EARLY CHILDHOOD DEVELOPMENT (ECD) CENTRE DESIGN TO MEET THE NEEDS OF CHILDREN WITH VARIOUS DISABILITIES

1 Introduction: Universal design of ECD centres

Universal design aims to create facilities and spaces that accommodate the needs and abilities of the widest possible range of people. It acknowledges that among any group of human beings, of any age, there is diversity in physical, psychological and social functioning, and that many of the adaptations that might be needed to accommodate someone with a disability will have benefit for others as well (for example, a ramped entrance for a wheelchair user is also useful for a mother with a pram, or an elderly person). Universal design does not need to be high-tech or expensive. Careful thought in the initial design of a facility is generally the best and cheapest way to achieve it, and much can be done with minor adaptations using locally available materials.

In considering the design of ECD centres, the lifespan of the facility must be borne in mind, together with the likely number of children to pass through the centre over that time. It is pointless to wait until the centre actually enrols a child with a disability before looking at accessibility. Firstly, many families would simply never approach the centre to enrol their child if the facility was inaccessible. Secondly, if they did, the time taken to design and add adaptations could delay the child's participation at school by six months to a year or more. Finally, retro-fitted adaptations are usually less effective and more expensive.

Given the estimated prevalence of disability (worldwide 15%), it should be taken for granted that *every* ECD centre will at some point need to accommodate children with disabilities. The perception in many communities (and among service providers) that childhood disability is rare is generally due to the inaccessibility of public spaces and the stigma often attached to disability – the children are there; you are just not seeing them! Well-designed ECD centres can go a long way towards ensuring children with disabilities access early education – with a lifetime effect on their opportunities and potential as well as benefitting children without disabilities who attend inclusive learning environments

2 Universal design for ECD centres

Universal infrastructure design for ECD refers to the design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all children regardless of their age, size, ability or disability.[1]

Design of Early Learning can also be defined as " It is designing early education settings so all children as equal and valued members of the program, may access and engage in all learning opportunities, learn from a common curriculum according to their individual strengths and abilities, and demonstrate their learning in multiple ways."[2]

[1] Adapted definition and descriptions taken from Building for everyone: A universal design approach: Planning and Policy: www.universaldesign.ie. The design comments have however been amended quite substantially
[2] https://fpg.unc.edu/sites/fpg.unc.edu/files/resources/presentations-and-webinars/ConnPowersBTJ(1).pdf

3 Rights of children with disabilities[3]

The assumption is that one can generalise on all children's rights. Discrimination may be direct or indirect and as a means to educate society on disability issues, it is important to state these rights separately.

Children with disabilities:

- Have a right to inclusion, integration and mainstream facilities and services;
- Have a right to a normal environment;
- Have a right to all other benefits enjoyed by their non-disabled counterparts and siblings;
- Have a right to family, social and community life;
- Have a right to sports and recreation;
- Have a right to an accessible environment;
- Have a right to develop independence and self-reliance;
- Have rights to special needs and attention;
- Have a right to be different;
- Children who are deaf have a right to sign language;
- Have rights to devices that assist them when they need them;
- Have a right to appropriate active learning that is suitable for their abilities without them being isolated.

4 Legal and regulatory environment

The rights of children with disabilities as set out above and the physical environment for accommodating children with disabilities is regulated by a myriad of acts, regulations, White papers, frameworks and strategies, policies, etc. of which only a few are listed below:

- The Constitution of the Republic of South Africa, 1996 Children's Act
- Children's Act (38 of 2005, April 2010)
- Guidelines for ECD services (DSD, 2006)
- National Development Plan
- National Integrated ECD Policy 2015
- Framework and Strategy for Disability and Rehabilitation Services in South Africa 2015 – 2020
- White Paper on the Rights of Persons with Disabilities (2015)
- National Norms and Standards Relating to Environmental Health in terms of National Health Act**,** 2003 (Act No 61 of 2003)
- National Building Regulations and building standards Act,1977 (No. 103 of1977)
- National Building Regulations SANS 10400 Part S: Facilities for Disabled Persons
- United Nations Convention on the Rights of Persons with Disabilities (UN CRPD), 2006
- Protocol to the African Charter on Human and Peoples' Rights on the Rights of Persons with Disabilities in Africa, 2018

[3] Guidelines for Early Childhood Development Services: Department of Social Development, UNICEF, 2006

5 Principles for an inclusive environment

i. **An inclusive environment cannot provide for every possible need.**
An inclusive design cannot claim to meet every possible need but it can try and accommodate all persons – the baby, toddler, pregnant mother, and aged grandmother - that make use of this building at different intervals. A handrail and non-slippery floor for will often achieve superior solutions that benefit everyone. When consideration is given to the needs of persons with disabilities within the design process, it will secure benefits for everyone.

ii. **All people should be able to access the building.**
The site should be flat. There should not be any stairs. The threshold of the standard low cost ECD centres is 75mm that make is accessible to all. Window sills are low on the one side of the building to allow children a view outside.

iii. **The design should create an enabling environment for children with varying abilities**
Care should be taken to create an enabling environment not only for children with physical impairments, but also for children with intellectual / psychosocial disabilities. It is important to understand the issues or barriers that children with different impairments may experience.

iv. **Inclusive design provides for flexibility in use.**
Inclusive design should provide for flexibility of use of space. The standard low cost ECD centres are thus provided with a movable internal wall that can provide for either a nursery for babies or for smaller classes for children with specific educational needs that may require less noisy surroundings, etc.

v. **The core of inclusion is attitude**[4]
"It's about relationships. Practitioners, management, social workers, other children - all must be welcoming of children with diverse abilities. Infrastructure design will create a more enabling environment but it will not guarantee a child's inclusion."

6 Who are we designing for?

When considering the design of ECD centres, it is useful to keep in mind the different kinds of disability or special need we hope to include. These include:

- **Children with physical impairment:** These could include children with a neurological disorder that affects different parts of the body (e.g. cerebral palsy), children with specific problems with their legs (e.g. amputation, bone conditions, club foot), with hand function limitations or children with developmental delay who are still learning to move around independently. Each will have different needs and abilities, but could benefit from similar adaptations.

[4] Sue Philpott, KZN, 2018

Note: while many people think of disability primarily as someone who uses a wheelchair, few pre-schoolers will have access to wheelchairs they can push themselves. Some might have special buggies that are pushed by others, while others might be able to walk with the help of an adult and/or a walking aid. Others (especially if they are dependent on public healthcare) will have no mobility device at all, and might crawl or bum-shuffle. This is not as a result of the child not needing a mobility device but rather a lack of service provision. Similarly, many children can independently propel themselves if they are fitted in the correct device, unfortunately, there is a significant lack of skilled seating practitioners who are knowledgeable in the field of appropriate device assessment, prescription and fitting.

- **Children with hearing and/or visual loss:**
    - ***Hearing loss*** is not uncommon in young children, often due to recurrent ear infections that are not treated successfully. Parents and/or teachers may not even be aware of the problem until children are slow to speak or display speech errors which manifests in their learning but they may still not present their child as having a disability. Hearing loss often goes undetected and if mild, often goes undetected by a child's ability to lip-read and interpret visual cues
    - ***Visual impairment*** (partial or complete) can be caused by a number of factors, and many children with visual problems (especially minor ones such as short-sightedness) will not be identified by preschool age. Many will not have access to optometry services and spectacles, even if they would be perfectly functional with minor help. The Department of Health's recent school health initiative has screened thousands of school-aged children and found an unexpectedly high rate of hearing and visual impairment.

- **Children with behavioural difficulties:** These could include children with autism spectrum disorders, socio-emotional problems, sensory integrative dysfunction, and ADHD (among others). Children might be highly distractible, unpredictable, and sensitive to noisy or busy environments (among other things). They may be physically very active, without being able to judge what is safe, respond to instruction or prevent themselves from getting hurt (less than is normal for children of this age). Again – while not all will be classified as having a disability at all, many preschool age children could have some of these features, and would benefit from adaptations which accommodate these needs.

- **Children with intellectual and or psychosocial disabilities:** These children may experience difficulties in cognition and perception that may affect navigation and orientation skills which may increase the likelihood of tripping or falling[5]

- **Children with epilepsy:** In certain parts of South Africa epilepsy is endemic due to pork tapeworm infestation. While most children with epilepsy will have only occasional fits, some will have more frequent attacks and are at risk of injury due to falls.

- **ECD Practitioners / employees:** consideration must be given to ECD Practitioners / employees with disabilities / difficulties in terms of their barrier free work space and environment.

[5] While provision is made in the Children's Act for children with disabilities up to the age of 8 to be in ECD centres and while some ECD centres are in some instances allowing children with intellectual disabilities to attend ECD centres, the experts consulted see this a very controversial issue which should be addressed by the Department of Basic Education.

While the primary consideration in this guideline is for children with disability, adults with disability – whether teachers, helpers or parents may also at times be affected by ECD centre design.

Design considerations must take account of the context of most community ECD centres, which have extremely limited budgets and often very few staff. In many rural and peri-urban areas, they may not have electricity or piped water. Available learner transport, local terrain, infrastructure and many other factors will affect the access of children with disabilities to ECD and may have indirect design implications. The context of each centre needs to be well understood in deciding the final design. Where “gold standard” specifications cannot be met, it is often possible to find a reasonable alternative with a little ingenuity (and ideally the assistance of an occupational therapist or someone with a good knowledge of disability and universal design).

7 ECD design to provide for human abilities

Standard low cost modular designs (ready for building plan submission) and costing are available for ECD centres catering for 40, 60, 80 and 100 children. A number of experts on disability in ECD centres made inputs in this document. Recommendations pertaining to the physical structure have been incorporated in the designs and costing but some of these recommendations can only be applied with the drafting of site plans and during the construction phase e.g. the construction of well compacted pathways and the placement of the centre on site to ensure that all new builds are within 10 to 30 meters from the gate Other recommendations aim to guide practitioners.

These guidelines should be read in conjunction with the SANS 10400 S: Facilities for Persons with Disabilities
Just keep in mind that these dimensions have to be adapted for toddlers

	HUMAN ABILITIES	**STANDARD LOW COST MODULAR ECD DESIGN APPROVED BY THE DSD**
A	**Physical abilities** This includes walking, balance, handling, pulling, pushing, lifting and reaching. Many activities involve simultaneous use of more than one of these skills. Physical strength and stamina may also affect *children*'s abilities to perform these actions <u>Walking and movability</u> For some *children* walking on the level or up gradients is difficult. Some *children* may have a limited walking range, may have difficulty with turning movements or may use mobility devices such as crutches or a walker *Children with many kinds of mobility impairment will need level, firm ground to move on, not just wheelchair users. It does not have to be concrete, as long as these points are met. Surface of any path should be non-slip when wet – e.g. textured cement. Paths should be broad enough to allow an adult to walk with a child who needs assistance* <u>Handling/ hand function</u> A significant minority of people are left-handed. Some people may have restricted use or no use of one or both hands, or may have limits on strength or precision. Facilities and components should be designed to be suitable for use with either hand or with one hand only. Handling includes gripping, grasping and manipulation. Each of these has a different purpose with specific design considerations. For instance,	• **Topography** ○ Sites for ECD centres should ideally be flat or only have a very mild slope to ensure easy access for all to the ECD Centre • **Thresholds** ○ All standard low cost modular designs for new builds are provided on a level area with no thresholds higher than 75mm • **Pathways and on site distances:** ○ The drop off zone can be on site yet outside the fenced area, close to the building to allow for children in wheelchairs/ buggies or using walking aids to disembark onto the pathway with access to the building. ○ Level well compacted gravel / concrete or paved paths may be considered Routes between these points are level, firm ground, which does not become slippery when wet. e.g. a smooth flat or slightly sloped well compacted path - minimum 1,1m wide. ○ The pathways must be level with the surrounding ground or grass. ○ The beginning and connection/ end sections of the pathways must be clearly demarcated by either by round tact tiles with contrasting colours or a concrete path with a white road paint strip or pavers with lighter colour etc. ○ All new build ECD Centres should be within 10 to 30m of the gate where possible ○ Standalone ablution blocks in rural areas e.g. for VIP or pour flush latrines in rural areas should be within 10 to 30 m of the main building ○ Playgrounds should include pathways for buggies or wheelchairs • **Ramps, steps and hand rails** • <u>Ramps</u> ○ A concrete ramp of 1,1-meter-wide with a fall of no less than 1:12 but preferably 1: 15 – 1: 20 must be provided with handrails in the event that a centre needs to be built with a higher threshold than the 75mm stipulated. – ○ A level landing (1:50 landing at the top and bottom of a ramp and at intermediate levels), clear of any door swing is required. This is covered in SANS 10400 Part S ○ Ramp surface must be textured/non-slip when wet.

components should be designed to be easily held. The circumference of the supporting structure and stability are critical.

Manipulation involves the moving, turning and twisting of components with a hand or hands. For those who have limited manipulation abilities, size and shape and ease of movement are critical. Another option to consider is to design for manipulation by using a pushing, pulling or pressing action using a clenched fist, or by using the wrist or the elbow.

Children may have varying grip strength, dexterity and coordination. Some may only be able to use one hand. Hand function is also greatly influenced by other factors such as stability of the body, vision and sensation.

Strength and endurance

Strength and endurance may be required on sloping paths and floors, stairways and long travel distances, when sustained effort may be needed.

For those with limited endurance, frequent resting-places are essential. People generally find it easier to push a component, than to pull it. This is particularly so if the individual uses a wheelchair. Self-closing devices on manual doors can be difficult for some people to operate, particularly if the doors are required to resist wind forces.

Lifting

Activities such as opening a vertically sliding sash window and an upward opening access gate, should be designed to be easily operated with minimal force.

- A small lip on exposed edges increases safety for wheelchair users, children using wheeled walkers, and children with visual impairment.

- <u>Steps</u>
  - The standard low cost ECD centre designs make no provision for steps
  - In case another design with steps is used, grab rails on child-height should be provided. It can just be a short handle affixed to the wall beside a door frame. Many children will benefit from this.
  - Rails and handles should always be suitable circumference for a child's grip, non-slip and non-abrasive. They need to be firmly fixed, and able to take a child's full weight if needed.

- **Doors, door handles and gates**
  - Doors must be 900mm wide and open outwards
  - Doors are 900mm wide (clear opening) and are wheelchair accessible – level threshold.
  - No doors have kick plates as it is expected that practitioners will be opening the doors for children at all times.
  - Ensure security gates and other fittings do not obstruct the clear opening to admit wheelchair user
  - The gate at the entrance must be opened by the accompanying adult / teenage sibling bringing and fetching the child.
  - All other doors should be opened by practitioners that should accompany children at all times.
  - Door handles (if children are meant to operate these) should be lever type rather than knobs, and of reasonable height for children.
  - Locks and latches should be positioned where children cannot reach them and lock doors by mistake (especially from the inside!)

Lifting

- No lifting required in these centres.

- **Toilets**
  - **Toilets** for wheel chair users are 1,8 x 1,8m as prescribed and allows space for assistant
  - Space must be adequate to allow transfer from a wheelchair from either side of the toilet
  - The doors for toilets are standard and will have to be opened by the supervising adult. Doors fitted to toilet cubicles should open outwards so as not to interfere with the inside space – which should allow an adult to assist the child inside. (another reason for outward-opening doors – if a child falls inside the cubicle and cannot get up, s/he may block an inward-opening door and prevent adults from entering to help)
  - All toddlers but specifically those in buggies or wheelchairs MUST be accompanied to the toilet by a supervising adult.
  - The poor flush pit latrines within standalone ablution blocks in in rural areas do not require pushing or pressing to flush toilets. In urban areas flush toilets are used, the lever will be extended to enable a pressing action.
  - Grab rails or a simple frame around the toilet, which a child can hold onto while getting on/off the toilet, often allow independence for a child with mobility difficulties (e.g. poor balance; developmental delay)

	Reaching Design has a role to play in ensuring that key components in a building or environment are in easy reach, bearing in mind the range of people's sizes and abilities. Having components within easy reach is particularly important for those with more severe limitations in mobility. The reach range is dependent on the height and arm length of the person, use of the arms, and the balance and mobility of the upper body. A 'comfortable reach range' has been defined as one that is appropriate to an activity that is likely to be frequent and in need of precise execution and that does not involve stretching or bending from the waist. Putting things within comfortable reach can ensure use by a greater number of people. An 'extended reach range' has been defined as one that is appropriate to an activity that is likely, neither to need precision nor to be frequent and that can involve stretching or bending from the waist.	○ The rails for the toilets can include a rail behind the toilet for children who might sit astride the toilet holding the rail on the wall behind the toilet. ○ For balance and safety, children would be able to rest their feet solidly on the ground while sitting on the toilet. If the toilet seat cannot be made lower, a simple wooden base or step can be used to support the feet of a smaller child. ○ Also consider access to toilet paper, and balance while managing clothing and wiping (see suggestions for rails and foot support above). Hard to give detailed rail specs here but correct placement is key! • **Handwashing** ○ Wash basins / tippy taps will be of height reachable by small children, without having to stretch. Consider both height and depth from front of the basin to the tap. ○ Also consider access to soap and towels, if used. ○ Wash basins / tippy taps must have clear space beneath to allow wheelchair user to approach - a rail around or beneath the basin at the front or a handle to the side can help children to lean on or hold to stabilise during reach ○ Tippy taps in rural areas are easy to manipulate by means of a pressing action using a wrist or elbow. ○ Taps in urban areas will be extended to enable a pressing action. Simple lever adaptations can be added to ordinary taps (can be made of wood) ○ Simple box-steps can be used for smaller kids which must be sturdy, non-slip, not too high. • **Playroom - pigeon holes** ○ Pigeon holes with personal belongings are within reach of the children – including children who crawl/bum-shuffle. The practitioner will have to identify the pigeon hole most accessible for those in wheelchairs (i.e. not flush against the wall) • **Training of practitioners (*DSD to attend to this)*** ○ Practitioners will have to be trained on putting things within the reach of the child on a continuous basis
B	**Sensory abilities** Speech Some conditions affect the capacity for or quality of speech. Two-way communication can be facilitated by environments designed to minimise barriers to hearing low or indistinct speech. Hearing People differ in their capacity to hear sound, to determine its direction, its source, to discern pitch, frequency, volume and variation and to separate out different sounds. Hearing quality is important for communication, for information, and for detection of hazards such as traffic.	• **Common courtesy** and respect needs to be taught by practitioners so that children keep quiet when the practitioner or any of the children talks. • **Good lighting** allows use of non-verbal communication to augment speech See recommendations below for hearing impairment. **Hearing** • **Light** ○ Good indirect lighting ensures that the teacher's face and body are well-lit, and the teacher's position doesn't place her in front of a bright window, allows children with hearing difficulties to use visual cues to supplement communication. ○ This also (obviously) assists children with visual impairment ○ Flash lights alarm warning system must be installed in case of emergency purposes for hearing impaired persons if there is electricity

	Hearing (continue) Reducing background and environmental noise is essential for children with hearing impairments AND often for children with sensory integrative, autistic spectrum and attention deficit difficulties. Many children with hearing difficulties use a hearing aid which amplifies all sounds caught by the microphone, making communications very difficult in noisy environments. Keeping background noise level low is essential. The selection of structural and surface materials can make a substantial difference in audibility.	• **Reduction of sounds** ○ Separating class groups into separate rooms is advised. ○ Good quality doors/ mobile room dividers make a considerable difference to sound-proofing. ○ Flooring which absorbs sound (e.g. dense rubber matting, carpet) reduces ambient noise. ○ Roofing/ceiling material is crucial, especially in rainy season.
	Sight Vision allows an individual to be aware of the luminance of surfaces, objects, form, size and colour. For *children* who are blind or who have visual difficulties, the provision of suitable tactile walking surface indicators and tactile or acoustic warnings at hazardous locations, should provide information on using the built environment and should limit the risk of injury. The built environment can be designed for orientation by providing sound cues and tactile cues. An easily discernible system of 'way finding' should also be considered. For children with limited, but low vision, effective visual contrast between surfaces or objects helps to identify critical locations. Warning markings on glass surfaces, and markings on the edges of stair treads, help minimise hazards. Differences in friction between one floor surface, or one stair tread surface, and the next should be avoided. Therefore, adjacent surfaces that display different standards of slip-resistance, or that depend on raised surfaces, should be carefully considered	**Sight** • **Light** ○ The standard modular low cost ECD centre designs provide for good use of natural light. ○ Ensure sufficient light (100max) ○ Make sure teacher's face is lit, specific areas to be navigated are lit – adequate wattage where electric lighting is used. ○ Avoid fluorescent lighting – the flicker makes for poor quality light and children with sensory integrative, autistic spectrum and other conditions can find it highly irritating, resulting in behavioural problems. A malfunctioning starter, producing more of a flicker, can trigger epileptic seizures in some instances. • **Use of sound** ○ Sound alarm warning system must be installed in case of emergency purposes for blind and visually impaired persons ○ Fix a small bell to the door so that children can hear if the door opens • **Walking surfaces** ○ Level, firm walking surfaces and removing any trip hazards will increase safety. ○ Practitioners must be trained on issue of trip hazards. Trip hazards can include loose mats/carpet edges, electrical cables, stones, uneven ground, toys or other items left lying around, materials stored in walkways ○ Door openings are usually easy to detect by change of sound, and use of hands to guide oneself through the door. Any raise on the threshold should be marked though – trip hazard ○ White paint strip on edges of paths, steps and any raised surface or obstacle. ○ Paths to gate and toilet should be marked with white – painted stripes if the path is paved, otherwise white-painted stones can also work, as long as they won't be a trip hazard or get moved around ○ There are no stairs but a 100mm wide stripe can be painted in white road marking paint **on the threshold** of the veranda, of the ablution block, the ablution tanks at the back and all other knee height features in and around the ablution block and even the water tank stand and gate poles so that visually impaired children can better orientate themselves ○ Difference in floor texture can be used by bare foot children to orientate themselves ○ Handrails for stairs or ramps will also help children with visual impairment, as they cannot use their eyes for balance.

		• **Hazards** ○ Ensure that the positioning of TV screens, overhead projectors, low hanging trees etc are not protruding or hazardous for blind/ visually impaired persons
	Touch In selecting surfaces in the built environment that people will need to touch (such as handrails, handles, knobs and controls, tactile information), it is important to select materials that avoid distress, injury or allergies. Surfaces should be free of abrasions. Metals that may cause adverse reactions when touched should be avoided.	All surfaces within new build ECD Centres are free of abrasions • All outside surfaces should be non-slip when wet. • Grips and rails should be textured where possible (if they are slippery, less safe). • Stainless steel is strong but can be slippery and extremely cold/hot in extreme weather. • Wood should be treated and weatherproofed to avoid splinters – including outdoor equipment • Consider children who crawl or bum-shuffle when planning pathways. In areas with sandy ground this is fine, but gravel or stony surfaces can be problematic. **Training of practitioners** • Be aware of children at high risk of falling – poor balance, epilepsy, mobility problems, developmental delay (especially in the playground) • Training of the Educators and assistant on the purpose and use of all adaptations and assistive devices is critical to ensure the safety and the maximum benefit for the children. • Appropriate training of staff in the use of AAC devices for communication is essential as well as training in the care and handling of hearing aids.

C	Mental abilities
	Mental abilities include cognition, intellect, interpretation, learning and memory. People differ in their knowledge, their capacity to understand, reason, or interpret information. Designing for differences in these capacities helps provide a usable environment for the population at large, from the very young to the old, and people of diverse abilities. Means of communication in the environment should be designed to be immediately and easily understood, and correctly interpreted.
		• **Concentration**
		  ○ Adaptations which assist children with visual and hearing impairments will also assist children with intellectual disability.
		  ○ Developmental delays associated with intellectual disability can cause mobility and movement problems – see adaptations above.
		  ○ Reducing ambient noise
		  ○ Ensuring correct lighting will assist children with concentration difficulties.
		  ○ Children who are highly distractible benefit from smaller, more contained learning environments (rather than, for example, being in a large room with different groups of children). This may be difficult to organise where centres in low income areas do not have additional room and staff to facilitate small groups for say 5 or 6 children.
		  ○ Reducing clutter (both physical and visual) is also helpful. (Practitioners)
		
		• **Safety**
		Safety is a critical consideration for children with mental and socio-emotional difficulties. Standard provision is made for the issues listed below:
		  ○ Properties must be securely fenced, using materials which a child cannot easily hurt herself on (or climb over).
		  ○ Gates must be child-proof and lockable. Children with certain behavioural difficulties can be impulsive and unpredictable (and run wildly for the traffic at every opportunity).

	Design considerations that take account of mental abilities Aural and visual messages should be simple, clear and have immediate impact. Figures, symbols and simple words are likely to be the most effective. Symbols should be instantly recognisable as representing images seen and activities undertaken in everyday life. Way finding should be simple, such as tactile, graphic, audible or architectural cues that are easy to follow. Signage should be large and clear. Way-finding maps should be clear, indicate the person's whereabouts in the building or facility, and be free from extraneous information.	○ Any hazard on the property (e.g. waste disposal areas) should be similarly fenced. Ideally, all parts of the property should be clearly visible from the main centre. ○ Children with disabilities are sadly also at high risk for sexual abuse and exploitation. This is another reason for the property to be secured. (Practitioner supervision at all times required) • **Signage:** ○ There must be visible signage when approaching the facility and within the ECD Centre. ○ Standard signage is used for the benefit of parents/ visitors ○ The use of simple visuals to distinguish different learning areas e.g. book area, make belief area, eating, etc. will be the responsibility of the practitioner
D	Age and size Accommodating the developing child It is important to create environments that are safe, accessible and useable for children. Individual components should be safe and useable as age-appropriate. Learning to manage risk is an essential part of a child's development. Diversity of size The population contains a diversity of sizes and heights, from children, to the diversity in the height of fully-grown adults. The positioning of components and the heights of building elements such as steps should recognise the diversity of height.	The modular designs provide for a safe accessible environment • Blocks for standing on should be sturdy. • Take account of older children with disabilities if any are attending. • Pigeon holes for children's bags are on their level and easy to reach. • Items to be managed by the practitioners are outside the reach of children
E	Universal access to the playground The playground and the play equipment provided should be designed to accommodate children with varying levels of physical ability. Appropriate play equipment should be designed in such a way that it requires little upkeep and it ought to likewise have the capacity to withstand a decent measure of maltreatment from older youngsters whom may gain access to the playground after hours and during school holidays. Equipment should offer a range of challenges, some children may prefer or maybe able to cope with less challenging activities and, if accommodated, would be able to play alongside the children tackling the more challenging activities.	• The play area should be level and where possible grassed to allow children with physical impairments where possible to move around independently. • Play equipment should be brought closer to the ground. • Grab handles, handrails and intermediary ladder rungs should be available to children whom may require them. • Fantasy cues would provide play opportunity for less physically active children. Airplane cockpits, ships, steering wheels, etc. • Steering wheels encourage children to cross their middle line and would develop core strength. • Balancing beams, monkey bars all close to the ground will be more accessible than if this equipment was elevated. *Different types of playground and outdoor space is MOST important! Especially in low income communities, the design of this can allow a child 10 times the chance to develop optimally and therefore prevent delays and developmental challenges later in life*[6]*.*

Orange font: activities undertaken by practitioners

[6] Basheera Surty, Diketo Inclusive Education 2018

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