

Measures for inclusion: Coping with challenges/ barriers faced by learners with physical impairment (PI) in regular schools.

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Abstract: *Thoughts and actions may either be encouraged or discouraged by the environment people find themselves. Permissive and/or restrictive social and physical environments have varying impacts to learners with disabilities in schools. If the environment is littered with barriers, one's progress is hindered, making it difficult for one to easily achieve, and the reverse is also true. Like what Roe (2008) says, "... for children's development and ensuring effective inclusive practices, professionals need to create contexts that promote both social and academic inclusion. Since there are numerous forms of barriers and/or challenges that may be faced by learners in regular schools, this paper shall only examine social and physical barriers faced by learners with physical disabilities. To ensure smooth inclusion of learners in regular schools, an effort shall be made to suggest strategies that may be employed to minimise social barriers. Research and practice have been brought together in this position paper, to examine social and physical challenges faced by learners with physical impairment.*

Keywords: *physical disability, impairment, barriers, inclusion, social inclusion, adaptation, access, infrastructural limitations, attitudinal barriers*

I. Introduction

While every impairment is characterised by diverse limitations in multiple areas of functioning, physical disability has been known to be both a personal and physical challenge. It is quite evident, from even a cursory review of literature, that those persons with physical disabilities are almost always deprived of benefits that children with non-disabilities enjoy. With any form of a physical disability, learners have often been discriminated against in a number of most basic human rights. Many of these children have even been denied education, probably one of the most fundamental rights in any democratic society. Those with physical disabilities and happen to be in schools, find it hard to take part in most indoor and outdoor activities, due to either social, physical/infrastructural or architectural limitations that may come with their physical condition. It is these social and/or physical limitations discussed in this position paper as barriers. The purpose of this paper is to examine some of the barriers, which come as challenges to learners with physical disabilities. The paper shall also make an effort to illuminate strategies that may be used to minimise such barriers to ensure smooth inclusion.

II. Understanding The Terms 'Physical Disability', 'Barriers' And 'Inclusion'

A physical disability may be understood as a limitation in one's physical functioning, as caused by either a malformation/deformity, missing or weak body part. Hallahan and Kauffman (1997) also observe that a physical disability is a condition that pertains to total or partial loss of a person's bodily functions, whose physical limitations or health problems predominantly interfere with one's day to day activities, to such an extent that special services, training, equipment, materials and/or facilities are required. If there be no proper systems put in place, such learners will remain dysfunctional because of barriers always found in the environment. Barriers can be taken to be obstacles, or anything that prevents progress, or makes it difficult for someone to achieve something (The Free Encyclopedia, 2011). In their numerous forms, barriers can be social, physical, infrastructural, architectural, etc., factors which can militate against one's smooth inclusion in a regular school. Although the term inclusion may be understood differently in different spheres of life, in education, it has been understood as a placement strategy where all students, with or with no disabilities, are placed in their neighbourhood schools in general education classes (Hallahan and Kauffman, 1997). To ensure smooth inclusion of learners with physical disabilities, barriers in whatever form, have to be minimised or totally removed.

(a). Social/Attitudinal Barriers

It is through interaction with others, as Roe (2008) observes, that humans learn and make sense of their world. With social barriers, such interactions will regrettably never be realised. By definition, social barriers may be understood as phenomena caused by intolerant people's attitudes, which if not corrected, may be a major

barrier to one's participation in school activities. Social barriers emanate from human attitudes; hence, Baine (1991) terms them attitudinal barriers. Experiential contacts with persons with disabilities have shown that societal attitudes impose the greatest barrier to persons with any form of disabilities. If mainstreaming of children has a social, emotional and academic benefit, it therefore goes without say that the social environment in which the learners with disabilities (LWPDs) finds themselves, has to be most welcoming in every sense of the word. It is important to note that the integration of people with physical disabilities in society should always first start with their inclusion in their immediate families, then schools, where much talk has been made about inclusive education. From its definition, this form of education has been known to give an opportunity for both the non-disabled and those living with disabilities or any other form of exceptionalities to share with one another, accepting, respecting and celebrating each other's differences in the process.

Understanding of Social barriers

Social barriers are created if unfamiliar social situations arise and remain not well explained. In regular schools, as UNESCO (2004) contends, anxiety-provoking situations can result in social barriers to one with a physical disability. Upon initial interaction with LWPDs, the non-disabled are often faced with an unstructured situation, which further causes stress, anxiety and confusion (Heider, 1997). If the most socially accepted rules and regulations for a proper welcoming environment are not well defined, those with disabilities retreat, thereby making them socially isolated, which becomes the basis of social barriers. It has been a common practice that some learners with disabilities have not always been accepted in most mainstream schools. Such general lack of acceptance in regular schools tantamount to social rejection, which is often characterised by: being feared, stared at, belittled, shouted at, despised, degraded, teased, given labels, rude remarks, name calling, or such patronising and prejudicial reactions which show no tolerance of someone's company. All these, including the way one is greeted, may culminate to social barrier. As long as a learner is restrained from socialisation, especially because of their physical condition, it virtually is a social barrier (Baine, 1991). Such an attitude militates against the learner's quest to participate in different regular school activities. Such attitudes begin by the way learners talk and feel for each other.

Lack of affective preparedness, on both parties, also causes a social barrier on one with a physical disability. If the learner with a disability just gets to the school without preparedness of the non-disabled, there will be an apparent fearful and negative reaction from those with no disability. With a disability, one will be viewed as different and strange, warranting rejection and isolation on the basis of a disability. Hallahan and Kauffman (1997) further crystallize by saying that people tend to resist the strange because it does not fit into the structure of an expected life space. This sounds true since strange and mutilated bodies trigger a conflict in the observer, because of incompatible perceptions. It becomes a social barrier to a learner with a physical disability if they stop performing a particular school task because someone constantly shows them a negative attitude, based on perceived strange and unexplained body deformities.

Lack of experiential contact and exposure to persons with disabilities is another contributing factor to the origin of social barriers. In other words, negative attitudes may be a result of lack of factual information about disabling condition(s), a contention strongly advanced by Dhemba (2015). Repulsion and discomfort are felt when those with no disabilities encounter certain disabilities such as amputations, cerebral palsy, muscular dystrophy or any other strange body deformities. Long experience of staying with persons with different forms of disabilities has also shown that severity of impairment has far-reaching effect on the non-disabled, hence the reason for social isolation. As severity relates to level of functional limitations involved, Heider (1997) notes that the more severe a disability is, the more negatively it is perceived and the more isolated one will be, so is degree of visibility. Experiential contact with persons with physical disability has also shown that the more visible a disability is, the more negative an attitude it triggers from the non-disabled individuals, who even further distance themselves, causing even more un-bridged social barriers.

Myths of disabilities are also another reason for negative attitudes leading to social barrier. Safilios (1990) observes that the more contagious a disability is believed to be, the more fear of personal attraction is aroused. On the whole, the non-disabled learners' unfounded beliefs about physical disabilities, have contributed in social isolation of these clients, thereby causing social barriers on the part of LWPDs. Because of lack of understanding and stereotypic beliefs, a fear factor feels in those with no disabilities, who always draw a conclusion that LWPDs are a health and safety risk to be close to in school activities in general, and class tasks, in particular.

Effects of social barriers to LWPDs:

Attitude is seen as central and hence an overriding factor over everything. Public attitudes can make a profound influence on how LWPDs rate themselves and their opportunities in education. Due to negative attitudes, LWPDs are chosen fewer times as playmates, friends or work/group mates than other children. Such a

scenario is seen prevalent in say team games, be it indoors or outdoors. With a form of a physical disability, one may be side lined or socially shut out, not to participate in specific school-organised activities like trips, shows, etc. Such makes these learners feel very unpopular, in regular classes, thereby creating in them feelings of repulsion and discomfort. Because of such feelings, learners become dispirited and lose confidence and esteem of self. Due to rejection, LWPDs feel discriminated against, experience feelings of helplessness, inferiority and lack of confidence. At worst, they develop a sense of deep-rooted depression, resulting in them not attempting to contribute in any learning activities, since one feels that they are not part of the learning process.

As they are discriminated against and/or isolated from school activities, like group work, drama etc, the LWPDs may react by trying to hide their anger. Frustration makes one withdraw into fantasy, or may regress into less mature modes of behaviour, like imagined helplessness or by demanding more help from others. One may also compensate people's repressive attitudes by finding an alternate interest, which will satisfy them. Frustrations out of social barriers may even make one aggressive, if not physically, then verbally. One may repress their desire by superficially accepting the situation without any other efforts or other forms of adjustment. One may also react against originally set goals saying that they are not worth achieving, and at times even degrading those who are achieving (Heider, 1997).

Efforts to minimise social barriers:

Those with no physical disabilities should not continue holding fears and other uncouth feelings towards LWPDs. Efforts to minimise social barriers in schools would only yield results if problems that influence such attitudes were addressed, in the first place. Teaching experience has shown that some attempts to minimise social barriers have yielded positive results, for inclusion.

The teacher has to inculcate positive attitudes in all those who find themselves interacting with LWPDs at school. Since one of the reasons for negative attitudes is lack of information, teachers have to provide the non-disabled learners with necessary information about LWPDs. Teachers need to help dispel prejudices towards people with disabilities, which emanate from factors like ignorance or superstition. In order to develop respect and acceptance of their counterparts with physical disabilities, the non-disabled learners need to be taught about different forms/types of such impairments. This can be done through: role-plays, motivation speeches, short stories, formal/non formal lessons, etc.

Social barriers can also be minimised by providing the non-disabled individuals with practical personal experiences with those learners with physical disabilities. This is where the non-disabled learners are given an opportunity to simulate a particular physical disability, not in a derogatory way, though. Simulating a disability makes the non-disabled peers directly experience what it is like to be disabled, thereby developing a better understanding of handicapping conditions and feelings one has (Anthony, 1972). For example, children simulate wheel chair or crutch users, where they can take some time, practically using a wheel chair or crutch(es), as they move from one point to the other. It is hoped that such an activity makes those with no disabilities become empathic, and not sympathetic to those persons with physical disabilities. After some time in a wheel chair, or using any mobility assistive device, some children can better understand mobility rehabilitation needs for LWPDs. Role-playing helps the non-disabled to experience feelings of being restrained and being incapacitated. As the amount of contact increases through play, learners may become more positive towards their peers with physical disabilities, ultimately developing positive attitudes. If properly managed, such plays have been to help in eliminating prejudices. Once those with no physical disabilities develop positive attitudes towards those with physical disabilities, social barriers naturally fall off!

Such a friendly hands on experience has to be augmented with authentic literature about physical disability. On this note, Marinelli and DellOrto (1984) say that many researchers have attempted to change attitudes towards LWPDs by combining the contact experience with some type of information about the disability, with remarkably consistent results. Still in an effort to develop positive societal attitudes, there should be societal rehabilitation programmes in the communities the learners with physical disabilities come from. The advocacy should be on reducing prejudicial attitudes towards LWPDs. The school can, for example, invite successful members of the community, preferably those with a similar disability, to give motivation speeches. This can be on open days, career days or parents meetings. Contacts between prominent personalities with disabilities and non-disabled learners may help minimise or eliminate, social distances which commonly exist between LWPDs and their counterparts with no disabilities. Bridging of such social gaps may be celebrated as the basis for breaking social barriers. From the foregoing, it may appear that information without contact has limited positive effects, just like contact without information. In order to minimise social barriers, the most important strategy is a combination of information about the disability and practical association with other children. This helps to dispel myths and inculcate a sense of tolerance and respect of differences, allowing smooth inclusion of LWPDs.

(b). Physical and Structural/ Architectural Barriers

Too often, as Hallahan and Kauffman (1997) have observed, people think of learners with physical impairment as unable to learn. This observation is just one of the indicators towards how often these children are made targets of prejudice and discriminatory practices. Emphasis is normally on what these learners cannot do, than what they are capable of doing. Such presumptions make LWPDs develop feelings of inferiority. It goes without saying that the school should be concerned about how to care for these learners to ensure smooth inclusion. The school has to make sure that one gains independent movement within the school premises and classrooms. Such interactions with the school environment has to be done in the most facilitative and efficient manner. Independent movement, for example, can only take place if the given environment is not only least restrictive, but also most facilitative.

Understanding of Physical barriers

For many LWPDs, accomplishing various school related activities has always been a nightmare because of physical/ infrastructural and/or architectural barriers which are on their own handicapping. The Free Encyclopedia (2011) defines physical barriers as conditions or structures, which impede or prevent the movement or progress of another object in its intended direction. Physical barriers have always been known as having a detrimental and/or handicapping effect on the otherwise intended forward movement of LWPDs. It is important to note that, in a school environment, any form of a physical barrier is handicapping by nature, to one with a physical disability, and may take numerous concrete and tangible forms.

Forms of Physical barriers

Major forms of physical barriers are architectural/infrastructural and those physical in nature (Marinelli and DellOrto 1984). Physical barriers refer to: uneven ground or uneven terrain, (for example, the non-movement facilitative ground or terrain within the school), and architectural or infrastructural barriers refer all those features that are architectural in nature, like: poor door designs and doorways - as characterised by door handles not at the correct height, inaccessible doorways, slippery floors, undesirably high chalk boards, tables and chairs- in the classroom or in the dining hall. These also include narrow spaces for wheelchairs, toilet seats and hand basins, especially left at heights not facilitative or user friendly to one with a physical disability. To this mix, are also shower-tapes left at levels that limit access by persons with physical disabilities, say if one wants to bath independently and/or privately.

The above examples have always made various school activities a challenge and hence a bane in LWPD's efforts to be smoothly included. Unless such physical barriers are minimised, or at best removed, these learners will always remain tools to be embarrassingly pushed around, making them feel dispirited because of their physical condition. At the end of the day, the whole scenario jeopardizes efforts for smooth inclusion.

Effects of Physical barriers to LWPDs

Like every other learner, those with physical disabilities also want to accomplish all school chores without traces of disappointments *at heart*. However, because of physical barriers, environments don't always tend to be very restrictive for functionality of one with a physical disability. For lack of functioning, as characterised by failing to do what others are doing, these learners suffer severe depression and disappointment. Like has been noted in restrictive social barriers, these learners also develop a feeling of helplessness, if the environment is not welcoming, but restrictive. For failure to navigate a given environment, what naturally follows is a deep sense of frustration and depression in one with a physical disability. Such a learner ends up hating all those high mobility regular school activities.

Know/ understand your learners as an individual

LWPDs are a heterogeneous group, each with unique individual strengths and weaknesses. For this reason, therefore, there is need for the teacher to understand the individual condition of each learner, in order to adequately minimise physical barriers. In their heterogeneity, children with physical disability are characterised by physical deformities like: microcephalus, hydrocephalus, cerebral palsy (monoplegia, hemiplegia, triplegia, paraplegia, quadriplegia, diplegia and double hemiplegia), muscular dystrophy (which interferes with normal functions of muscles and joints), spina bifida, etc. (Hallahan and Kauffman, 1997). Generally, these learners have problems of mobility, manual dexterity, coordination, or perception resulting from the lack of proper development of, injury or weakness of a body part(s). Each specific problem may be unique, in terms of nature and severity. For this reason, the interference, limitations and/or challenges to effectiveness and functioning in different school activities is also different. What may be a barrier to one learner, may not affect the other learner, that's the reason for proper understanding of learners' individual condition – *as an individual*.

Although LWPDs disabilities have the same needs as the non-disabled learners, their means of satisfying the needs are always limited. These learners can only take part in different physical activities like ball

games or athletics, after proper modification of the games, facilities and the environment that should not, in any way, harbour physical barriers.

How to minimise physical barriers

Teachers should advocate for modifications and/or adaptations of the whole environment in which such learners find themselves. The creation of Least Restrictive Environment, as advocated by The PL 94-142 should be the basis for all intervention strategies to minimise physical barriers in these learners. Modifications should be made to the physical and infrastructural environments, to facilities and equipment found in the regular school. As long as there will be no such modifications/adaptations, physical barriers will always be there. Like every other learner, LWPDs also want to participate and succeed in various school activities. Teachers should, therefore, keep the expectations of these learners high by minimising physical barriers. Those mobility limitations which naturally militate against smooth inclusion have to be carefully thought of and managed by the regular school. As far as possible, all objects and designs, which are barriers by nature, and hence adding on to the person's handicap, have to be removed. In order to ensure a smooth inclusion for LWPDs in various school activities, the physical environment has to be facilitative, user friendly and enjoyable to these learners. In other words, the environment has to be least restrictive, if the recommendation of The Warnock Report of 1978 is anything to go by, also as read together with the PL 94-142. Teachers have a duty to, therefore, make an effort to always create an atmosphere where smooth inclusion and optimum learning could take place by removing the architectural barriers, which prohibit or limit the participation of the LWPDs.

Assistive devices/gadgets/tools/equipment

Regular school environments are naturally littered with barriers which militate against functionality to one with a physical impairment. What these learners, therefore, need are practical intervention strategies, which will see them enjoy smooth inclusion, as opposed to just being pitied. Such interventions can come through assistive mobility devices or equipment. While the school should always encourage the use of residual function, there are cases where teachers have to encourage the use of prosthetic and orthotic devices, to help LWPDs to better function on daily basis. Such mobility devices/gadgets may include examples like wheel chairs, crutches, braces or such similar mobility tools/equipment. Unless some learners, say with spina bifida (a congenital midline defect), are given orthotic devices like thermoform braces, they will not function in school activities which require high level of mobility.

III. Conclusion

From the foregoing, it may be learnt that learners with physical disabilities are often targets of prejudice and discriminatory practices. Such negative attitudes towards them, place limitations on one's expectations, making them devastated and weighed down by their difficulties. One of the raised factors that influence an individual's ability to participate and achieve in school activities is the degree to which one is able to maintain a state of social and physical adjustment. As one meets limitations to full participation in these areas, it suggests a culmination of social and physical barriers. Smooth inclusion of LWPDs can only be possible when change of attitudes and necessary adaptations/modifications are accomplished. The belief that LWPDs benefit through an inclusive model only turns to be true if social, architectural and physical barriers are minimised, or at best eliminated. For smooth inclusion, there should not be categorical boundaries as marked by social and physical considerations. Regular schools should minimise such barriers by making sure that both the social and physical environment, that surround LWPDs, remain least restrictive, in line with the dictates of PL 94-142. With proper barrier free environments, it is hoped that learners with physical impairment will always achieve great success. As the social and physical environment becomes barrier free, these learners will find themselves smoothly included, and find all school activities facilitative and enjoyable. In a barrier free environment, chances are that learners with physical impairment become objective towards their physical disabilities.

IV. Recommendations

Factoring in the above, the following may be passed as recommendations used to minimise barriers:

- Regular schools should be able to maintain a state of positive social and physical adjustments.
- Smooth inclusion of LWPDs can only be possible when change of attitudes and necessary adaptations / modifications is accomplished.
- All paths that link places to be travelled by the learner like: the dining hall, toilets/ bathrooms, the school office, the sports grounds, the parking lot, and paths leading to special rooms like physiotherapy room have to be well developed to be accessible, with or without the use of different forms of mobility devices.
- Social, architectural or physical barriers, which interfere with learners with physical disabilities, have to be minimised, or at best eliminated.

- Doorways have to be remodeled and be wide enough to allow wheel chairs in the classrooms. To facilitate smooth entrance into the classroom, ramps, handrails and other mobility-assistive aids have to be in place. (Such designs permit freedom of movement to LWPDs, and their absence culminates to physical barriers).
- Classroom equipment are to be made with a particular child in mind, these include: special chairs like corner seats with lap straps, leg position and footrests or other special support designs, cutout tables (to support one as they sit or stand), etc. (Marinelli, 1984).
- Classroom floors have to be designed in such a way that they are not slippery, for learners using crutches or walks. The school should make sure that the classrooms used by these learners have non-skid surface floor, with rubber tiles, or covered with other non-skid surfaces like a wall-to-wall firmly fixed carpet, which does not slide.
- Teachers must modify the classroom environment in terms of furniture space. The classroom has to be spacious. It will be a physical barrier if a learner with a physical disability will not freely move around in the classroom performing different functions.
- Special equipment like bookracks/stands, for children who cannot hold books, like the muscular dystrophy should be provided. Page turners like mouth stick (wand) or head stick, for those without both arms should be in place, for the benefit of LWPDs using computer keyboards. For pointing activities or painting, the teacher should make sure that the learner uses the mouth or head stick. Other equipment, which include supporters and supporting boards, should be provided where the learner writes/draws in a tilted semi-standing or kneeling position on a table or counter (Hallahan and Kauffman, 1997).
- The regular school has to provide a barrier free transport system by acquiring a vehicle that provides facilities for independent loading of some of these children, as they come or go out.
- The teacher has to design games and/or physical activities with little mobility for LWPDs. Depending with the nature and degree of the physical disability, a learner with such a condition can be a goal keeper in a soccer ball game.
- A plate used by a learner with physical impairment, especially those with neurological problems which affect coordination, has to be attached to the table to keep it from moving.
- Without both lower limbs, one will be taught to use arms to move about in a wheel chair. Such a child will be made to make use of object-pickers to retrieve objects on the floor, in case something drops.

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