learning activities, acquire and demonstrate essential knowledge as well as skills. These adaptations usually take various forms notably structuring students' learning in a more and explicit, systematic way than some non- challenged students may require; other adaptations bring in alternation means for students to acquire or show their knowledge while they are developing related language arts literacy proficiencies like listening to text on tape, using a graphic organizer to structure or organize thinking. According to the Association for Supervision and Curriculum Development,(1994) and Renzulli et al.,(1992) some adaptation based on effective instructional practices for all students that enhance and foster the implementation of inclusive education are:

-Student motivation

Some learners with challenges may be reluctant to engage or persist in their studies because of difficulties in coping up with task demands and discouragements from unsuccessful learning experiences despite their initial efforts and desire to learn. As a result of these difficulties, motivational strategies are worthwhile to assist this category of children to become successfully involved in a variety of ways in the teaching learning process and thus develop proficiency, confidence, love and enjoyment in learning. For instance, give doable tasks, use hands-on activities strategy, accept oral or written answers from learners, allow students to choose their learning groups.

-Instructional presentation

Students with challenges require adaptations to instructional presentation which will enable them to acquire, comprehend, recall and apply school activities content and related processes. Besides, instructional presentation adaptations can really enhance and foster learners' attention and ability to focus on instruction or to remain attentive and receptive especially if the teacher uses a good animal story to present the lesson (Bezagwa,2019a). The principal purpose of these instructional presentation adaptations is to provide students

with challenges with teacher-initiated and teacher-directed interventions which prepare them for learning and engage them in the learning process(instructional preparation); structure and organize information to help comprehension and remembering(instructional prompts); and enhance and foster understanding of new concepts and processes(instructional application) addressed in their studies framework activities. For example, use of games or stories to present and teach lessons, pre-teach vocabulary, use of real objects and especially pictures.

-Instructional monitoring

The raison d'être of instructional monitoring is that frequent checking of the performance and progress of students with challenges is very important in order to ensure that they are actually understanding and gaining from learning activities. Instructional monitoring provides teachers with ways of getting information related to students and their ability to take part effectively in learning activities. Besides, it enables teachers to determine when and how to adjust learning activities and instructional assistances or supports to promote learners' development. Also essential is learner self –monitoring, self-evaluation and self-management to promote children self-reflection and self-direction in connection with tasks demands, goal attainment, and performance accuracy. For instance, use assignment books to check learners' performances.

-Instructional organization

Learners with challenges sometimes need special adaptations to classroom organization in order for them to actively engage in the concepts and processes addressed in school learning activities framework. The main purpose of instructional organization adaptations is to maximize learners' attention, participation, independence, mobility and comfort; to promote peer and teacher communication and interaction, and to provide access to information, material and equipment. Some common examples of instructional organization adaptations are: cooperative learning, peer partner, teams, group roles(timekeeper, recorder, material messenger, illustrator) .

Student response

Learners with challenges sometimes need specific adaptations in order to showcase acquisition, remembering, understanding, and application of learning activities in various situations with diverse materials as they are developing proficiencies in these areas. The aim of learners' performance response is to provide learners with challenges, ways of showcasing

progress towards the lesson objectives to the learning activities framework (De-Vrocy, 2016).

Some key concepts of instructional adaptations are:

-Cooperative learning

1) Cooperative Learning: Cooperative learning also known as collaborative learning refers to an educational approach that aims to organize classroom activities into academic and social learning experiences (Meyer et al., 2005; Tambo,2012). There is much more to cooperative learning than just structuring students into groups, and it has been described as arranging positive interdependence. According to Johnson et al., (1994); Tchombe & Ekema,2011; Nana et al., 2012; Fonkoua,(2018) cooperative learning is an organized and structured way to use small groups to enhance and foster students' learning and interdependence which is very important in inclusive classrooms where we find not just ordinary but extra-ordinary differences. For instance, learners are given a task, otherwise known as an assignment, and these students work together to do this assignment. Each of them has responsibilities and is held responsible for helping in the completion of the task; hence, success is dependent on the work of all or everyone in the group. Besides, apart from learning from each other, students equally learn how to work as part of a group or a team and have others depend on them. According to Tambo, (2012) cooperative learning refers to a successful teaching strategy in which small teams, each with learners of varying abilities, use various learning activities to ameliorate their understanding of a subject. Cooperative learning uses different teaching-centered and learner-centered activities for effective learning. Besides, it provides the opportunity to practice appropriate communication, leadership and conflict management skills. In a nutshell, cooperative learning refers to a teaching and learning strategy that consists of organizing learners in small mixed abilities teams whose reason d'être is to interact, discuss and solve learning tasks as well as learn from one another.

In connection with the findings of this study that up-hold the great importance of instructional adaptation on the implementation of inclusive education in English secondary schools in Yaounde municipality, Tomilnson, (2001); Tchombe,(1997) and Tanyi,(2016) hold that instructional adaptation greatly enhances and fosters the implementation of inclusive education in secondary schools as it largely enhances students' attention and ability to focus on instruction. Besides, instructional adaptation is to provide students with challenges with teacher-initiated and teacher-directed interventions which prepare students for learning and engage them in the learning process, structure and organize information to

help comprehension and recall, and foster understanding of new concepts and processes addressed in various learning activities. They hold that cooperative learning which is a key concept of inclusive practices should constantly be adapted in order to improve the implementation of inclusive education in secondary schools as it embodies many benefits notably:

- Cooperative learning is fun, so learners enjoy it and as a result of this are more motivated especially those with learning disabilities who need a joyful and friendly environment in order to learn well (Tomilnson,2001; Tchombe, 1997; and Tanyi,2016). Other benefits of cooperative learning include and not limited to:
- Cooperative learning is interactive, so learners are engaged, active participants in the learning environment.
- Cooperative learning allows discussions, and critical thinking, so students learn more and remember what they have learned for a longer period of time.
- Cooperative learning demands that students learn to work together, which is the skill of oneness or togetherness, necessary for their socialization in their future societies.
- Cooperative learning creates positive interdependence among the learners.
- Working in mixed ability groups enables the weaker ones especially those with disabilities to be pulled on.
- The students learn to be responsible as individuals or as a group
- Children learn social acceptance and respect for one another's opinion which is very necessary for challenged children to learn as this gives them the sense of belonging in the classroom and the willingness to school like others.
- The teacher's role moves from that of "the know all" to that of a facilitator.

How to Group Students for Cooperative Learning

For teachers and learners, cooperative learning requires more time and willingness to make adjustments before they are used to it. Cooperative groups are generally comprised of mixed students based on ability level. Besides, different groups are set up based on the skill level of the students. For instance, groups may be made up of three, four or five students, which will include two or three average students, one below average student, and one student who is above average. Generally, students should not be allowed to create their own groups or have the policy of moving from one group to the other. Once groups have been put in place, the teacher may wish to arrange desks in his classroom in groups of 4 or 5. Groups

have got to change every two months. As much as possible, students should only work with the same students once a year, but class size is a determinant factor. In order to ease test tasks, learners can be attributed numbers notably one, two, three, and four and keep the very number for all tests, or numbers can be drawn each time before each assignment or test. A common number system can reduce or eliminate confusion and help determine students role for all given assignments.

Cooperative Learning Strategies

1) Think-Pair-Share: It is a method that enables learners to engage in individual and small-group thinking before being asked to answer questions in front of the whole class. This method has four steps namely:

- e) Step one-groups of four learners listen to the posed question by the instructor.
- f) Step two-individual learners are given time to think and thereafter write their answers
- g) Step three-pairs of learners read and discuss their answers
- h) Finally-two or three learners are called up by the instructor to share their experiences with the whole class.

This method is very useful and works well in the science classroom because of the continual demand of science teachers that learners formulate hypotheses about the outcome of an experiment before it is done.

2) Three-Step Interview: Three-Step Interview is a strategy which is effective when students are solving problems that are ambiguous. Three problem solving steps are concerned in this process. They are:

- a) Step one-The teacher presents an ambiguous problem and poses different questions for the students to discuss.
- b) Step two-Students, in pairs become the interviewer and the interviewee. It is a commendable learning method in inclusive classrooms.
- c) Step three-After the first interview has been done, the students' roles are changed. Once each student has had a turn, the pairs read their answers to the whole class. After all interviews have been done, the class writes a summary report of the interview results that have just taken place.

3) Round Table: A round table is a simple cooperative learning structure which covers much content, builds team spirit, and incorporates writing. It has three steps. The first step is concerned with the teacher's ambiguous question having many answers. In step two, the first student in each group writes an answer on a paper and passes it counter clock wise to the next student. Then, in step three, groups with the highest number of correct answers gain some kind of recognition. This kind of cooperative learning can be easily practiced during science lessons. For instance, the students may be asked to write as many as reptile names as they can. At the end, the group that has more reptile names written down is praised.

4) Group Investigations: They are structured to emphasize real thinking skills such as analysis and evaluation. Learners work to produce group projects, that they may have a hand in selecting.

5) Student Teams-Achievement Division (STAD): Here students with different academic abilities are assigned to four or five member teams in a way to study what has been initially taught by the teacher and to help each learner reach his or her higher level of achievement. Thereafter, learners are tested individually. Usually, teams testify based on the degree to which every team member has progressed in their passed records. This greatly helps students with learning disabilities as no learner is left behind in the group.

6) Three-Minutes Review: It is used to keep students attentive and receptive. For instance, the teacher stops at any time during lecture or discussion and allows teams three minutes to review what has been said with their groups (Cooper et al, 1990). Students in their groups can ask a clarifying question to the other members or answer others' questions.

Typical Examples of Cooperative Learning Situations

In an elementary Science weather unit, where bar graphs were the desired product, one student gathered data, one chose the type of graph to use for reporting data, all the students discussed data and prepare the graph cooperatively and another student with severe disabilities colored it (Johnson and Johnson, 1989).

In another lesson, a visually impaired student was part of the group. The lesson was a measuring task that involved measuring items in the classroom. These students decided that, their visually impaired mate would hold the measuring tape and repeat measurements for the recorder which she did very well and happily (Slavin, 1991).

During subsequent discussions, the group talked about relative concepts of length and size; larger, smaller, longer, shorter; and assisted their mate with challenges in her reporting about the objects' sizes and lengths.

According to Stainback et al., (1992); Fulk,(2004); Impecoven-Lind,(2010), Maheady, (1991) and Mastropieri et al., (2007) the context of cooperative learning itself facilitates the inclusion of all students, and was reported by survey respondents as leading to reduced needs for multiple adaptations for the students with disabilities. Besides, it is interesting to note that teachers in inclusive classrooms reported that they adhere to cooperative principles and a process-oriented perspective. It is equally very interesting that teachers describe themselves in this way, and this underscores the fact that cooperative learning structures usually occur in concert with other instructional support strategies, notably multi-level instruction, activity -based or thematic instruction, peer participation. For instance, in rural Northern California, cooperative groups, formed on multiple dimensions at the junior high level, were involved in a science unit about animals' habitats and breeding practices. This group developed a simulation to illustrate salmon spawning, where students assumed a variety of roles such as currents, predator fish, etc. Ropes were used for the currents, and the learners themselves developed the adaptations for the mate with severe disabilities, including fewer predator fish and slower -moving currents when he was taking the salmon role. This activity equally provided ample opportunities for the disabled mate to play other roles, while allowing for multi-level outcomes across learners.

-Differentiated instruction

According to Bezagwa, (2019a) differentiated instruction refers to a teaching method that consists of planning and delivering instruction in a way to properly meet each learner's needs. Differentiated instruction is not a program. It is simply a way of teaching that enables the teacher to best meet the diversity of needs of his/her learners. It is a commendable inclusive teaching practice that facilitates the implementation of inclusive education in learning environments. According to Carol (1999); Tchombe & Ekema, (2011); Tambo,(2012); Adewale, (2016); Fonkoua, (2018) differentiated instruction means giving learners various options for taking in information. In a nutshell, differentiated instruction means that, the teacher observes and understands the differences and similarities among learners and thereafter uses these pieces of information to plan teaching activities.

According to (Tomlinson,1995,1999; Winebrenner, 1992, 1996), the key principles that form the foundation of differentiated instruction are:

-Ongoing formative assessment: Teachers continually assess learners in order to identify their strength and areas of need so that they can meet learners where they are and help them move forward.

- Recognition of diverse learners:

Learners have diverse levels of experience and experience with reading, writing and thinking, problem solving and speaking. Ongoing assessments enable teachers to develop differentiated lessons that meet every learner's needs.

-Group Work:

Learners collaborate in pairs and small groups whose membership changes as needs arise. Learning in groups enables learners to engage in meaningful discussions and to observe and learn from one another..

-Problem Solving:

The focus in classrooms that differentiate instruction is on issues and concepts rather than the book or the chapter. This encourages all learners to explore big ideas and improve their understanding of key concepts.

-Choice:

Teachers offer students choices in their reading and writing experiences and in the task and projects they complete. By negotiating with learners, teachers can come up with motivating assignments that meet learners' diverse needs and varied interest.

Different ways of Differentiating Instruction

According to Basu, (2017) teachers can differentiate instruction through four ways notably:

-Content: Teachers may differentiate the content they teach by designing some activities for groups of learners that cover most levels of Bloom's taxonomy (namely remembering, understanding, applying, analyzing, evaluating and creating). Learners who are unfamiliar with a lesson may be required to complete tasks on the lower levels like remembering and understanding. Other students with some mastery may be asked to apply and analyze the content and those who have high levels of mastery

may be asked to complete tasks in the areas of evaluating and creating like matching vocabulary words to definitions.

-Process: Learners have preferred learning styles and successful differentiation includes delivering the material to every style; visual; auditory; and kinesthetic and through words. Generally, not all learners require the same amount of support from the teacher and learners have the choice to work either in pairs, petit groups or individually. Whereas some learners may benefit from one to two interactions with the teacher or classroom side, others may be capable of progressing by themselves. Sometimes teachers can enhance and foster students' learning by offering support based on individual needs like allowing auditory learners to listen to audio books.

-Product: It is what learners create at the end of the learning activities in order to demonstrate the mastery of the content. This is usually in the form of tests, reports or other activities. Teachers may have to assign learners to complex activities that show mastery of educational concept in a way the learner prefers based on his/her learning style.

-Learning Environment: Conditions for successful learning include both physical and psychological elements. A flexible classroom layout is very important, incorporating different kinds of furniture and arrangements to support both individual and group work. Psychologically, teachers have got to use classroom management techniques that support a safe, friendly and joyful learning environment like grouping learners to discuss assignment.

The researchers hold that, to differentiate instruction is to acknowledge learners varying background knowledge, readiness, language, preferences in learning and interests; and to thereafter react responsively. Differentiated instruction is likely to provide teachers with both theory and practice to appropriately challenge the broad scope of students in classrooms today especially inclusive ones (Gartin et al.,2002).

According to De Vroey (2016), instructional adaptation is one of the basic pillars of inclusive education and as such teachers have to plan their lessons in a way to enhance and foster participation and learning of their students. An example of how group activities and individualized work is presented below. In this example, the group goals of a lesson to be taught to the whole class are written down and those for students who require adaptations are fitted against the common group goals in the next column. This is the same for selected instructional materials. This way, the individual needs of students in general and those with learning disabilities in particular are made and proper participation in learning is ensured for the betterment of inclusive education.

-Games:

These researchers define games as fun methods of previewing and reinforcing learning activities through active learning formats involving movements and manipulations which greatly motivate and engage learners in exploration, discussion, and repeated practices. According to the University of Buea,(2008) instructional games are quite different from fantasy or other games developed for the home computer market. They are however classified as games because they run following a clear set of rules and usually have a winner at the end. Instructional games are designed to be fun for students thereby increasing their chances of learning the concepts, knowledge and skills embodied in the games. An instructional game is a commendable motivational strategy used to enhance and foster learning on the one hand, and provides the learner with a rich and complex learning environment on the other hand (Guha,2016). For instance, in a one-well known instructional game, learners engage in a problem-solving exercise which requires them to apply different rules of logic. In order to play this game, learners have to discover who murdered someone by putting together sentences which describe relationship between facts. They try to guess who the murderer is at any given point. For example, they are provided the following facts by the computer so that they can guess who the murderer is:

Mr. Jones wears a red suit.

Mrs. Brown lives next door to the murderer.

Mrs. Brown lives next door to Mr. Jones.

By playing this game learners learn about language, thinking and reading. They learn how to process facts and make logical inferences while solving is of interest to them. Traditional learning goals like teaching basic skills can equally be addressed by instructional games. For instance, in a computer instructional game, ‘‘Darts’’ learners have to figure out the locations of a balloon on a number line marked off in fractions and mixed numbers. In order to succeed, learners have to estimate distances and convert equivalent fractions. Students type in the fractions at which they think the balloon is located. This activates dart that strikes the chosen point. The popping balloon provides reinforcement for learners’ performance as well as a graphically joyful display. All these games make the classroom environment exciting, joyful, friendly and supportive for learners especially those with learning disabilities and difficulties who generally learn well in such environments. According to Ghosh, (2016; Beangwa, 2019 a) a single game can teach many different skills and concepts in a more sophisticated nature and in a kind of way that learners do not get tired of it, on the contrary they wish it continue. This is very entertaining in inclusive classrooms

as it keeps the learners attentive and receptive especially those with learning disabilities and difficulties.

According to, Cure our Children, (2010); Barber, (2010); Johnson,(2009); Martin, (2010);Tchombe & Ekema, (2011); Tambo, (2012); Nana et al., (2012); Ambel et al.,(2018) communication is key for all relationships, and the lack of speech cum language can hinder the way children interact with their peers and parents or caregivers. Finding adaptive ways to communicate and play with your nonverbal learners can help possibly stimulate speech or facilitate cognitive growth. Just as all learners, learners with disabilities need access to sports and games. Sporting games can be modified to include learners with disabilities. In some situations, learners with disabilities can be included with no modifications at all whereas in others modifications are actually required. Such modifications, where they are called for, may just be minor like a change in a rule or piece of equipment but may provide real assistance to learners especially to those with challenges. Sometimes too, according to Johnson, 2009 & Barber 2010, major modifications are needed especially for learners with high educational needs. They hold that adapting and modifying sporting activities is to minimize or eliminate disadvantages brought about by the environments in which sporting activities are taking place. This also calls for the introduction of new rules and equipment as well as the ability to constantly review them following constantly evolving situations. Some of these modifications include the following:

- a) Reducing the size of the playing ground
- b) Playing in a closed area which is surrounded by walls or a fence will greatly help learners with some challenges like visual impairment and autism to play safely and comfortably.
- c) Practicing games indoor in a modified form and thereafter taking it outside.
- d) By lowering heights of basketball hoops, badminton net and volleyball nets.
- e) By using balls which may be easier to control
- f) By using balls with bells inside or very bright so that it is easy to track.

According to Barber, (2010) teachers can modify rules in the following ways:

- Having more players in a team reduces the amount of activity required by each player.
- Having a smaller team by reducing the number of players in order to facilitate greater freedom of movement.
- Constantly substituting players.
- Making scoring points simple and very visual to all.

- Modifying rules of throwing or passing a ball, bouncing, rolling, or underarm toss, instead of over arm throw.
- Teaching rules visually and having the visual rules nearby for reference for the learners.
- By simply modifying the rules of the games

- Drawing:

Drawing according to these researchers refers to another way of expressing ideas and enhancing associations. It is the easiest mode of expression for some learners with disabilities as illustrations enable them to express their understandings in richer details. These illustrations may then serve as a springboard to facilitate oral or written expressions. According to Katz, (1995); Tambo, (2012); drawing refers to a special expression of ideas, feelings and values in perceptible forms or through senses and it is not just a method of demonstrating different concepts but equally a way to acquire knowledge. In the classroom, especially in an inclusive one, drawing can be a commendable way for teachers to offer learners real support to properly understand subjects. For instance, if a child adds 1 and 2 and writes /// or $1+2=///$, his or her answer is as correct as $1+2=3$. Similarly, if another learner writes $1+2=000$, his/ her answer is as right as $1+2=3$.

-Graphic materials:

Graphic materials refer to instructional materials that show relationship by means of lines, colors or symbols. According to the University of Buea, (2008) graphics include graphs, maps, diagrams, cartoons, and posters which are very useful in teaching as they render verbal symbols more concrete and clearer to learners. For instance, a political map of Africa can show the location of one country in relation to another one clearly and in more concrete terms than a verbal description of the said location. Graphs are pictorial representation of data. There are various types of graphs namely:

-Circle or pie Graphs: Circles and pie graphs are very useful in showing parts of a whole .For instance, when considering the birds' population of a particular region we may want to show the percentage of owls, eagle and swallows or we may be interested in showing the percentage of urban, semi-urban and rural dwellers in a given population. They are better used when the different categories of the whole to be shown are not many. Pie graphs can be used very successful in teaching learners with disabilities. It has been shown that learners with challenges can read these graphs much easier than other graphs. For instance, when teaching fractions, the whole, half and one quarter can be illustrated by a pie chart.

The influence of assessment adaptation on the implementation of inclusive education in English secondary schools in Yaounde municipality.

These researchers set to find out the influence of assessment adaptation on the implementation of inclusive education in English secondary schools in Yaounde municipality. From the results obtained and presented in table 23, it is crystal clear that assessment adaptation significantly influences the implementation of inclusive education in English secondary schools in Yaounde municipality as the null hypothesis is rejected while the alternative hypothesis is retained. Their findings indicated that assessment adaptation significantly influence the implementation of inclusive education in English secondary schools in Yaounde municipality. Hence the better the assessment adaptation is, the easier the implementation of inclusive education in English secondary schools in Yaounde municipality. This means that learners with challenges are not learning disabled. The only thing they need is an appropriate learning environment adapted to their conditions. This is in line with the work of Howard (1983) in his Multiple Intelligent Theory which holds that every learner possesses distinct forms of intelligence in different degrees. So assessment adaptation is needed to meet their diverse needs in inclusive classrooms so that every learner has something to carry home and boast of (Bezangwa, 2017).

The findings of this study tie with those of Orulwene et al.,(2019); Shey, 2017) who hold that assessment adaptation are modifications and accommodations which a teacher makes in connection with assessment processes in order to meet the needs of diverse learners in his or her classroom, significantly influence the implementation of inclusive education in schools. Besides, they hold that most assessments in our secondary schools are mainly cognitive and as a result of this exclude most learners with challenges from the process as their educational needs are not generally met and thus propose these types of assessment adaptation in order to fix the situation:

- Time adaptation
- Rest time or frequent breaks adaptation
- Response adaptation
- Setting adaptation
- Timing and scheduling adaptation
- Presentation adaptation
- Preferential seating

The findings of this investigation equally tie with those of Fuchs and Fuchs,(1995); Orulwene et al.,(2019), who opine that assessment adaptation enables the teacher to assess

different learners differently in all domains of child development while adapting the tasks to children developmental stages of child development so that each learner especially the one with challenges will recognize his or herself in the exercise and thus develop interest in the teaching learning process for the betterment of inclusive education. It is worthwhile noting that the kind of technique chosen by the teacher must allow students with challenges to effectively show or demonstrate their learning during the evaluation process. These evaluations should play off students' abilities and reduce the influence of their weaknesses, so that they can unveil or awake their innate greatest potentials.

It is in the same light that Suzane (2017); Shey,(2017) say each and every student with learning disabilities is unique, as their strengths and needs, because of the diversity of challenges, it is vital that teachers know their learners very well in connection with their strengths and needs so that they will be able to select suitable adaptations for them because students will respond differently to adaptations offered to them. Similarly, each assessment is different so a technique which is effective for one assessment may not be best for another one. In line with the above, she provided some examples of assessment adaptations for students with challenges that support the implementation of inclusive education notably:

- For students with writing difficulties, they can have access to a scribe or speech-to-text technology; use spell-checker text software use word prediction software; to help with spelling and to ease the process of generating idea; use a method of demonstrating their learning, other than pen and paper; videos; mind maps comics; Bristol boards; models; complete the evaluation as fill in the blanks style page; so that the students just have to put in the information tested.
- For the students with difficulties organizing their ideas and time, chunk the information into smaller sections that a learner can complete over a number of different class periods. Chunk the questions into smaller steps, and in a logical order for the task required. Use counts down timer to assist students manage their time.
- For learners with memory difficulties, provide the following items:
 - a) A word bank related to the assessment;
 - b) A formula list related to a Mathematic test;
 - c) A glossary (either with images or written definitions, depending on the learner's strength);
 - d) A reference page for calculations processes (division, multiplication, how to use a protractor);

e) Provide students with devices like calculators for Mathematic as they will still need to justify their answers on paper.

f) For problem solving, read the problem aloud.

- For students with reading difficulties, the student can listen to the assessment questions using text-to speech technology. If he or she has no access to technology, somebody can help him or her read the questions aloud.

In line with this study's findings, Sara, (2018) opines that rigid assessment of all learners in now days classrooms does not take into consideration the diversity needs of all learners and as such constitutes a great barrier to the implementation of inclusive education in many a schools. Like these researchers, she holds that assessment must be adapted if it has to meet the diversity of needs of all the members of the classroom. Besides, adapted assessment that meets the interest of every learner enables them to awake their inborn talents inherited in them and thus demonstrate that in every disability there is ability. According to her, to adapt assessment for learners with visual impairment the teacher can:

- Adapt test material as students with limited vision have problems reading and responding to traditional paper-based tests. With this in mind, the teacher has to consider the following tests designs when adapting assessment materials:

1) Large print

2) Wide line spacing

3) More spacing between words

4) Tactile graphics

5) Simplified instructions and text

6) High contrast between the text and background (e.g., black text and bright white paper)

- **Modify assessment method**

In a situation where modified materials are not sufficient to assist learners with visual impairments, the teacher can adapt the assessment method by reading the test aloud and giving the learner the option of oral answers. Such students could be given scribes which will help them answer their questions.

-**Adapting the testing environment**

Apart from adapting assessment materials and methods, the teacher can think of adapting the testing environment for learners with visual impairments. Such students may perform better when they are provide a quiet testing environment which is free from noise and distraction to them

-Adapting the testing time

Another adaptation is to give students with visual impairments extra time to complete their work. For instance, if the time allocated for the test is 30 minutes, students with visual trouble may be provided an hour. Furthermore, students with visual impairments should sit near the front of the room or closest to instruction in a well-lit area; have a larger desk or table space to compensate for any other extra equipment, have a seat near an electrical outlet to plug in any appliances and finally have flexibility to move around the class as required in order to get a better look.

According to Bryant, (2017); Esere, (2011); Fonkoua,(2018); Shey,(2017); Ambel et al.,(2018) effective assessment adaptation for inclusive classrooms should not just touch one common domain of child development as it is the case in most of our secondary schools but should cover all the three domains of child development notably cognitive, affective and psychomotor domains as children may succeed differently in different domains and not just in the cognitive domain. For instance, drawing and counting ten pineapples is a cognitive and psychomotor learning activity which can be used to assess normal and disabled learners. While normal learners are drawing and counting ten pineapples, those with challenges are just drawing pineapples.

Contributions to theories on curriculum

After literature review and in connection with the findings of this study, these researchers seek to contribute to the fragmented field of curriculum, that is, curriculum in terms of " what is" instead of " what should be" and the contested nature of curriculum, especially focusing on curriculum as a "process "

It is evident from the findings of this study that although teachers use the curriculum in their day to day teaching activities, the meaning of curriculum is complex. Curriculum is viewed and used as a product and it is confined to a specified time and content as the prescribed. content is taught within a specified time. Methods of curriculum delivery tend to be a traditional curriculum delivery approach which involves uplifting what the curriculum suggest and transmitting to the learners. We argue here that for a paradigm change move from viewing the curriculum as a receptive process to viewing it as an interactive dynamic process and to viewing curriculum as much more than subject knowledge. This kind of alternative approach to curriculum allows a greater flexibility (i. e. open ended standards) as to what , when, where and how learning will take place as well the role of ;teachers during learning activities and classroom interactions. In this approach, we find enhanced

interaction between the teacher, learners and the curriculum. In as much as these interactions occur, social relationships usually do develop and this gives the teaching learning process a totally different understanding in that learners may benefit from the process as much as they are able to benefit from the curriculum. As a result of this, we therefore propose dynamic, constructive relationship curriculum, teachers and learners hoping to help teachers to shift away from teaching ‘the curriculum’ to ‘understanding and developing curricula’. This move ties with the constructivist way of teaching which embraces treating the learner as the most important feature in the teaching learning process. Hence, a paradigm shift is proposed on figure 24 below.

From teaching “the curriculum “

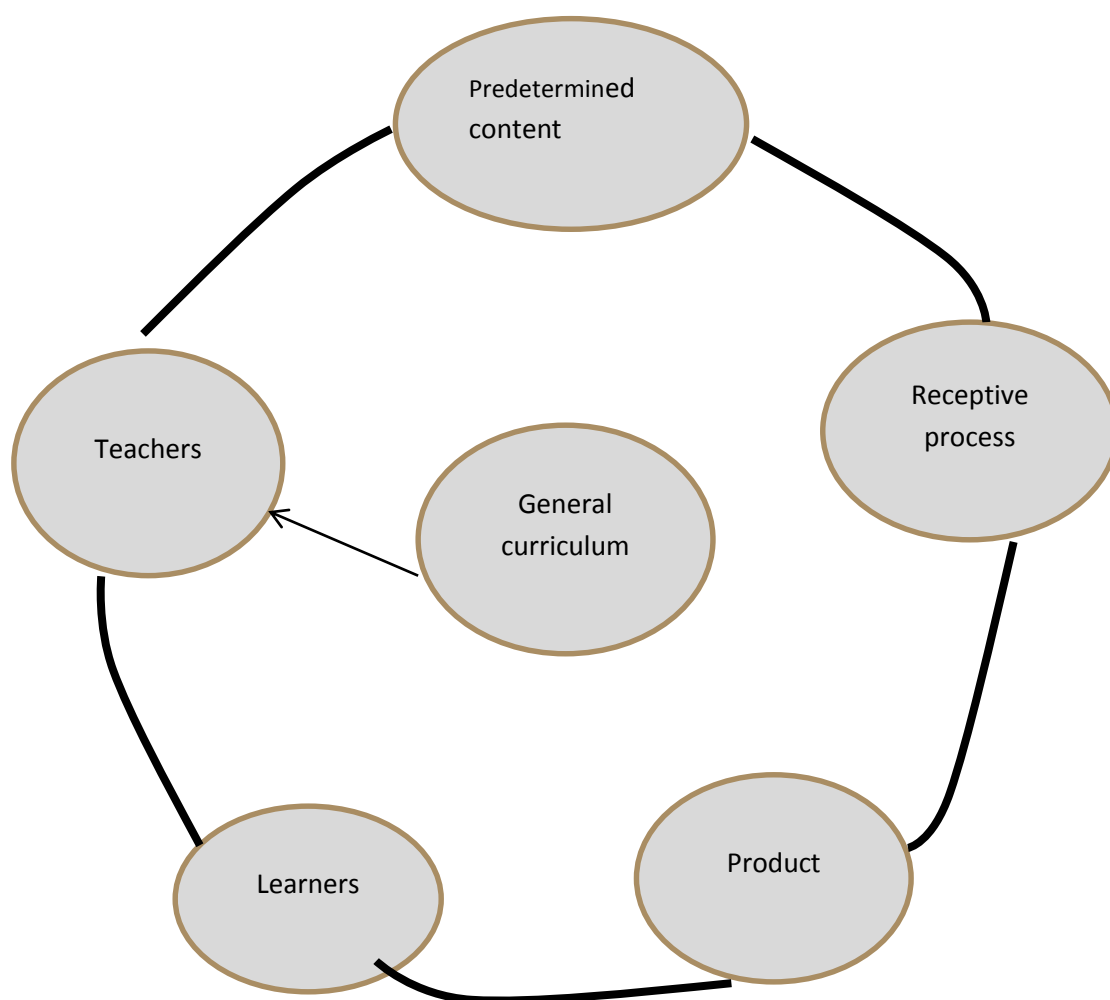


Figure 24 : Paradigm Shift

To understanding an interactive inclusive curricula

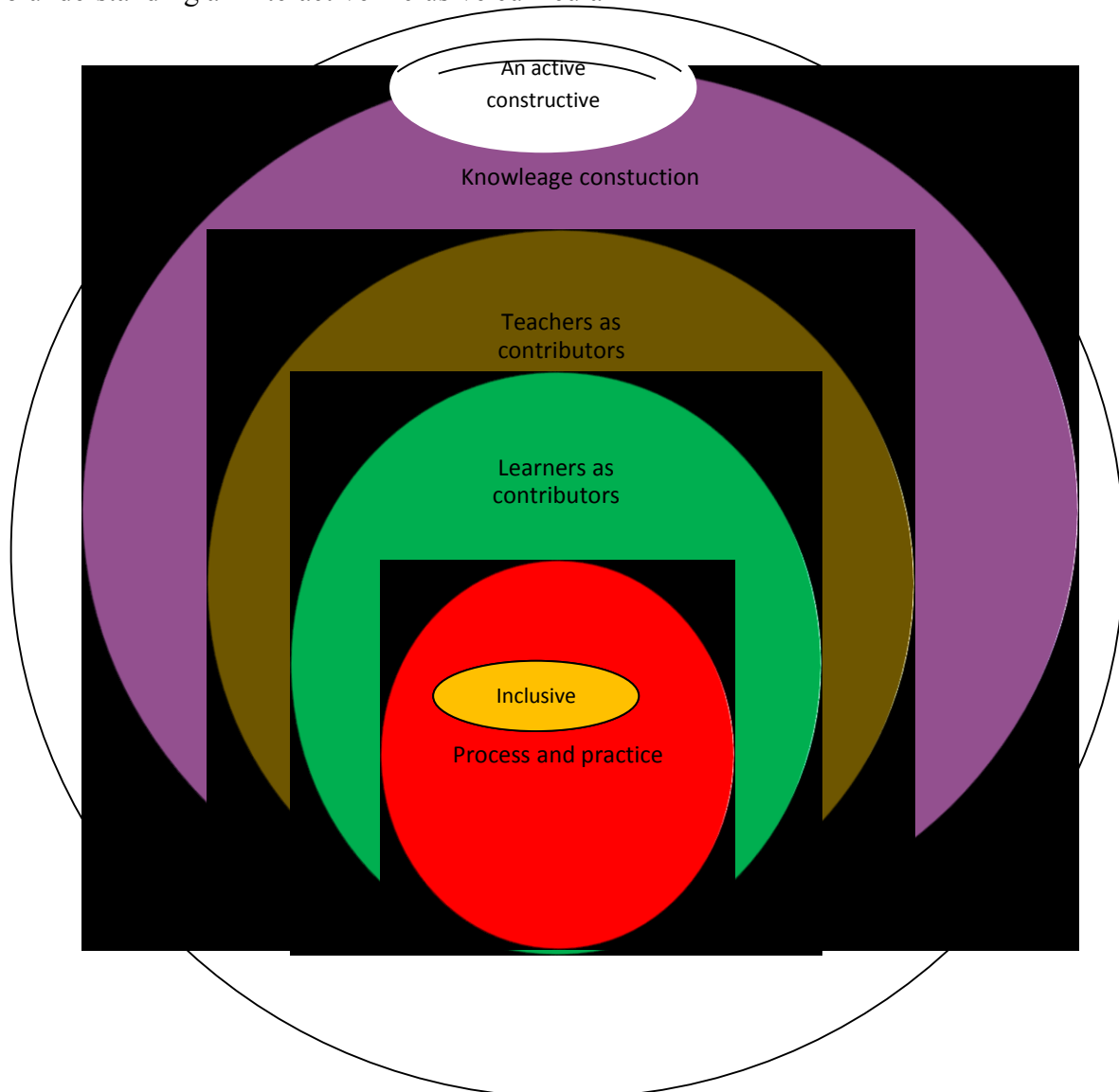


Figure 25: Shift from predetermined curriculum to inclusive curricula

Source: Researcher initiative

As shown in figure 25, developing curricula demands that schools have the willingness to change or modify their old approaches where curriculum has predetermined content and knowledge which has been designed without consideration of the realities of the specific cultural and classroom context. This predetermined content knowledge is then taken and given to the student through examinations and tests means where special outcomes are in expectations. This approach becomes a receptive process because learners are told what to know rather than constructing their own knowledge. We are arguing here that the present approach of teaching ‘the curriculum’ as suggested by the findings of this study look inadequate in meeting the needs of learners with learning disabilities. It is in this perspective

that we suggest an alternative approach which focuses on the process and practice of inclusive curricula. Under this said model, learning is constructed instead of transmitted and both teachers and learners are seen as contributors in knowledge construction. Having all these components under this model makes this entire approach an active constructive process which is susceptible of getting learners to build their confidence, self-esteem and self-motivation this type of interaction. A real or near-real curriculum looks at what is feasible, workable and manageable considering the uniqueness of individual learners within a given classroom situation.

In this connection, an inclusive curriculum is interactive and allow learners to contribute towards their own knowledge as well as recognizing the different learning abilities of every individual learner. Besides, inclusive curricula call for pedagogies which respond adequately to the social construction of differences in the school environment are conducive for enhancing and fostering success for all diverse learners. Developing an inclusive curriculum is a real transformative and interactive process for both learners and teachers. According to UNESCO, (2016) ; Flick, (1999) an inclusive curriculum calls for a paradigm shift in which simple or basic assumptions are examined , modified and changed..

5.2 Conclusions

The research findings of this investigation entitled curriculum adaptation of the learning environment and the implementation of inclusive education in English secondary schools in Yaounde municipality make these researchers to conclude that there is inclusive education in most secondary schools in Yaounde municipality. In a tiny-minority of these secondary schools, some excellent inclusive practices were observed. But the presence of students with learning disabilities and learning difficulties in most of these secondary schools are no true testimonies of near-real implementation of inclusive education in such secondary schools. In such secondary schools, offering learning experiences and providing opportunities which require students to actively participate in their learning, looked absent or far below expectations and as a result of this, students lack the curiosity and intrinsic motivation to learn as suggested by Montgomery (1990). Inclusive education has got to move beyond just being comfortable with the physical presence of students with challenges in inclusive settings. It is in this light that Mittler, (2000); Endeley, (2015); Guha, (2016); DeVroey, (2016); Ahuja, (2017); Shey, (2020) point out that inclusion includes ensuring that all learners take fullest part in a lesson, that they have opportunities to interact with the teachers

and with each other. This is why these researchers like the above mentioned ones conclude that poor classroom management as well the absence of instructional and assessment adaptations are real barriers to the implementation of inclusive education in English secondary schools in Yaounde municipality in particular and in secondary schools in Cameroon in general. The pedagogic learning environment in Cameroon has to undergo some changes so that teachers should be able to acquire disability-friendly and inclusive education practices knowledge. It is in this connection that these researchers like UNESCO, (2013) hold that the Cameroon government like other governments need to develop standards for teacher education which require all teacher education institutions to develop and use curricula that educate every teacher about inclusive education. This way, every teacher will be capable of carrying out appropriate curriculum adaptations notably classroom management adaptation, instructional adaptation and assessment adaptation in their classrooms for the smooth implementation of inclusive education in secondary schools. The findings from this studies like those from Shey,(2017) strongly hold that curriculum adaptation to a larger extent will provide proper access to learners with challenges to regular secondary schools in Yaounde municipality as elsewhere in Cameroon. Curriculum adaptation is therefore vital for this category of learners. These researchers are also of the opinion that having good educational policies, best educational environments but neither supporting teachers nor listening to them could still constitute barriers to the implementation of inclusive education in secondary schools in Cameroon. The way forward is that the government pays greater attention to teachers' well-being. This way, every darkness in the implementation of inclusive education would be removed so that every child is motivated to learn especially that every person is a potential person with a disability or disabilities.

5.3 Recommendations

From the research topic entitled curriculum adaptation of the learning environment and the implementation of inclusive education in English secondary schools in Yaounde municipality, the followings recommendations were made for the betterment of inclusive education in English secondary schools in Yaounde municipality in particular and in Cameroon secondary schools in general. The researchers have grouped them into specific recommendations by objectives and general recommendations

Specific Recommendations by objectives

This investigation had three objectives notably:

1. To determine the influence of classroom management adaptation on the implementation of inclusive education in English secondary schools in Yaounde municipality.
2. To examine the influence of instructional adaptation on the implementation of inclusive education in English secondary schools in Yaounde municipality.
3. To determine the influence of assessment adaptation on the implementation of inclusive education in English secondary schools in Yaounde municipality

In line with objective one, the recommendations made regard the restructure of classrooms learning environments and the proper training of teachers especially in inclusive classrooms practices. First, as Schubert, (1986) ;(Nana et al.,(2012); Endeley, (2015); Chaffi, (2017); Shey,(2018a) hold, classroom environments in Cameroon secondary schools as elsewhere on the African continent need to be disability-friendly. The physical classroom should be spacious and have suitable desks, chairs, tables and cupboards for storage. Ventilation and lighting should be adequate. Teachers have to use various teaching methods in order to manage the class so that it is a loving learning environment for its diverse learners. Above all, they have to be impartial, hardworking, honest, tolerant and knowledgeable so that they will be able to properly manage these students from different family back grounds as many a problems in today classrooms arise as a result of teachers' inability to handle disruptive students' behaviors Tambo,(2012); Adewale,(2016); Shey,(2020).The modifications and decisions the teachers take should have the desire to create and maintain friendly, supportive and welcoming learning environments that motivate every type of student to happily learn and feel a sense of belonging in these classroom environments and it is in this connection that Bezungwa,(2019b) & Manfouo et al.,(2023) hold that teachers should be properly trained in order to meet up with constant changing and challenging classroom management difficulties. In such a classroom, nicknaming and bullying are forbidden and severely punished. This calls for the respect of rules and regulations in place and the constant use of mixed ability group work and cooperative learning strategies.

Regarding objective two, the recommendations are centered on the teacher who as a key factor in the teaching learning process has to properly adapt the curriculum in order to provide students with challenges meaningful access to curriculum and instruction based on the content standards as such adaptations are not intended to alter or compromise the content standards but on the contrary, the teacher has got to know that the *raison d'être* of adaptations

is to provide students with disabilities and difficulties opportunities to maximize their strengths and compensate for their learning differences. It is in this perspective that Ngwokabuenui,(2013); Endeley,(2015); Chaffi,(2017); Bezangwa,(2019b); Ambel et al., (2018); Shey, (2020); Manfouo et al.,(2023) hold that teachers should be well trained in inclusive education practices in order to know that students with disabilities demonstrate a broad range of learning, cognitive, communication, physical, sensory, social/emotional differences which may call for adaptations to the general education program as each learner may manifest his or her abilities, learning styles and learning preferences in a unique way. These researchers recommend that teachers ensure at all times that instructional adaptations enable children with and without challenges to participate in and benefit from learning activities and experiences based on the core curriculum contents and demonstrate understanding and application of the content standards.

Teachers should ensure that adaptations provide students with and without learning disabilities with teacher-initiated and teacher directed instructions which prepare students for learning and engage them in the learning process (Instructional Preparation); Structure and organize information to help comprehension and recall (Instructional Prompts): and foster understanding of new concepts and processes (Instructional Application) in every subject framework activities. Besides, teachers should use motivational strategies to enable students with challenges become successfully involved in a variety of learning activities, to develop proficiency, confidence, and enjoyment in learning thus overcoming tasks demands and discouragement from unsuccessful learning experiences despite initial efforts and desire to learn. In a nutshell, suitable instructional adaptations require that the teacher:

- Uses games and stories to present learning activities as they generally make learners attentive, active and receptive
- adapt the way instructions are delivered to the students by using various visual aids, more concrete examples and placing students in cooperative groups, Teachers should also at all times write in bold letters,
- adapt the skill level, problem type or the rules on how the student may approach his or her work by changing rules to accommodate some learners' needs, simplifying task directions or allowing some learners to use calculators for Mathematics.
- adapt the extent to which a learner is actively involved in a learning activity by having a challenged student in a Geography lesson for instance, hold the globe, while other students point out different places on it.

- increase the amount of personal assistance with specific learners by assigning to them peer buddies, teaching assistants, or peer tutors.
- know how to control and attend to individual differences in the learners from different cultural backgrounds and must be aware that every classroom is a multicultural context even within the same ethnic community because of class differences and personal experiences.
- Regarding objective three, the following recommendations which call for teachers to be really knowledgeable and tolerant were made in order to meet the educational needs of all children irrespective of their disabilities or limitations during assessment practices within or without the classroom environment. These recommendations include but not limited to:
 - adapt how students can respond to instruction by accepting verbal or written responses, using a communication book for students or allowing students to show knowledge with hands-on materials
 - adapt time allotted and allowed for task completion or testing by individualizing a timeline for task completion.
 - adapt the number of items or questions that some learners are expected to complete by reducing the number of questions they are expected to answer.
 - access to computers for written assignments (e.g. use of word prediction software, spell-checker and a suitable generator).
 - use of scribes and braille typewriters to answer questions which both the school and parents could provide
 - adapt the level of support to some students by assigning laboratory assistant or reader to assist them during examinations
 - non-professional support personnel like caregivers may be required to take the candidate into the classroom or examination hall and find his or her seat. In some situations caregivers may remain with such students for motivation and comfort.

5.4 General Recommendations

- The Cameroon government should match words with actions and make school learning environments in Cameroon more conducive for learning especially for the implementation of inclusive education. This should call for suitable and enough teachers, appropriate infrastructures and facilities, and manageable funds (Ambel et al.,(2018).

- Educational stakeholders should make sure that classrooms which include students with disabilities should have smaller sizes
- Inclusive education should not just be a major course taught at all the levels of faculties of education and colleges of education in Cameroon which is not even the case today, but should be an integral part of teacher education if inclusive education must be successfully implemented in schools in Cameroon.
- Teachers should be well trained especially in curriculum adaptation for as Tchombe, (2017); Manfouo et al.,(2023) hold, very few teachers in Cameroon are trained and fit to handle learners with challenges, knowledgeable and humane in order to know that every person is a potential person with a handicap or a disability and that in every adaptation, the starting point should always be, what is good for a particular student?
- In order to properly address the problem of indiscipline in schools, Moral Education should be a major course taught at all the levels of faculties of education and colleges of education as well as in all the primary, secondary and high school classes with a very high credit or coefficient (e.g. credit 6 or coefficient 4). This is because the lack of knowledge is the cause of most societal problems and indiscipline and atrocities in schools are no exceptions.
- All the educational stakeholders at the regional and national levels and policy makers need to cooperate in order to ensure strict implementation of existing laws on the education of students with learning disabilities and difficulties in Cameroon as this could facilitate the implementation of inclusive education. Besides, the government should increase the number of classrooms in existing secondary schools and reduce the number of secondary schools or stop the policy of creating secondary schools in every quarter or village which are later on abandoned to parents who are generally unfit to construct and manage inclusive secondary schools. For the development of all talents in secondary schools, the ministry of secondary education should readjust the curriculum in order to add more series from form four notably music, farming, crafts and sports series so that every student especially those with learning disabilities and difficulties will find their own domains in which they can adequately express their inborn talents which will enable them earn their own livings and fully contribute their own quotas for nation building which is a joint endeavor.
- Examination oriented curriculum should be avoided as it underpins efforts to include all learners as teachers are pre-occupied with preparing students for promotion and official examinations. Besides, test or examination curriculum pushes teachers to give excessive

assignments which instead of bringing up standards are creating stress for both teachers and the learners and making school more difficult for learners with disabilities who are sometimes kept in the cold in this state of affairs. Examination curriculum does not help the children as it does not prepare them for life because education should mold good citizens capable of socializing themselves in constant changing societies so that they would be able to properly take care of themselves, their families and contribute to nation building which is a collective endeavor. There is a clear tension promoted by these two major aims. The Cameroon government on one hand supports the right to education for all children and on the other hand examinations continue to determine the progress of learners from one class to another. These tensions no doubt, leave teachers to be caught in between as they struggle to strike the balance between the two distinct aims. As a matter of fact, the gap between policy and practice is too evident when teachers try to merge the implementation of inclusive education with the mighty pressure of preparing students for examinations. In the light of this overwhelming tension, the need to redefine inclusive education in Cameroon is therefore imperative. In this perspective for example, teachers' education at faculties of education and colleges of education in Cameroon should build the competence of teachers rather than focusing mainly on content because quality teacher education is one of the best gateways to sustainable quality inclusive education in Cameroon as elsewhere. In Cameroon, the government should reverse the traditional tendency of paying too much attention on words than on actions in inclusive education matters in order to bridge the gap between what teachers have learned in curriculum and the field realities which they are facing in constant changing classrooms in the country today..

- Teaching practices should take place as much as possible in classrooms that house at least two or three learners with challenges if the Cameroon government really wants to move from speeches to actions in a bit to properly implement inclusive education in the country.

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APPENDICES

APPENDIX 1: QUESTIONNAIRE :

English version
University of Yaounde 1

Faculty of education
Department of Curriculum and
Evaluation

QUESTIONNAIRE FOR STUDENTS

I am a Ph.D student in the Faculty of Education, University of Yaoundé 1. I am carrying out a research on the topic entitled curriculum Adaptations and the Implementation of Inclusive Education in Yaounde Municipality. I would appreciate if you kindly use a few minutes of your school time to answer the questions as much as you can. The information you give will be used confidentially and only for the purpose of the study. You are not expected to indicate your name.

Thank you very much.

A) Demographic Information

- 1) Gender: Male Female
- 2) School Type: Public Denominational Lay Private
- 3) Type of Disability: None Mental Visual Physical

B) The School Learning Environment

Instruction: Please select just one level of agreement for each statement and place a tick () against the one which best represent your opinion.

S/N	Item	SA	A	D	SD
Classroom management Adaptation: In our classroom					
1	There is group learning				
2	There is peer tutoring.				
3	The teacher speaks clearly to the hearing of all.				
4	Every child is called by his/her name				
5	There is proper seating arrangements				
6	There are instructional materials for students with learning disabilities and difficulties				
7	There is bullying in our classroom.				
8	Some students sit closer to the teacher or board				
9	The teacher writes in bold figures and letters				
10	The teacher uses sign language				

Instructional adaptation: In our Classroom				
11	The teacher uses real objects to teach.			
12	The teacher use senses to teach.			
13	The teacher uses games to teach.			
14	Teachers use simple and concrete examples to present lessons.			
15	The teacher uses hands-on activities to teach.			
16	There are cooperative learning groups.			
17	The teacher reduces learning tasks for some students.			
18	The teacher pays more attention to students with disabilities.			
19	The teacher uses pictures to teach.			
20	The teacher teaches students in small groups.			
Assessment Adaptation: In our Classroom				
21	The teacher gives more time to some students to complete their work.			
22	Some students use hands-on activities to answer their questions.			
23	Some students use calculators to answer questions while others do not.			
24	The teacher accepts oral responses.			
25	During assessment, the teacher reduces the number of test items for some students.			
26	Large print materials are used so that everyone can see well.			
27	Students use assistive technology to do assessment			
28	The teacher reads test questions aloud.			
29	The teacher gives short and simples instructions			
30	During assessment the teacher changes rules in order to accommodate some students' needs.			
Implementation of inclusive education: In our school				
31	There are students with disabilities			
32	Teachers are happy when students with disabilities answer questions			
33	There is co-teaching			
34	We do not nickname challenged students on the basis of their disabilities			
35	There is a club for challenged students			

36	There are rules and regulations against discrimination				
37	We accept challenged mates in our learning groups and respect their opinions				
38	Regular information is sent to parents of challenged students about their school attendance and performance.				
39	There is differentiated instruction				
40	There are small class sizes of 20 students				

APPENDIX 2: INTERVIEW GUIDE

Interview Guide for students with or without disabilities in secondary schools in Yaounde Municipality. My name is Martin BEZANGWA. I am a Ph.D student on research in the Faculty of Education, University of Yaounde 1. Let me explain how we shall work together. We shall have an interview of about 30 minutes which will be recorded, transcribed and finally edited into what we call a ‘‘profile’’ which will include just your words with my questions edited out. Some notes will be taking during the interview. I will focus on the way you perceive the learning environments notably classroom management adaptation, instructional adaptation and assessment adaptation in which inclusive education is implemented in secondary schools in Yaounde Municipality. You will remain anonymous in the final profile. Your profile will be used only for this research purpose. Any use of your profile for any other purpose will require your approval. This interview is a kind of ‘‘structured discussion’’ that is made up of three parts: Your physical, emotional and mental situation in relation with your school learning environment; your life story and experience; your impression; relation and way out. Before we begin, I need this information from you about yourself.

1.) Gender _____ 2.) School Type _____ 3.Type of Disability: _____

Questions

- 1- How is your physical health condition?
- 2- Have you once been victim of some kind of abuse?
- 3- Do you sometimes have physical support like material support for example from your class or school mates? If yes, cite examples.
- 4- Are your school facilities (buildings, playground, library, laboratory, health center etc) suitable and accessible to all students? Give examples.

Emotional Aspects

- 5- How is your relationship with your teachers? Is it very good, good, average, bad or very bad? Explain why.
- 6- How is your relationship with your peer (class and school mates)? Is it very good, good, average, bad or very bad? Give reasons for this situation.

7- Do you feel accepted by your peers in your school? How?

8- Do you play or communicate with your friends? If yes, how? If no, why?

Mental Aspects

9- Do you participate in lessons in class?

10- Do like the way your teachers present lessons? If yes, how? If no, why?

11- Are students challenges considered during lessons and tests examinations in your school?
If yes, how?

General

12- Can you recall any situation in your class or school that a student with a disability was poorly treated by class or school mates? If yes, say what happen.

13- According to you, what should be done in order to make your learning environment friendly and enjoyable?

Thank you very much

You can get to me if you have additional information via 675761852

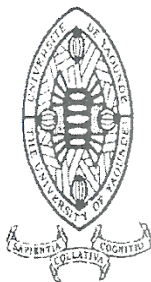
Email:bezangwam@yahoo.com

APPENDIX 3 : AUTORISATION FOR RESEARCH

FACULTÉ DES SCIENCES DE L'ÉDUCATION

CENTRE DE RECHERCHE ET DE FORMATION
DOCTORALE EN SCIENCES HUMAINES,
SOCIALES ET ÉDUCATIVES

UNITÉ DE RECHERCHE ET DE FORMATION
DOCTORALE EN SCIENCES DE
L'ÉDUCATION ET INGÉNIERIE ÉDUCATIVE



THE FACULTY OF EDUCATION

POSTGRADUATE SCHOOL FOR HUMAN,
SOCIAL AND EDUCATIONAL
SCIENCES

DOCTORAL UNIT OF RESEARCH AND
TRAINING IN SCIENCE OF EDUCATION
AND EDUCATIONAL ENGINEERING

Le Doyen

The Dean

N°...../23/UYYI

AUTORISATION DE RECHERCHE

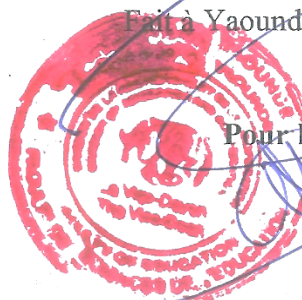
Je soussigné (e), **Professeur Cyrille Bienvenu BELA**, Doyen de la Faculté des Sciences de l'Éducation de l'Université de Yaoundé I, certifie que l'étudiant **Martin BEZANGWA**, Matricule **14Z3166** est inscrit en Doctorat/Ph.D à la Faculté de l'Éducation, Département : *CURRICULA ET EVALUATION*, Option : *CURRICULA ET EVALUATION*.

L'intéressé doit effectuer des travaux de recherche en vue de la préparation de son diplôme de Doctorat/Ph.D. Il travaille sous la direction de **Pr. Peter TAMBI AGBORBECHEM**. Son sujet est intitulé: « *Curriculum adaptation of the learning environment and the implementation of inclusive education in English secondary schools in Yaounde Municipality* ».

Je vous saurai gré de bien vouloir le recevoir et mettre à sa disposition toutes les informations susceptibles de l'aider à conduire ses travaux de recherches.

En foi de quoi, cette attestation de recherche lui est délivrée pour servir et valoir ce que de droit /.

Fait à Yaoundé, le.....



Pour le Doyen et par ordre

Jacques Erouma
Maître de Conférences
Langue Française et Linguistique

APPENDIX 4 : JOINT CIRCULAR

REPUBLIC OF CAMEROON
Peace – Work - Fatherland

MINISTRY
OF HIGHER EDUCATION

REPUBLIQUE DU CAMEROUN
Paix – Travail - Patrie

MINISTRY
OF SOCIAL AFFAIRS

JOINT CIRCULAR N° 08/0006 /JC/MINESUP/MINAS OF 08 JULY 2008
relating to the strengthening of the improvement of accommodation and supervision conditions
of disabled and vulnerable students in Cameroon State Universities.

The Minister of Higher Education

And

The Minister of Social Affairs

To

- The Vice-Chancellor,
- Rector of State Universities,
- Heads of Professional Schools and Deans of Faculties
of Public University Institutions.

This Joint Circular, drafted within the framework of Government solidarity prescribed by the Head of State and implemented by the Prime Minister and Head of Government, aims at constantly strengthening the improvement of the accommodation and supervision conditions of disabled and vulnerable students in Cameroon State Universities.

According to this Joint Circular, the concept of disabled or vulnerable student refers to the student suffering from motor, sensory or behavioural disability; the student suffering from material or immaterial poverty as a result of a disability of various psychological, social, cultural or any other disability or vulnerability; the student born of disabled and needy parents, and consequently subjected to vulnerability.

This category of citizens enjoys the protection of the United Nations Conventions and Regulations, the Constitution of the Republic of Cameroon, the Laws and Regulations of our country. It is in this light, among others, that:

the United Nations instruments guarantee to disabled persons a treatment that complies with their status of human beings, thus conferring them the right to the respect of their dignity.

the Constitution of the Republic of Cameroon proclaims that the Nation shall protect disabled persons;


- Law n° 83/13 of 21 July 1983 on the protection of disabled persons and its implementation Decree n° 90/1516 of 26 November 1990, grant specific exemptions to disabled children and to those born of needy disabled parents;
- Law n° 005 of 16 April 2001 on the Orientation of Higher Education provides that, Higher Education shall participate in the eradication of all forms of discrimination and contribute to the strengthening of equal opportunities for all;
- Decree N° 82/412 of 9 September 1982 to determine the modalities for providing State assistance to the poor and needy states that, "immediate or sustainable assistance shall be provided within the limits of the funds available";
- Instruction n° B70/d-2/SG/PM of 13 January 2006 prescribes the integral implementation of the Recommendations of the First Forum on National Solidarity;

Lastly and as was the case in the past, action plans and activity reports of State Universities shall always contain a chapter devoted to the Disability or Vulnerability Approach. Reports pertaining thereto shall be the subject of methodical exploitation at the level of the Joint Follow-up Committee of Meetings between the Ministers of Higher Education and Social Affairs (CMS – MINESUP/MINAS), an institutional dialogue structure set up by Joint-Decision N° 18070648/MINESUP/MINAS of 2 August 2007.

The Vice-Chancellor and Rectors of State Universities, the Secretaries General of the Ministries of Higher Education and Social Affairs, the Heads of Professional Schools and Deans of Faculties of Public University Institutions, the Head of the Division for the Promotion of Dialogue and Solidarity in Universities in the Ministry of Higher Education, the Director of National Solidarity in the Ministry of Social Affairs and Provincial Delegates of Social Affairs are responsible, each in his own sphere, for the strict implementation of this Joint Circular to which we attach great importance, and which shall be published in English and French wherever need arises.

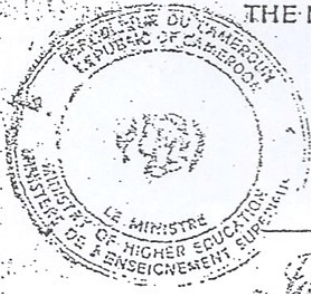
Yaounde, 06 J. 2008

THE MINISTER OF SOCIAL
AFFAIRS



Georges Akono

THE MINISTER OF HIGHER
EDUCATION



Jacques Fane

Copy :

- MINETAT SG/PR (ATCR)
- SG/PM (ATCR)
- MINATD
- MINPROFF
- MINESEC
- MINETFOR
- Provincial Governors
- The Vice-Chancellor and Rectors
- Provincial Delegates of Social Affairs
- Records/File

APPENDIX 5 : 1990 JOTIEN CONFERENCES

1990 Jomtien Conference

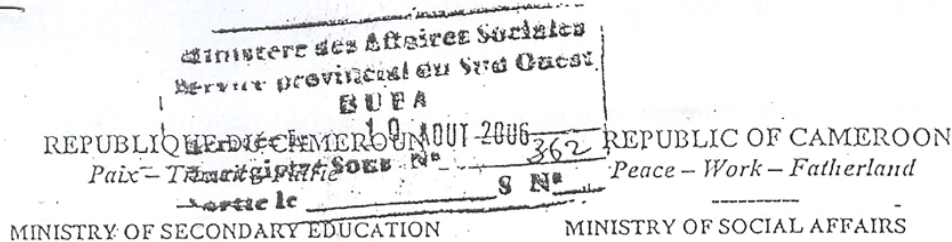
World Declaration on Education For All

Meeting Basic Learning Needs World Conference on Education for All

ARTICLE III – UNIVERSALIZING ACCESS AND PROMOTING EQUITY

1. Basic education should be provided to all children, youth and adults. To this end, basic education services of quality should be expanded and consistent measures must be taken to reduce disparities.
2. For basic education to be equitable, all children, youth and adults must be given the opportunity to achieve and maintain an acceptable level of learning.
3. The most urgent priority is to ensure access to, and improve the quality of, education for girls and women, and to remove every obstacle that hampers their active participation. All gender stereotyping in education should be eliminated.
4. An active commitment must be made to removing educational disparities. Underserved groups: the poor; street and working children; rural and remote populations; nomads and migrant workers; indigenous peoples; ethnic, racial, and linguistic minorities; refugees; those displaced by war; and people under occupation, should not suffer and discrimination in access to learning opportunities.
5. The learning needs of the disabled demand special attention. Steps need to be taken to provide equal access to education to every category of disabled persons as an integral part of the education system.

APPENDIX 6 : JOINT CIRCULAR



JOINT CIRCULAR No 34/06 LC/MINESEC/MINAS of 02 AOÛT 2006
 Relating to the admission of disabled children and children born of needy
 disabled parents into Government Secondary Educational Establishments

THE MINISTER OF SECONDARY EDUCATION
 AND
 THE MINISTER OF SOCIAL AFFAIRS

- To/ - Provincial Delegates for Secondary Education and for Social Affairs
- Divisional Delegates for Secondary Education and for Social Affairs
 - Principals of Government Secondary Educational Establishments
 - Heads of Social Centres
 - Heads of Social Action Services in Government Secondary Educational Establishments,

It has been brought to our notice that disabled children and children born of needy disabled parents are increasingly facing difficulties in obtaining admission into Government Secondary Educational Establishments. This situation, which is contrary to the Constitution, to international instruments ratified by Cameroon, and to legal and regulatory instruments in force, widens the gap in the area of access to Education and renders the social integration of young disabled persons more difficult.

In application of:

- The Preamble of the Constitution of the Republic of Cameroon (dash 18) which provides that the State shall guarantee the child's right to education;
- The provisions of the Convention on the rights of the Child, of Africa's Charter on the rights and welfare of the Child, and of the United Nations' rules on equal opportunities for disabled persons;
- Law No 83/13 of 21 July 1983 on the protection of the disabled and its enabling Decree No 90/1516 of 26 November 1990 which authorise an age waiver, the right to repeat, remedial classes, exemption from paying school fees and financial assistance to disabled children and those born of needy disabled parents at all levels of public secondary education;
- Law No 98/004 of 14 April 1998 to lay down Guidelines for Education in Cameroon which, in Article 7, provides that the State shall guarantee equal opportunities for education to all, without discrimination as to

gender, political, philosophical or religious opinion, social, cultural, linguistic or geographical origin;

In view of facilitating admission of disabled children and those born of needy disabled parents into Government Secondary Educational Establishments, we have the honour to prescribe the following measures:

1. The files of children in the category above, duly examined by the local services of the Ministry of Social Affairs shall be deposited each year by 15 August, deadline, in the competent Divisional Delegation for Secondary Education for onward transmission to the host Educational Establishment in view of their appreciation and report to hierarchy. This report shall contain statistics on the number of disabled children and children born of needy disabled parents enrolled in the educational establishment.
2. The Divisional Delegate for Secondary Education shall forward a report to his Provincial Delegate and to the latter's counterpart of the Ministry of Social Affairs on the state of admission of disabled children and those born of needy disabled parents in his area of competence, not later than 31 October.
3. The Provincial Delegate for Secondary Education and his counterpart for Social Affairs shall each forward to their respective Ministers a short report on the state of admission of these children.

This notwithstanding, any child may only be admitted into a Government Secondary Educational Establishment within the confines of the intake allowed by the Ministry of Secondary Education. All the children duly enrolled in a Government Secondary Educational Establishment shall be subjected to the same rules and regulations in matters of academic work and discipline. However, with regard to repeating, the Class Council and the Discipline Council may, at the end of the year, examine the situation of each student in this category.

It is worth reminding you that, pursuant to Circular No 86/L/1658/MINEDUC/CT2 of 13 January 1986, such students shall be exempted from paying school fees. Besides, exemption from paying PTA levies shall exceptionally apply to this category of students.

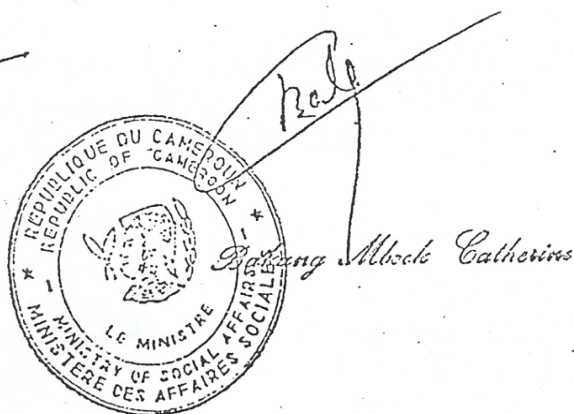
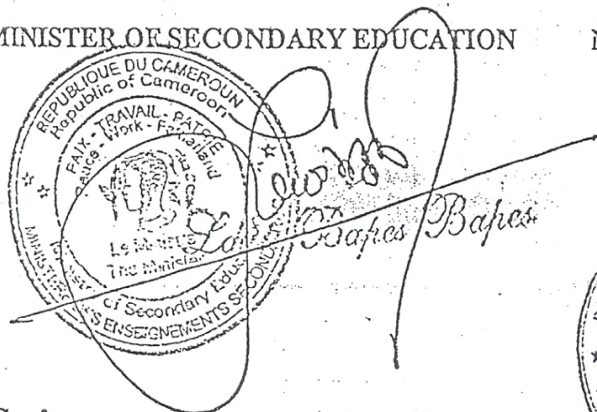
The local service of the Ministry in charge of Social Affairs, initiator of the academic placement of the types of children mentioned above shall ensure that, the registration fees for official examinations are paid and permanently follow those children up, in view of their smooth integration into the education community, in a spirit of national solidarity, tolerance and mutual respect.

Provincial and Divisional Delegates of the Ministry in charge of Secondary Education and of that for Social Affairs, Principals of Government Secondary Educational Establishments, Heads of Social Centres, Heads of Social Action Services in educational establishments are, each in their own sphere, charged with the strict implementation of the terms of this Circular, which takes effect as from the date of signature.

This Circular shall be communicated where and when necessary.

MINISTER OF SECONDARY EDUCATION

MINISTER OF SOCIAL AFFAIRS



Copies:

- SG/PR
- SG/PM
- MINATD
- MINEDUB
- MINESUP
- MINEFOP
- MINPROFF
- Records/File

**APPENDIX 7 : SAMPLE SIZE (S) REQUIRED FOR THE GIVEN
POPULATION SIZES (N)**

Determining the Size of a Random 2 sample (S) For A Given Population Size (N)

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	256	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	100000	384

Source: Amin, M (2005), citing R.V. Krejcie and D.W. Morgan (1970), Determining sample size for research activities. Educational and psychological measurement, 30, 608, Saga Publication.

APPENDIX 8 : LAW No 2010/002 of 13 AVRIL 2010

REPUBLIC OF CAMEROON

PEACE -- WORK -- FATHERLAND

LAW No. 2010/002 OF 13 AVR 2010
RELATING TO THE PROTECTION AND WELFARE
OF PERSONS WITH DISABILITIES

The National Assembly deliberated and adopted, the President of the Republic hereby enacts the law set out below:

CHAPTER 1
GENERAL PROVISIONS

SECTION 1. This law relates to the protection and welfare of persons with disabilities.

In this respect, it aims at:

- the prevention of disabilities;
- social, economic and psychological rehabilitation and integration of persons with disabilities;
- promotion of national solidarity in favour of persons with disabilities.

SECTION 2. For the purpose of this law, the following definitions shall apply:

- **Disability:** limitation of a person's ability, due to a deficiency, to fully participate in an activity in a given environment;
- **Person with disability :** any person who is unable to fulfil by themselves all or part of the requirements of a normal personal or social life, as a result of a physical or mental disability, be it of birth or otherwise;
- **Deficiency:** any loss or impairment of a psychological, physiological or anatomic function or structure;
- **Inability:** any temporary, partial or total loss of the capacity to carry out an activity in a given manner or within the limits considered as normal for a human being;
- **Invalidity:** the state of a person whose ability to work, due to physical or mental defects, is permanently reduced and is evaluated in terms of percentage;
- **Infirmity:** the situation of a person whose organ or limb is amputated or defective due to congenital or other reasons;

SECTION 3. The term "person with disability" shall apply to the following: persons with physical, mental and multiple disabilities.

- 1 - *Persons with physical disabilities :* Motor disability
- 2 - *Persons with sensory disabilities:* Blind, Partially Sighted, Deaf, Deaf and Dumb, Dumb, Hard of hearing.
- 3 - *Persons with Mental disability:* mentally retarded people, autistic persons, persons with cerebral palsy, mongols, persons with microcephal and macrocephaly, persons with psychiatric and epileptic disorders.
- 4 - *Persons with multiple disabilities:* this group comprises people with more than one disability.

SECTION 4. (1) A deficiency shall be established by a qualified physician who shall issue a special medical certificate free of charge.

- (2) The special medical certificate shall specify the nature of the deficiency, as well as the corresponding inability or invalidity percentage.

- (3) Conditions for the issuance of the special medical certificate shall be defined by regulation.

SECTION 5. (1) The prevention of disabilities, and the psychological, social and economic rehabilitation and integration of persons with disabilities shall be an obligation of national solidarity.

- (2) The State, families, physical or corporate persons shall pool their efforts to put into effect the obligation referred

to in paragraph (1) above.

- (3) The parties referred to in Section 5 (2) above shall provide persons with disabilities access to institutions and public structures and ensure their integration and upkeep in a normal working and living environment.

CHAPTER II PREVENTION OF DISABILITIES

SECTION 6. (1) Prevention shall mean any action whose purpose is to avoid the occurrence of motor, sensor and/or mental deficiencies or reduce functional limitations.

- (2) The following actions shall be considered as measures of prevention:

- Medical prevention;
- Social prevention.

I. MEDICAL PREVENTION

SECTION 7. Medical prevention shall comprise:

- measures to combat endemic diseases;
- premarital, prenatal and postnatal medical examinations;
- medical examinations in schools and university institutions;
- medical examinations in workplaces.

SECTION 8. The State, Regional and Local Authorities shall guarantee access to immunization and take every measure to ensure health education and public sanitation in order to prevent the occurrence of disabilities.

SECTION 9. (1) Future spouses shall be bound to carry out premarital medical examinations.

- (2) Parents shall be bound to ensure the immunization and premarital, prenatal and postnatal medical examinations of their children.

(3) During premarital, prenatal and postnatal medical examinations, the medical staff shall systematically screen for any disability and inform the persons concerned about the results and the

medical action to be taken. They shall refer the persons concerned, where necessary, to social services.

SECTION 10. Families, schools, health institutions as well as public or private structures that detect any disability must inform the closest social service, with a view to taking care of the said disability.

SECTION 11. Systematic medical examinations of pupils, students and workers must be conducted every year with a view to detecting disability.

II. SOCIAL PREVENTION

SECTION 12. Social prevention shall comprise:

- Safety measures aimed at preventing accidents in various environments;
- Prevention of deficiencies resulting from environmental pollution and armed conflicts;

SECTION 13. The State, Regional and Local Authorities shall organize information, education and communication campaigns with a view to preventing disabling diseases.

SECTION 14. Regional and Local Authorities as well as public and private services shall take hygiene and safety measures at work and living places to avoid any accident that may cause or aggravate a deficiency.

SECTION 15. The State, Regional and Local Authorities shall take all necessary measures to prevent disabilities due to:

- domestic violence;
- construction of public buildings;
- environmental pollution;
- natural disasters;
- railway, road, air and maritime transport;
- armed conflicts;
- violence of any nature.

CHAPTER III

REHABILITATION OF PERSONS WITH DISABILITIES

SECTION 16. (1) Rehabilitation shall be aimed at enabling persons with disabilities to attain or maintain an optimal physical, sensory, intellectual and psychological functional level and, as such, at providing them with the means to acquire greater autonomy.

It shall comprise:

- psychosocial support to persons with disabilities;
- medical rehabilitation and functional therapy of persons with disabilities;
- special education for persons with disabilities.

I. PSYCHOSOCIAL SUPPORT TO PERSONS WITH DISABILITIES

SECTION 17. Psychosocial support shall aim at strengthening psychological capacity, developing self-esteem, and at strengthening relations with the living environment in order to reconcile persons with disabilities with themselves and with their environment.

SECTION 18. Social workers shall be responsible for the coordination of all actions leading to psychological support to persons with disabilities.

SECTION 19. (1) Destitute persons with disabilities who cannot afford minimum autonomy and whose health status requires constant medical supervision and care shall receive a disability allowance. The amount and allocation conditions of such allowance shall be fixed by regulation.

(2) In case of incompatibility with normal family life, the persons referred to in Section 19 (1) above shall, exceptionally and provisionally, be placed in specialized institutions.

(3) For the cases referred to in Section 19 (1) and (2) above, the family shall be entitled to social and technical assistance.

II. MEDICAL REHABILITATION AND FUNCTIONAL THERAPY OF PERSONS WITH DISABILITIES

SECTION 20. Medical rehabilitation and functional therapy shall notably involve orthopaedic surgery, ergotherapy, physiotherapy, prosthetics and the practice of physical activities and sports.

SECTION 21. (1) The State, Regional and Local Authorities, civil society and, if need be, International organizations shall set up institutions for the medical rehabilitation and functional therapy of persons with disabilities.

(2) Conditions for the setting up, organization and functioning of the said institutions shall be fixed by regulation.

SECTION 22. (1) Persons with disabilities recognized as destitute and who are holders of a national disability card as provided for in section 41 below shall, for their medical and functional rehabilitation, receive full or partial medical care from the State in specialized institutions or public or private health institutions.

(2) The medical care provided for in sub-section (1) above shall comprise consultations, medical tests, x-ray or medical imagery, hospitalization, health referrals and the purchase of certain drugs.

(3) Conditions for receiving the medical care provided for in sub-sections (1) and (2) above shall be fixed by regulation.

SECTION 23. (1) The State shall subsidize certain products and materials intended for the treatment of specific pathologies or functional therapy.

(2) The conditions for the application of the provisions of sub-section 1. above shall be laid down by a separate instrument.

III. SPECIAL EDUCATION FOR PERSONS WITH DISABILITIES

SECTION 24. Special education shall consist in initiating persons with physical, sensory, mental and multiple disabilities to appropriate communication methods in order to enable them to have access to normal general education and, later on, to vocational training.

SECTION 25. (1) The State, Regional and Local Authorities, civil society and possibly international organizations shall set up integrative educational structures and schools for the training of trainers according to types of disability.

(2) The conditions for setting up, organizing and operating such structures shall be laid down by regulation.

SECTION 26. (1) The State, Regional and Local Authorities and civil society shall provide initial and further training for staff specialized in the training of persons with disabilities.

(2) The State shall subsidize the acquisition of teaching aids to be used in training persons with disabilities with special educational needs.

CHAPTER IV

SOCIO-ECONOMIC INTEGRATION OF PERSONS WITH DISABILITIES

SECTION 27. (1) Integration shall concern any social or economic measure that guarantees the full participation of persons with disabilities in social life.

(2) The State shall encourage the presence of persons with disabilities in various bodies of social and political life.

(3) The socio-economic integration of persons with disabilities shall comprise:

- access to education and vocational training;
- access to information and participation in cultural activities;
- access to infrastructure, housing and transport;
- participation in sports and leisure activities;
- access to employment.

I. ACCESS TO EDUCATION AND VOCATIONAL TRAINING

SECTION 28. The State shall take specific measures to guarantee persons with disabilities access to education and vocational training.

Such measures shall include:

- providing for their material and financial needs;
- pedagogic support.

SECTION 29. (1) The State shall contribute to the coverage of the expenses for the education and initial vocational training of destitute pupils and students with disabilities.

(2) Such cover shall entail total or partial exemption from the payment of school or university fees and the award of scholarships.

(3) The cover referred to in sub-section (1) and (2) above shall also concern children born of destitute parents with disabilities.

SECTION 30. Children and adolescents suffering from any disability shall be entitled to conditions for education and apprenticeship adapted to their situation.

SECTION 31. Pupils and students with disabilities shall be entitled to special conditions, notably age waiver, assignment of suitable teaching aids and specialized teachers.

II. ACCESS TO INFORMATION AND PARTICIPATION IN CULTURAL ACTIVITIES

SECTION 32. The State, Regional and Local Authorities and civil society shall take all necessary measures to facilitate:

- access by persons with disabilities to information and communication technologies;
- the participation of persons with disabilities in productions and artistic works;
- access of persons with disabilities to equipment, activities and culture-related trades.

III. ACCESS TO INFRASTRUCTURE, HOUSING AND TRANSPORT

SECTION 33. (1) Government and private buildings and institutions open to the public shall be designed such as to facilitate access and use by persons with disabilities.

(2) When carrying out renovation or major transformation works on buildings, existing government or private buildings and facilities open to the public shall be refurbished such as to facilitate access and use by persons with disabilities.

(3) The authorization to build or use a house shall be subject to complying with the provisions of sub-sections (1) and (2) above.

(4-) The construction of passages shall take into consideration facilities reserved for persons with disabilities.

SECTION 34. The State, Regional and Local Authorities and civil society shall take measures to give persons with disabilities preferential access to low-cost housing.

Section 35. (1) Persons with disabilities who are holders of a national disability card shall be entitled to preferential treatment in public and private transport, in particular:

- reduction in transport fare;
- priority during embarking and disembarking;
- reserved seats.

(2) The conditions for the application of sub-section (1) above shall be laid down by regulation.

IV- PARTICIPATION IN SPORT AND LEISURE ACTIVITIES

SECTION 36. The State, Regional and Local Authorities and civil society shall take all necessary measures to encourage the participation of persons with disabilities in sports and leisure activities and shall organize their participation in international competitions.

SECTION 37. A sport and physical education programme for persons with disabilities shall be included in the school and university systems.

V. ACCESS OF PERSONS WITH DISABILITIES TO EMPLOYMENT

SECTION 38. (1) Persons with disabilities with a vocational training or general education shall be entitled to preferential treatment, in particular, through an age waiver during recruitment into government or private jobs when competing with non-handicapped persons, where the position is compatible with their condition.

(2) With equal qualifications, priority in recruitment shall be given to persons with disabilities.

However, they may only be subjected to tests that are compatible with their condition.

(3) Under no circumstance, whatsoever, shall a disability be a reason for rejecting their application or discriminating against them.

SECTION 39. (1) Persons with disabilities who on account of the seriousness of their disability, cannot withstand normal conditions of work, in a natural setting shall be entitled to protected employment.

(2) Protected employment shall mean a work station arranged by taking into account the functional possibilities and the performance capacities of the persons with disabilities.

SECTION 40. (1) The State, Regional and Local Authorities and civil society shall encourage persons with disabilities to set up private enterprises and cooperatives.

- (2) Persons with disabilities shall be encouraged through:
- tax and customs duty waivers granted, as the case may be, and upon the proposal of the Minister in charge of Social Affairs;
 - the granting of business start-up assistance;
 - assignment of technical trainers;

- b) feigns a disability in order to attract the generosity or pity over the intelligence of a third party;
- c) having the means of subsistence or being able to find work for himself, begs for charity wherever it may be.

SECTION 45. Officials of schools, vocational and university institutions, employers or corporate managers guilty of discrimination in the admission, recruitment or pay of persons with disabilities shall be punished with imprisonment for from 3 (three) to 6 (six) months and fine of from 100.000 (one hundred thousand) to 1.000.000 (one million) Cfa francs.

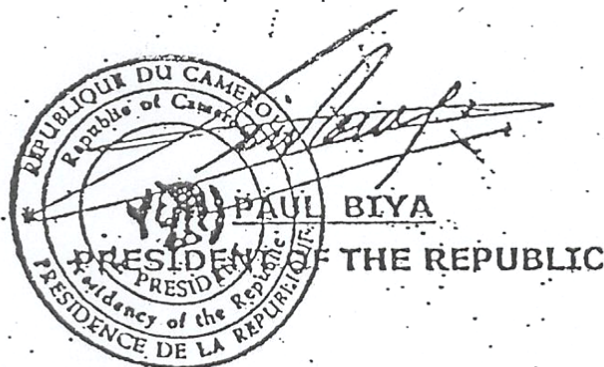
SECTION 46. Whoever refuses to provide a service due to a person with disability in accordance with this law and its enabling instruments shall be punished with the penalties set forth in Section 242 of the Penal Code.

CHAPTER VII FINAL PROVISIONS

SECTION 47. Specific statutory instruments shall, as and when necessary, lay down the conditions for the application of this law.

SECTION 48. - This law, which repeals all previous provisions repugnant thereto, shall be registered, published according to the procedure of urgency and inserted in the Official Gazette in English and French.

YAOUNDE, 13 AVR 2010



APPENDIX 9 : Map of Cameroon



Source: Communaute Urbaine de Yaounde

CURRICULUM VITAE



CIVIL STATUS

Names : **Martin BEZANGWA**
 Occupation : **Teaching**
 Date of Birth : **13 October 1965**
 Place of Birth : **Mbindia**
 Marital Status : **Married and father of 8**
 Nationality : **Cameroonian**
 Contacts : **675 76 18 52 / 694 16 23 33 // 669 92 62 01**
 : **bezangwam@yahoo.com**

EDUCATION / TRAINING

YEAR	SCHOOL	RESULTS
2023	University of Yaounde I	Ph. D Thesis submitted for Defense
2018	The Global Health Training Centre	Certificate in Research Ethics
2017	University of Yaounde I	Master of Education in Curriculum and Evaluation
2014	University of Buea	Bachelor of Education in Curriculum Studies and Teaching
1997	Government Teacher Training College Kumba	Teacher Grade One Certificate (CAPIEMP)
1998	Muyuka Evening School	G.C.E. A Level
1986	College de L'UNION DSCHANG	Probatoire A4 Allemand
1983	Lycée de Dschang	Brevet d'Etudes Primaires Complémentaires (BEPC)
1978	Ecole Publique de Fomenguia	Certificat d'Etudes Primaires Elémentaires
1975	Catholic Mission School Mbindia	First School Leaving Certificate

TEACHING EXPERIENCE

From 2003 - present: Head teacher Government Bilingual Primary School Ngomedzap.

From 1998 - 2003: English Language Teacher Groupe Scolaire Ngomedzap.

From 1997-1998: Classroom teacher at Government Bilingual Primary School Mbalmayo.

From 1993 -1995: French Language tutor Efueng Comprehension College Muyuka.

From 1986-1996: French Language and Civic Education tutor at Vocational College of Arts, Science and Technology Muyuka.

CONFERENCES AND SEMINARS ATTENDED

From 24th – 31st March 2023 : 2nd Cameroon-World Bank Seminar on the use of new primary and nursery curriculum in Cameroon.

From 13th - 17th September 2021 : 7th International Conference of Educational Assessment and Research Network in Africa (EARNIA) on the Role of Technology in Educational Assessment and Research in Africa at University of Yaoundé I- Cameroon

From 17th - 19th July 2018 : 1^{er} Colloque Scientifique International sur l'innovation Pédagogique et le Développement Professionnel sur le Thème **“Enjeux de l'Approche par Compétence en milieu Educatif et Professionnel”** au Palais des Congrès de Yaoundé.

From 29th – 3rd May 2018: ‘21st Century Higher Education Curriculum and Employability of Graduates: Challenges and prospects’ at the University of Yaounde I.

From the 3rd - 8th December 2017: 3rd International Conference of Educational Assessment and Research Network in Africa (EARNIA) on ‘Cultivating Assessment and Research Literacy in Africa’ at the Benue State University Makurdi - Nigeria.

From the 28th November - 2nd December 2016: 2nd International Conference of Educational Assessment and Research Network in Africa on the role of Assessment and Research in Catching - up with the trends in Global Education at the International Conference Centre, University of Calabar-Nigeria.

February - March 2011: National Human Rights Capacity Building Project on the Regional Training Workshops for the training of teachers and administrators of Pilot Schools of Basic and Secondary Education on the use the Pedagogic Manual and Guides for the Teaching of Human Rights in Cameroon at the Centre d’Accueil Mbalmayo.

FROM 1996 - 1997: Training for the teaching of French Language in English Primary Schools in Cameroon at the Government Teacher Training College Kumba.

PUBLISHED EDUCATIONAL JOURNALS

- Storytelling and the cognitive development of Primary school children in Mbalmayo Sub Division;
- Teachers’ attitudes towards inclusive education in Primary schools in Mbalmayo Municipality;

UNPUBLISHED EDUCATIONAL JOURNALS

- The social learning environment of the school and the implementation of inclusive education in secondary schools in Ngomedzap municipality;
- The physical learning environment of the school and the implementation of inclusive education in secondary schools in Yaounde municipality;

Ph.D. THESIS Submitted for Defense

- Curriculum adaptations of the learning environment and the implementation of inclusive education in secondary schools in Yaounde municipality.

KNOWLEDGE OF LANGUAGES

Can speak, read and write both French and English Languages. Speak Bangwa and Dschang. Also speak a bit of Ewondo.

DECORATION

Chevalier des Palmes Académiques 2019.

Chevalier du merit Camerounais 2021

Best Head teacher Award Ngomedzap Sub Division 2011

HOBBIES: farming, music, reading, football.

RELIGION: Catholic, baptized and confirmed. Marriage blessed by his Lordship Bishop Adalbert Ndzana, Emeritus Bishop of Mbalmayo

REFERENCES

Prof Maureen EBANGA TANYI
RT HOD Curriculum and Evaluation
University of Yaounde I
Tel: 675810935

Pr AGBORBECEM PETER TAMBI
Dean of Faculty of Education
University of Buea
Tel.: 650 537 092

Ngomedzap the 4th April 2023

Martin BEZANGWA