Inclusive Education in Cameroon; Dictates of Learning Environment on the Academic Participation of Students with Physical Disabilities in the South West Region of Cameroon

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Abstract: *The aim of the study was to establish how the learning environment influences academic participation for students with physical disabilities within the Buea municipality. This study explored the access to information, attitudes, effective teaching and assessment methods. The study was guided by the social model theory of disability. It explains that it is the society which disables people with disabilities. To achieve its objective the study employed qualitative and quantitative methods of data collection which allowed for an intensive investigation into learning environment and academic participation for students with physical disabilities and provided a basis for informing better policies and planning. In addition, the investigation employed a descriptive case study design that involves detailed studies of the scope. The respondents of study were 32 secondary school students with physical disabilities. The data collection instruments employed was: Questionnaires, structured interview schedules, observation schedules and Focus Group Discussion. The information that was collected from these instruments was analyzed using both qualitative and quantitative methods. The results showed that the two schools were making a lot of efforts towards inclusivity and accessibility for all. The results also revealed that 17(52%) of students with physical disabilities revealed that teachers had a positive attitude towards them as well as involved them in class activities. The results further revealed that the lecture method was dominant although group discussion and classroom presentation were also used. However, the study found that time given during practical lessons and examinations was not adequate as the students ended up not completing their work. The study recommends that school administrations should promote more sensitization programmes through seminars, sporting activities, workshops and forums in order to increase the level of awareness of the needs, aspirations and capacities of students with physical disabilities with a view to enhancing their acceptance, participation in learning activities and integration in the school communities in Cameroon.*

Keywords: *Inclusive Education, Learning Environment, Physical Disability and Academic Participation.*

1. INTRODUCTION

The concept of special needs education such as what it is and how to deal with it in developing world remains in a state of confusion. This may account for the poor provisions that have been made by the various governments. In fact, the state of education for persons with disabilities in developing countries such as Cameroon has been a source of concern for professionals. (Alur, 2001; Potts, 2000; Villa, 2003) The provision for children with disabilities across developing countries has often been regarded as a privilege rather than a right (Alur, 2001). Abosi (2006) noted that proper attention has not been given to special needs education in terms of planning and organization. It's planning; organization and management have been characterized by lack of vision and commitment, inadequate funding, lack of cooperation among experts, negative attitudes influenced by traditional values, and culture. The aim of this empirical article is to highlight the relevance of Learning environment and academic participation of students with physical disabilities in Buea, south west region of Cameroon.

2. BACKGROUND TO THE STUDY

Early effort to educate persons with disabilities in developing countries in general was made by missionaries. Since then, the various governments have become more sensitive and committed. Special schools, classes, units and resource centers have been built. Teacher training facilities have been established locally in some cases, and more teachers have been trained locally and abroad. All these efforts notwithstanding, most developing countries have been caught in the web of international controversy of acceptable approach to effective education of persons with disabilities.

Inclusive education emerged by insisting that all children with special needs be included in the traditional classroom. Before the emergence of the inclusive system, it was the concept of integration or mainstreaming, which was practiced. The concept of integration is based on integrating children with disabilities according to their needs and severity of their conditions. Some children with disabilities could benefit from total integration, while others benefit from units/special class or resource rooms. However since the middle of the nineties, the American system of inclusive education has spread like fire across the world.

Some special needs children with talents in Cameroon and indeed the world over have lived and died without education. Many have also lived and died, unknown and perhaps unwanted, their talents lost of the detriment of the society (Abang, 1981). As it is the case in most developing countries, effective participation of all able bodied individuals is required for the building and total transformation of their respective societies. This expectation is a bit difficult for persons with special needs due to their handicapping conditions. Educators and laymen alike having recognized the special needs of such children, youths and adults, have designed a number of programs (educational and non educational) to give appropriate assistance in a variety of ways.

Traditional beliefs, customs and attitudes held by different ethnic groups in Cameroon have for a long time influenced the education and socialization of persons with special educational needs, Yuh & Shey (2008). In some parts of the country, children with disabilities were and are still denied their basic rights especially the right to go to school, communicate and interact with peers in spite of global movement towards universalization of access to schooling for all children (world's conference on education for all, Jomtien, Thailand, 1990; Salamanca conference on special need education, Spain 1994; millennium development goals, 2000). The right to education is clearly stated in the Universal Declaration of human rights (UNESCO, 1946); "everyone has a right to education". The participants in the world's conference on education for all re-affirmed the right of all people to education, particularly, Basic education.

"We, the participants in the world's conference on education for all, reaffirm the right of all people for education. This is the foundation of our determination, singly and together, to ensure education for all… together we call on government, concerned organization and individuals to join in this urgent undertaking. The basic learning needs of all can and must be made…we adopt, therefore, this world's Declaration on education for all; Meeting Basic Learning Needs and agree on the framework for Action to Meet Basic needs, to achieve the goals set forth in this declaration".

The Salamanca conference on 'Special Needs Education' held in June 1994 emphasized the need for policy change in the education of people with disabilities. The second goal in the Millennium Development Goal (MDGs) outlined in the "Millennium Declaration" of September 2000, focuses on 'Achieving universal primary education'.

Special education in Cameroon began in informal settings, especially in the family circles where some parents and family members of persons with disabilities tried to teach their children like skills, for example, showing the blind child how to wash its hands, and how to move around the home; making signs to a deaf child when communicating with it. Teaching all the children how to count in their local dialects and the use of local currency in buying and selling was also the pre-occupation of most parents in the early days in Cameroon.

The education of children with disabilities in the pre-colonial and colonial period indicates a slow yet steady recognition of the plight encountered by persons with special needs. The British Baptist Missionary Society first introduced western education in Cameroon in 1842. The number of schools remained with few Cameroonians gaining access to formal education. Catholic and Presbyterian missionary societies, like the Pallotine Fathers, the Mill Hill missionaries and the Basel Mission also made substantial contribution to formal education. By the time German colonial rule was established

after 1884, there were already a few Cameroonians who had been educated by the missionaries. With the introduction of Christian education by western missionaries, consideration was given to the well being of persons with disabilities. A small number of children were admitted in mission schools and were taught alongside other children.

Nsamenang (1996) in his sketch in a proposed study of disabilities in Cameroon, points out that historically education and care for children with disabilities was rooted in the community, church and charitable organizations. He argues that these services were organized as a protection consideration, and as an attempt to provide services which public education and training systems were unable to offer. Before 1975, the welfare of persons with disabilities in Cameroon was the responsibility of a unit in the ministry of Health. As a matter of fact and misconception, disability was perceived as a disease and sometimes seen as incurable. The question that most people asked was: How can people who are sick and cannot be cured go to school?

Formal education for children and young adults with disabilities was done mostly in specialized centres with very few attending regular primary schools. The first centre created in 1972 called "ecole specialisee pour Enfants Deficients Auditif-ESEDA (special school for children with Hearing Impairments), Yaounde and L'externat Medico-Pedagogigue-LA COLOMBRE (special school for mentally retarded) Yaounde. These centres were run and managed by religious groups and parents of children with disabilities. With the creation of the Ministry of Social Affairs in 1975, a Department of National Solidarity was established to oversee the well being of persons with disabilities and the very old. This department, in collaboration with the Ministries of Education has put in some efforts to improve the education of persons with disabilities. Thus, the creation of many privately owned special schools or institution in almost all provinces of the country with some receiving yearly subsidies from the state took effect. Some of these institutions or special schools serve persons with specific disabilities, for example, those with mental retardation, visual and hearing impairments, behavioural disorders, and so on. Others provide services to persons with multiple disabilities.

To train young Cameroonians with visual impairments in arts and crafts, the ministry of Social Affairs created the Rehabilitation Institute for the Blind (RIB) popularly known as Bulu Centre for the Blind in Buea. This was the first institution for persons with disabilities created by the government in Cameroon in 1973. It is under the control of the Ministry of Social Affairs. More private institutions have been established in recent years, but most of them are in urban areas. It is worth noting that nearly all these institutions, whether owned by government, Mission or NGOs have problems of shortage of trained and qualified staff and personnel to serve the persons with disabilities. (AJS, 2008)

Legislation and policy on education of persons with disabilities lack a lot of reinforcement, which could help in the remediation of their day to day problems. The only Law in Cameroon, which addresses the needs of persons with disabilities, is law No. 83/13 of July, 1983 relating to the protection of persons with disabilities. The conditions for implementing this law are laid down in decree No.90/1516 of 26 November, 1990. These two documents form a foundation stone for a strong government policy toward the education of persons with disabilities. Article 3 of law No. 83/13 of July 1983 focuses on the education of children with disabilities. Three options are given concerning the type of education to be given this group of children.

These include:

Integration in ordinary schools: parents of children with disabilities are advised to send them to regular schools. This integrated approach calls for specialized staff to be recruited to serve the needs of children with disabilities in regular schools, and also the provision of appropriate pedagogic material.

Admission in special classes: some parents who seek admission for children with disabilities in regular schools are advised to place them in special classes. This is seen as a temporary solution in the sense that the specialized training adapted to the child's ability in such classes only prepares him/her for eventual admission in a regular class.

Admission in specialized institutions: in this case, the child with disability is admitted in a specialized institution where he/she receives special education as well as medical care and treatment.

Although the law on the protection of persons with disabilities was enacted by Parliament in 1983, the Head of State only signs the decree laying down the modalities of its application in November, 1990. It is divided into five parts with the first part dealing with the education and vocational training of persons with disabilities. Article 1 of this law clearly states " The education of children and young adults with disabilities shall be taken care of in regular and special schools…In case of necessity, regular schools enrolling children with disabilities shall be provided with special teachers and didactic material adapted to the children's needs" (MINAS, 1990). As far as easing access of pupils with disabilities into various classes in ordinary schools is concerned, schools are required to make the necessary adjustments to suit the needs of all children.

To ensure the proper digestion of the 1983 law, the Minister of National Education issued circular letter No. 86/1/658/MINEDUC/CTZ of January 13, 1986 calling on all national education authorities to implement the 1983 law by giving priority, easing and facilitation the enrolment of children with disabilities in public and private schools. This circular letter also stated that punishment would be meted out to recalcitrant head teachers and teachers who go against the 1983 law. The major setback witnessed today is lack of follow-up and implementation of this policy.

The most recent document on the education in Cameroon is the February 2005 Draft Document from the Technical Committee for the Elaboration of the Sector Wide Approach in education. Although this document reflects a common and coherent vision of education in Cameroon, nothing is mentioned about the education of persons with disabilities.

The Universal Declaration of Human Rights (UDHR) 1948 Article 3a states that admission to education should be based on merit, capacity, efforts, perseverance and devotion, showed by those seeking access. No discrimination can be accepted in granting education on grounds of race, gender, language or religion, or economic, cultural or social distinctions, or disability (UNESCO, 1998). However, the contents of this article have not clearly been implemented in higher institutions in many countries as the needs of SWD such as providing effective learning environment that could enhance academic participation, as it is the key to success in secondary education remained largely unnoticed hence this study filled the gap.

In Africa as Olakulehin (2010) observes, educational provision has always been made available to learners with disabilities at the elementary and secondary levels. For example, there are special schools for learners with physical disabilities for both primary and secondary education. The inclusion of students with disabilities in elementary and secondary education has not automatically transferred to their inclusion in SEIs (Wolanin and Steele, 2004). Perhaps, because the investment in higher education tends to be extremely high, little consideration is given to their needs when conventional higher education systems and processes are constructed.

Eriksson and Grunlund (2004) observe that participation is an integrated term of involvement in activities, evident in interaction process between his/ her environment. From this conceptualization Sachs and Schreuer (2011) explain academic participation as students" experience in participating and learning in all aspects of academic institutional life, in and outside the classroom. However, Wawire, Elarabi and Mwanzi (2010) note that there is a complete absence of statistics on students with disabilities (SWD) in secondary education. This implies that educational planning, policy making and attention tend to focus on the needs of the general population; interests of disabled persons are usually an afterthought.

However, the contents of the policy are yet to be implemented to the letter. Barriers like the attitude and willingness of the academic staff as Fuller, Bradley, and Healey (2004a) argue to provide arrangements as well as provide user friendly handouts and unrealistic expectations of reading works, affects the SWD in their academic participation (AP). In addition, assessment methods are not suitable as they can be very pertinent in creating of a conducive learning process for SWD. On the other hand, there is a challenge in accessing information as it is the key to effective academic participation for them. It needs to be pointed out that previous studies carried out in secondary education institutions focused generally on all categories of students with disabilities, yet each group has unique needs based on their disabilities that require specific learning environments. It is against this background that this study sought to investigate the aspects of learning environment and academic participation for students with physical disabilities in selected secondary schools in Fako-sub Division of the south west region of Cameroon.

The conceptualization of this study reveals and indicates an exclusive learning environment in secondary school learning institution for students with physical disabilities. As a result, there is a reduced academic participation in secondary education institution. It also gives the indicators that point at poor learning environment (LE). These include: less inclusive teaching and assessment methods; negative attitudes towards SWD; restrictive access to books and information, low academic participation and high dropout rates. All these contributed to ineffective LE where little focus is on the creation of appropriate nourishing experiences so that learning comes about naturally and inevitably.

If interventions such as the full implementation of Persons with Disabilities rights and Disability Policy in Cameroon secondary education could be reinforced, the situation above would be reversed; conducive learning environment would be enhanced. This would be achieved as follows: By promotion of inclusive teaching methods; adapted teaching and assessment strategies; positive attitude towards students with disabilities; increased accessibility to books and information and inclusive teaching and learning resources. When all these are achieved, academic participation of students with physical disabilities (SWPD) would be enhanced. Academic participation (AP) is characterized by: low dropout rates; high level of students' participation in class activities; high academic achievement and regular class attendance. Effective AP of SWPD would yield the following outcomes: Success in life; pursuing further studies; and better employment opportunities as well as a shift to higher social-economic. Therefore, secondary education has the potential of boosting chances for SWPD to integrate into the society in general, and into employment in particular, so that they might sustain themselves financially with dignity.

This study was guided by Social model and medical models of disabilities. The approach behind the social model is traced to the civil rights/human rights movements of the 1960s. In 1975, the UK organization Union of the Physically Impaired Against Segregation(UPIAS) claimed: "In our view, it is society which disables physically impaired people." Disability is something imposed on top of our impairments by the way we are unnecessarily isolated and excluded from full participation in society (Hodkinson and Vickerman, 2009).

In 1983, the disabled academic Mike Oliver coined the phrase "social model of disability" in reference to these ideological developments. He focused on the idea of an individual model (of which the medical was a part) versus a social model, derived from the distinction originally made between impairment and disability by the UPIAS (BRAIN, 2006). Perhaps as, Watermeger, Swartz, Lorenzo, Schreito and Priestly (2006) posit, disability can no longer be seen as a static feature of an individual but rather as a dynamic and changing experience defined by changing nature of environment.

Social model perspective, notes Hodkinson and Vickerman (2009), turns the attention away from identifying people with disabilities to identifying and addressing the barriers in society that restrict their full participation in everyday life. Thus, from this perspective, disability can be understood by focusing on the relationship between persons with impairment and the society or environment of which they are part. Therefore, the response to disability is the restructuring of society for it to be able to deal appropriately with people with disability. In this study, an extended use of the social model was in its analysis of how the society disables persons with physical disabilities by the way they are unnecessarily isolated from full participation in higher education.

The model facilitated the study by turning the attention away from identifying students with disabilities and addressing the barriers in secondary education institutions that restrict their full participation in learning activities. For instance, adapting teaching, learning, assessment methods to enable them to have full access to secondary school subject content. This implies that certain mechanisms need to be put in place to create an environment where all students, including students with physical disabilities, can participate equally in the process of teaching and learning. As Mwaura (2009) observes, disability is not a fixed state and reforms are, therefore, supposed to provide equal opportunities to SWD and even expose the various forms of discrimination and segregation, institutionalization and exclusion.

3. STATEMENT OF THE PROBLEM

A higher level of education enables students with physical disabilities to get better chances to integrate into society in general, and into employment in particular, so that they may sustain themselves financially with dignity. Therefore, it is pertinent to promote an inclusive learning environment for them in learning institutions which lead to academic success, and this prompted the study. It is a serious issue that the numbers of students with disabilities participating in higher education are minimal. Various studies point to issues in the learning environment and participation of students with disabilities in secondary education.

Lack of ramps in existing buildings, slippery floors and teaching facilities with seats suitable only for able-bodied students point to exclusive learning environment in secondary school institutions of education. Its note that participation of students with disabilities (SWD) in the learning activities in Buea Sub-division secondary school is poor, translating to below the total number of the students enrolled. Furthermore, It was observed that students with physical disabilities complete secondary at a statistically significant lower rate than able-bodied peers indicating that there are issues with the learning environment for this group. It is against this backdrop the study investigated learning environment and academic participation for students with physical disabilities in selected secondary schools in Fako Sub-division.

4. GENERAL OBJECTIVE

To describe the implication of learning environment on the academic participation of students with physical disabilities

4.1. Specific objective of the study

➢ To examine access to academic information and the participation of classroom activities by students with physical disabilities

➢ To examine teaching methods used and in regular classrooms attended by students with physical disabilities

➢ To establish assessment methods used to facilitate the independence of students with physical disabilities.

5. CONCEPTUAL REVIEW

5.1. The concept of learning Environment Defined

A learning environment consists of a wide set of features that affect learning. The idea of a learning environment implies a setting where intentions and design cannot account for everything that happens; some elements escape control or are at least unintended. Environment, then, is a mix of the deliberate and the accidental, the conjunction of planned and unanticipated events. To some extent, traditional teaching in conventional classrooms could support this dynamic—students could be given assignments to take in directions that show mastery but also imagination and creativity. Now, however, with minimally mediated access to large amounts of information and with a substantially enhanced social dimension available to students, the set of directions students can take in their learning is far larger and growing. Some of this change is sanctioned by faculty; other parts of it reflect the environmental changes brought by technology and a tipping of control in favor of students regardless of faculty intentions Barnes, (1997).

The discussion of learning environments should also include assessment and evaluation of the effectiveness of the environments that institutions create. Much has been said in recent years about new kinds of learning and new methods of assessing educational outcomes. Adaptability to change, mastery of complexity, and intuition for abstract concepts and objects are some of the mental qualities required in the technology-infused world. Problem-solving, critical thinking, and innovation are among the most-cited general objectives when learning outcomes are discussed. The value of authentic learning is clear, whether sponsored and directed by institutions or acquired by students through work, time off from study, volunteerism, or prior learning experiences. A thoughtfully designed learning environment allows for both authentic learning and appropriate assessment. As new models of learning environments are developed, new forms of learning will emerge, and educators must include assessment as a component of this evolution, Coleridge, (1992).

5.2. The Concept of Physical Disability

The concept of physical disability, as WHO (2011) observes is broad and covers a range of disabilities and health issues, including both congenital and acquired disabilities. Mobility impairments range in severity from limitations on stamina to paralysis. Some mobility impairments are caused by conditions present at birth while others are the result of illness or physical injury. Injuries cause different types of mobility impairments, depending on what area of the spine is affected.

5.3. Theoretical Frame Work

There are a number of 'models' of disability which have been defined over the last few years. The two most frequently mentioned are the 'social' and the 'medical' models of disability. The medical model of disability views disability as a 'problem' that belongs to the disabled individual. It is not seen as an issue to concern anyone other than the individual affected. For example, if a wheelchair using student is unable to get into a building because of some steps, the medical model would suggest that this is because of the wheelchair, rather than the steps.

The social model of disability, in contrast, would see the steps as the disabling barrier. This model draws on the idea that it is society that disables people, through designing everything to meet the needs of the majority of people who are not disabled. There is a recognition within the social model that there is a great deal that society can do to reduce, and ultimately remove, some of these disabling barriers, and that this task is the responsibility of society, rather than the disabled person.

5.4. The Social Model of Disability

This study was guided by Social model and medical models of disabilities. The approach behind the social model is traced to the civil rights/human rights movements of the 1960s. In 1975, the UK organization Union of the Physically Impaired Against Segregation(UPIAS) claimed: "In our view, it is society which disables physically impaired people." Disability is something imposed on top of our impairments by the way we are unnecessarily isolated and excluded from full participation in society (Hodkinson and Vickerman, 2009).

Social model perspective, notes Hodkinson and Vickerman (2009), turns the attention away from identifying people with disabilities to identifying and addressing the barriers in society that restrict their full participation in everyday life. Thus, from this perspective, disability can be understood by focusing on the relationship between persons with impairment and the society or environment of which they are part. Therefore, the response to disability is the restructuring of society for it to be able to deal appropriately with people with disability. In this study, an extended use of the social model was in its analysis of how the society disables persons with physical disabilities by the way they are unnecessarily isolated from full participation in higher education.

The model facilitated the study by turning the attention away from identifying students with disabilities and addressing the barriers in secondary education institutions that restrict their full participation in learning activities. For instance, adapting teaching, learning, assessment methods to enable them to have full access to secondary school subject content. This implies that certain mechanisms need to be put in place to create an environment where all students, including students with physical disabilities, can participate equally in the process of teaching and learning. As Mwaura (2009) observes, disability is not a fixed state and reforms are, therefore, supposed to provide equal opportunities to SWD and even expose the various forms of discrimination and segregation, institutionalization and exclusion.

5.5. The Medical Model

According to the medical model, people with special needs are visible only as patients, welfare or charity cases (Hales, 1996). This medical model views what ought to be wrong with people with physical disabilities rather than what they need, thus affecting their participation, mobility, loss of independence and social competence. The medical model considers.

5.5.1. Some Examples of a Medical Model Approach Might be

➢ A course leader who refuses to produce a hand-out in a larger font for a visually impaired student. The student cannot therefore participate in the class discussion;

➢ A member of staff who refuses to make available a copy of a PowerPoint presentation before a lecture. This creates a barrier to learning for the dyslexic students in the group who are likely to have a slower processing and writing speed and who will struggle to understand and record the key points;

➢ A Students' Union society that organizes an event that is not accessible to disabled members.

This medical model approach is based on a belief that the difficulties associated with the disability should be borne wholly by the disabled person, and that the disabled person should make extra effort (perhaps in time and/or money) to ensure that they do not inconvenience anyone else.

6. EMPIRICAL REVIEW

6.1. Schooling and Academic Participation for the SWPD

Eriksson and Granlund (2004) provide a definition of academic participation as an integrated term of involvement in activities, evident in the interaction process between an individual and environment. The term participation has several dimensions: taking part, inclusion, involvement in various life areas, and access to the necessary resource. This conceptualization means those students' experiences include participation and learning in all aspects of academic institutional life, in and outside the classroom. In addition, Pace & Kuh (as cited in Schreuer and Sachs, 2011) pointed that students with physical disabilities should be encouraged to expand and exercise the knowledge gained in formal learning to interact with students, faculty members, and other people outside the campus. Thus, formal and non-formal learning experiences, on- and off-campus interactions, are part of students' roles. However, depending on their particular impairment, most of the students experienced barriers to accessing their education relating to the physical environment or teaching and learning at some points during their studies.

6.2. Accessibility of Academic Information and Course Content

There are few studies done on students with physical disabilities in higher education in Kenya. Writing about Higher Education Access and Retention Opportunities for students with disabilities from selected universities in Egypt and Kenya, Wawire, Elarabi and Mwanzi (2010) posit that a major barrier to academic and social engagement was lack of adapted curriculum for students with disabilities in almost all courses. This practice not only limits the courses that students with disabilities take to those who do not need scientific manipulations as well as long periods of physical strain or field or laboratory work but also confines them to specific careers which may not be of their choice. Furthermore, the study findings point to the need for the reconstruction of the definition of disability in Kenya and Egypt that currently centers on visual impairments, in a bid to arriving at a more comprehensive understanding that includes previous neglected components that are relevant for policy and practical provisions.

6.3. Teaching Strategies in Higher Education

For the orthopedically disabled, articulates Olakulehin (2010), the medium of instruction can remain the same as the one of able-bodied students, but the former will need assistance in their mobility, access to the study centre, transport, etc. Students with physical disabilities, explains UNESCO (1994), may require special seating arrangement to meet their needs. For example, special chairs and lower lab tables to accommodate their chairs and allow for manipulation of tools and other equipment as well as flexibility with deadlines to submit assignments. The ability to engage each student, argues Heikinaro (2010), in the physical education lesson develops a teacher-student relationship that promotes learning at each students level of engagement. International drive to accommodate diverse learners in the classroom including SWD in the classroom as Magongwa (2009) notes has an impact on SWPD.

6.4. Assessment Methods for Students with Physical Disabilities

Schools have taken steps to strengthen the evaluation of students, posit Mwiria et al. (2007, by including scores from two continuous assessment tests to summative examinations. As a matter of necessity, this kind of reform should be scaled up by adapting assessment techniques to fit students with physical disabilities who, as a result of impairment, cannot cope in a normal setting. This necessitated this study to document the best assessment techniques for students with physical disabilities.

7. RESEARCH DESIGN

This study adapted a descriptive case study design, utilizing both qualitative and quantitative techniques in gathering data. The choice for this design was appropriate because it enabled the researcher to collect in-depth information concerning how learning environment was critical to learning needs of the students with physical disabilities in the selected secondary schools. The respondents were then observed and the information gathered was compared to the pre-existing theory. Qualitative methods provided the otherwise relatively non-existent data on the characteristics of SWPD in the schools selected in terms of assessment methods, teaching strategies and access to information.

7.1. Area of the Study

The study was conducted within the Buea municipality in the South West Region of Cameroon. The region has economic importance in commerce, transport, agriculture and small-scale industries. The region is the second most heavily populated and rapidly growing in the south of Cameroon west region. The region is mostly semi urbanized with high populations. A contributory factor to the high urban population in the region is the growth in places which were previously considered rural settlements. These growing places have now attained urban status through populations and development spills. However the region still displays wide disparities in urban and rural areas in terms of health care, social and economic activities in this study, a mix of urban-rural setting was used. This urban-rural mix choice made the study more of a comparable nature. The choice is also certain to provide a wider discussion and views instead of a one-sided view of the problem if urban areas are chosen over rural areas or vice versa. Seven secondary schools of both denominational, lay private an government were used to ease generalization of findings. This schools include; Government High School Buea, Presbyterian Comprehensive Secondary School Buea, Inter-Comprehensive College Buea, Government Bilingual High School Molyko, Buea, Government Technical High School, Molyko Buea, Baptist High School Buea and Frankfils Comprehensive Secondary School Buea.

7.2. Population of the Study

The target population comprised of all Students With Physical Disabilities in the selected schools, regular and self-sponsored; able - bodied students. This study selected 32 students with Physical disabilities from a total population of 2,105 people with disabilities in South West Region, Cameroon. Sampling Technique Purposive sampling technique was used to select the entire 32 SWPDs as the key informants. The students with Physical disabilities included (i.e., loss and limited use of hands or legs (limbs), people with serious problem with spine or people using canes or prostheses, braces, calipers, crutches, wheelchairs, or those who fatigue easily and have difficulty moving around school campus). According to the UN (2009) estimate, Cameroon's total population is 19,958,351 of which, 1,316,079 was the population of the South West Region. Estimation by the World Health Organization (2005) indicates that, there are 1.6 million people with disabilities in Cameroon. Therefore, the unclassified total number of persons with disabilities is 1,600,000 (which is about 8% of the total population). When 1,316,079 is divided by 8% (percentage of persons with disabilities in Cameroon) will equal to approximately 105,286 persons with disabilities in South West Region. Loaiza and Cappa (2005) provide that, the proportion of persons with Physical disability in relation to other disabilities is 2%. Therefore, 2% of 105,286 equal 2105 persons with Physical disability in South West Region.

8. FINDINGS

This section presents the study findings obtained through an interactive process of data collection and analysis involving both qualitative and quantitative methods. The data analysis and interpretation were based on the following study questions:

The student's focus group discussions revealed that friends delayed delivering handouts to them in time; notes from friends were sometimes not accurate so they were forced to compare notes from different sources making this a demanding task. The researcher went further to interrogate able - bodied students regarding their views in availing information to SWPDs. The study findings revealed that able - bodied students helped them to photocopy handouts whenever they were given by the teachers. They further observed that some SWPDs were gifted in the sense that they could write notes very fast although sometimes they joined classes when late due to their disability as one student commented: „…. Whenever we are given handouts in class, we do photocopy for SWPDs… in class

some of them can write notes very fast than us though they come to class late sometimes." In addition, the able - bodied students respondents interviewed explained that they spared front seats for SWPDs when late to class as well as assisted them with notes to catch up.

The study sought to investigate accessibility to classroom learning. The students" responses from the questionnaire showed their appreciation to the efforts few of the selected schools were making to ensure that all lecture rooms were accessible by constructing ramps to the existing buildings. The results of the study revealed that in all the seven schools selected for this study, none of the lecture classrooms had standard ramps. It also emerged from the study findings that in all the selected schools, accessibility to the lecture halls was hindered by high steps for a student in a wheelchair to navigate through or those in crutches to walk through as well as partial construction of sidewalks that denied easy ride for a student on a wheelchair when moving from one class to another. It emerged from the study findings that provision of suitable and frequent transport systems to ferry students with special needs from one location to another between home and school precincts was paramount. The student's respondents in most of the selected schools proposed a vehicle with a lift as a better option particularly for wheelchair user students who found it challenging to use bikes whereas SWPDs in other schools suggested to the researcher to provide shuttle services to facilitate their movement to and from classes.

The findings indicates that, the student and teachers questionnaires in the seven schools revealed that teaching group discussion and question and answer were the most commonly used strategies accounting for students 31 (96%), 29 (92%), 26 (82%) and school teachers 23 (100%), 19 (81.25%) and 17 (75%) respectively. These were fairly high percentages and indicated some possibility of accommodating students with physical disabilities since most of them were student centered. In group discussion of students, it was revealed that lecture method was dominant although group discussion and class presentation teaching were also used. The students observed that when a variety of methods of teaching were being used, they were in a better position to understand new concepts taught in class. The same view was shared by one of the principals who observed that as a teacher different methods of teaching enhance learning of new theories and ideas.

In addition, during classroom observations, it was observed that majority of the school teachers used a variety of teaching methods. Even where lecture method dominated other methods like question and answer and class discussions were also used. The study findings revealed that question and answer method was enjoyable when the teacher could give a chance to all students and not only those who seemed to know. It was also observed that during question and answer method, teachers concentrated on the active students. This could disadvantage 6.2% students with cerebral palsy and 9.4% amputees who were not able to raise their hand to answer a question as a result of impairment as well as sitting behind the class. However, the school teachers indicated that some students with physical disabilities did not answer questions freely in class without being prompted.

findings indicate that 80% of assessment methods in all the schools were suitable to enhance academic achievement while 16 % revealed they were not suitable. It further shows that 4% was non - committal. The study results from the schools teachers' questionnaire revealed that through the assessment methods, it was possible to note the weaknesses of the students and rectify them if the methods were used effectively. They further observed that students with physical disabilities particularly 43.8% wheelchair users were able to research and write their answers without problems as they performed well in their examinations given the accessibility needs met. It can be noted that whereas the schools teachers 'aimed at including the student in learning activities, there was a conflict of perception where the student felt demoralized. It is important, however, to mention that if students with physical disabilities were assessed in a practical setting such as dancing, the specific unique needs of the students would have to be addressed, and it is in this type of situation that teachers consultations with the students can be most useful.

The female students on crutches noted that sometime the assessment methods encouraged rote learning as they crammed for examination without comprehending the concepts learnt in class for the purpose of application in the real life situations. They added that technical units should be tested practically without examinations as this is salient in the world of work where practical aspects are paramount. The study findings also revealed that although 6.2% students with cerebral palsy experienced examination as very exhausting, they felt that writing examinations was the only way to learn and gain knowledge in a particular subject area. As illustrated by this comment:

Assessment helps me understand easily what has been taught in class and what to do practically in a really situation (A male student with cerebral palsy, 2016).

The study findings further showed that 18.8% students with physical disabilities experienced some challenges as a result of practical work in the laboratory. For example a female student on crutches explained that practical work was more tiring and sometimes they ended up not obtaining an accurate result for instance,

"…the practical work expects more physical ability from me that I can't offer…. Sometimes practical work requires me to go alone to far areas which become cumbersome."

8.1. Recommendations

Based on the study results and the conclusions, the following recommendations were made in order to facilitate conducive learning environment and academic participation of students with physical disabilities in the two institutions.

8.2. Architectural Designs

There is need for more barrier- free and disability friendly environment to enable students with physical disabilities to have access to buildings, academic information, materials, assistive devices and other equipment to promote their mobility as this will increase their participation in learning activities. This could be achieved by school administration removing all physical barriers within institution's physical environment by construction of ramps that are according to international standards such as 1:12 (One inch of rise to 12 inch on slope), 3 feet width and 6 feet land width with 60" length and user-friendly pavements in all establishments within the campuses.

8.3. Sensitization and Awareness Programmes

There is need for schools administration to promote sensitization programmes such as seminars, sporting activities, workshops and forums to increase the level of awareness of the needs, aspirations and capacities of students with physical disabilities with a view to enhancing their acceptance, participation in learning activities and integration in the university communities.

8.4. In-Service Training and Refresher Courses on Teaching Strategies

There is need for administration to provide in-service training and refresher subjects on inclusive teaching and learning methods to the school staff. This could ensure that teaching strategies used are appropriate to students with special needs in general in the selected schools. The teachers should meet with students with physical disabilities at the beginning of every term to discuss the appropriate adaptations on the teaching methods to enhance their participation in class learning activities.

8.5. Concluding Remarks

Based on the study findings, the following conclusions were made: The learning environment was limiting full participation of students withϖ physical disabilities in their academic matters. Proper infrastructural adjustments seem to be critical for promoting inclusivity and accessibility for all. The schools need to provide an environment where there is equality of opportunities and where SWPDs can enjoy a quality experience while pursuing their studies. Appropriate adaptations to meet the diverse academic needs of SWPDs had not been fully achieved in the two public universities. These would include spacing, furniture, technologies, ramps, equipment in all lecture halls, laboratories and libraries that meet internationally accepted standards for persons with disabilities.

These had negatively affected the participation of SWPD in their learning activities. There was inappropriate accommodation of students with physicalϖ disabilities in teaching and learning activities. This is because there was little involvement of the students by some lecturers in class activities. Teacher's attitude towards SWPD had an implication in their academic endeavors thus they need to be properly equipped with knowledge on the diverse unique needs of the students. There were limited adaptations of teaching methods to suit specific needsϖ of students with physical disabilities. This is because the students in selected schools were not homogenous in terms of their unique disabilities. This lack of suitable adaptations based on ones needs had a negative implication on learning of the students. There was inadequate time given to students with physical disabilitiesϖ during examination and practical's in the schools. This was due to many students with physical disabilities sat for their examinations in common rooms with able - bodied peers. In fact, this was likely to impact their performance negatively.

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