



SCIENCE TO POLICY BRIEF

## INCLUSIVE EDUCATION AND ACCESSIBILITY

Breaking down barriers in school infrastructure to achieve education for all

THOSE OF THE GERMAN FEDERAL

MINISTRY FOR ECONOMIC COOPERATION AND DEVELOPMENT (BMZ)/DEUTSCHE GESELLSCHAFT FÜR INTERNATIONALE ZUSAMMENARBEIT (GIZ) GMBH

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## **ABSTRACT**

BARRIER-FREE school environments are a key requirement for inclusive education. The principles of universal design help to remove physical, sensory and cognitive barriers in the school system and to ensure accessibility, orientation, usability and safety of schools for all children and adolescents. Education policy, development cooperation and educational science will support the contextualisation process and the adaptation of the universal design approach to the local economic, social, cultural and religious conditions of the countries of the Global South.

INCLUSIVE EDUCATION AND ACCESSIBILITY [1] BACKGROUND INFORMATION 03

## 1 BACKGROUND INFORMATION

BARRIERS ARE USUALLY associated with material obstacles – physical barriers such as fences or walls that hinder or prevent people from getting to where they want to go. Overcoming these barriers requires at least additional time and/or effort. Moreover, material obstacles have a symbolic character. A fence – however low and easily accessible it may be – clearly has the meaning of 'No trespassing!' in all cultural and social contexts. The same information may also be conveyed by a sign, in which case the obstacle loses its direct physical/material meaning as a barrier.

Accessibility may, furthermore, be governed by conventions, requiring people, for instance, to pay admission fees or to prove their right of entry by presenting a valid membership or ID card. Barriers may thus be indicative of power relations and hierarchical structures. Barriers can both include and exclude people. They can ensure safety and constitute a benefit, while at the same time they may discriminate against people and deny them participation.

MAYBE ONLY, well, it is not that serious, but I do feel that since we have children with physical disabilities, for example children with paralysis who do not move and everything. I do feel, I have seen that I as an adult, even for me it is hard to go down to enter the school because everything is dirt with stones and when it rains, more stones. I think that if it is hard for me, it might be even harder for the lady's son, for those who walk a little, or those who come with their devices, it is hard to go up and to come down. Another problem is the bathroom because here we have bathrooms in the back, so these might not be matters of life or death but they do put at risk their PHYSICAL INTEGRITY.

### TEACHER OF INCLUSIVE SCHOOL

Guatemala; see refie<sup>1</sup>, p.149

WE ARE HELPING the children with a free school bus paid by the municipality, to help them overcome that barrier, we could say the barrier of distance. Transportation is also part of what we were considering as a barrier, we provide free transportation in the morning, at noon and in the afternoon for those who study in THE AFTERNOONS.

MUNICIPAL AUTHORITY, CASE OF INCLUSIVE SCHOOL

Guatemala; see refie, p.184

On behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ) the GIZ implemented the Research Project on Inclusive Education in cooperation with the Institute for Special Education at the Leibniz University of Hanover and GOPA Consultants.



PHOTO GIZ Liliana Aldana, EDUVIDA INCLUSIVE EDUCATION AND ACCESSIBILITY [2] EXEMPLARY RESEARCH ACTIVITIES

## 2 EXEMPLARY RESEARCH ACTIVITIES



PHOTO
GIZ
Leyton Alvarado

WHEN EXAMINING the potential barriers that deny children and adolescents access to school<sup>2</sup>, various dimensions are usually identified in research:

- MATERIAL CONDITIONS (e.g. lack of school buildings, poorly equipped classrooms, insufficient learning materials);
- FISCAL FRAMEWORKS (e.g. underfinancing of the education sector, lack of teaching staff or inadequately qualified teaching staff, charging of formal or informal tuition fees);
- SOCIO-SPATIAL OR INFRASTRUCTURAL CONDITIONS (e.g. long distance from home to school or inaccessible/ hazardous roads);
- POLITICAL AND/OR ECONOMIC STRUCTURES (e.g. war, riots, poverty, hunger);
- DISCRIMINATION against social groups based on collective stereotyping (sex/gender, skin colour, diseases such as HIV/AIDS, certain disabilities, membership of linguistic, ethnic, religious or sexual minorities, social ostracism of orphans or street children etc.).
- 2 cf., for instance, https://www. globalcitizen.org/ en/content/10barriers-toeducation-aroundthe-world-2/

an

http://educateachild.org/ ALL BARRIERS TO EDUCATION that are based on stereotyping have one thing in common: They result from the way people think about others<sup>3</sup>. The lack of data and information available on the topic comes together with the attitudes and fragmentary knowledge on the part of the decision-makers, who deny these groups the right to education, often on the pretext that they do not meet the criteria to attend school. Thus, a paradigm shift is necessary when it comes to investigating the reasons why children drop out of school: Children are not able to change the school, but the schools can be adapted in such a way as to ensure full access to education for all children regardless of limitations or impairments.

CHILDREN WITH DISABILITIES are commonly assumed not to possess the intellectual or cognitive capacity to follow the curriculum. What all schools should aim at, however, is to develop curricula tailored to the needs of all children:

INCLUSIVE EDUCATION REQUIRES
"A NEW, CHILD-CENTRED
CURRICULUM THAT INCLUDES
REPRESENTATIONS OF THE FULL
SPECTRUM OF PEOPLE FOUND
IN SOCIETY (NOT JUST PERSONS
WITH DISABILITIES) AND
REFLECTS THE NEEDS OF
ALL CHILDREN" 4.

Another common justification for denying children with disabilities access to regular schools is that the school buildings are not adapted to children and adolescents with disabilities. Here, too, a change of perspective is required: What infrastructural, physical and educational aspects need to be considered in the design of schools to make them accessible for all children? This perspective helps to make the topic of accessibility a key issue to be sustainably included in the design of schools across all levels.

See also
http://www.
eenet.org.uk/
resources/docs/
barriers%20
to%20education.

UNICEF 2013
p. 28, 29, see:
http://www.
unicef.org/
sowc2013/files/
SWCR2013\_
ENG\_Lo\_res\_24\_
Apr\_2013.pdf

INCLUSIVE EDUCATION AND ACCESSIBILITY [3] KEY RESEARCH FINDINGS

## **3** KEY RESEARCH FINDINGS

IN THE ANALYSIS of the current state of research on the accessibility of the educational systems in the countries of the Global South, methodological and applied publications (scientific journals, project papers and evaluation reports, good practice documents etc.) in English, Spanish and German were examined as to their use of key words such as accessibility, usability, disability, inclusive education, barrier-free and universal design. What becomes obvious here is that this dimension of school-related inclusion, especially in relation to possible barriers, has not received much attention: Apart from a number of project reports, country reports and comparative studies by international organisations, the amount of available empirical data is rather limited. Despite an extensive search through publications across various disciplines (architecture, civil engineering, educational and rehabilitation science) and across various regions, covering countries in Africa,

Latin America and Asia, the list of findings turns out to be remarkably short. This, though, does not come as a surprise, given the fact that even in the Global North this topic as it relates to school tends to be widely neglected in research and politics.

ONE FINDING derived from the analysis of the sources is that in some emerging and developing countries, the legal framework for embedding the principle of accessibility has now been established in the form of appropriate policies and regulations. Comprehensive regulations have been introduced in law, inter alia in Brazil (2008), Uganda (2010) and South Africa (2013). With the exception of a few industrialised nations, most of the 24 participants in the ISO/TC 59/SC 16 Accessibility and Usability of the Built Environment programme are emerging countries (South Africa, China, Colombia, Ecuador, Brazil and Uruguay); India and Bolivia are involved as observing countries only <sup>5</sup>.

THE COUNTRY REPORTS examined here document, for the most part, building projects for barrier-free school facilities. Handicap International, for instance, conducts regional projects on inclusive school development in Burkina Faso, Liberia, Mali, Niger, Senegal and Togo, which in some cases take aspects of accessibility in the planning of school buildings into account <sup>6</sup>. Other NGOs organise similar projects in Bangladesh, Kenya, Nepal and Cambodia <sup>7</sup>.

- 5 http:// www.iso.org/ iso/home/ standards\_development/list\_ of\_iso\_technical\_committees/ iso\_technical\_ committee.htm?commid=291991
- Handicap
  International,
  Jahresbericht
  2013 https://
  www.handicapinternational.de
- 7 http://www. unesco.org.pk./ education/icfe/ resources/res4. pdf

http://www. unicef.org./rosa/ InclusiveNep.pdf

http://www. un.org./disabilities/documents/ best\_practices\_ publication\_2011.pdf INCLUSIVE EDUCATION AND ACCESSIBILITY [3] KEY RESEARCH FINDINGS

A compendium on the topic presents "School Construction Strategies for Universal Primary Education in Africa" (Theunynck 2009), with just the example of Uganda explicitly relating to the issue of accessibility. Another document examines examples of inclusive design of school latrines in Ethiopia (Jones 2011).

VARIOUS INTERNATIONAL studies on the barriers to school attendance for children and adolescents with disabilities have yielded relatively similar results. A study on the situation in Rwanda, for instance, involving parents and caregivers, has shown the following: 'Among others, the distance from home to the nearest school, school design and inappropriate roads were the main barriers. To achieve inclusive education, appropriate school buildings such as toilets, seats or chairs, playground, doors and class should be designed in a way that also considers children with disabilities' 8. With respect to the physical environment, the study 'Schools for All: Including disabled children in education' examines the significance of transport and school buildings. This analysis of the situation in Zimbabwe <sup>10</sup>, conducted by the Leonard Cheshire Disability and Inclusive Development Centre in cooperation with University College London, highlights a lack of assistive devices and teaching aids along with insufficiently trained teaching staff and long distances to school as major barriers to attending educational offerings.

THE BARRIER 'distance to school' already clearly points to the fact that an approach to eliminating barriers to attending school for children and adolescents with disabilities cannot be regarded in isolation: The distribution and the design of schools in a rural area with poor infrastructure have direct implications for the educational opportunities of all children and adolescents. The analysis of this situation " and the establishment of norms - a distance norm, for instance, defining the 'maximum distance children are expected to travel to school' 12 - concern all pupils. It is only when the situation of children and adolescents with disabilities is given equal consideration in a distance norm or in any other school quality norm (classroom size, teacher-student ratios etc.) that a strategy for one school for all can be realised. As examples such as 'distance to school' or 'classroom size' and 'teacherstudent ratio' indicate, barrier-eliminating solutions which are of benefit to children with disabilities and meet their needs will also lead to the enhancement of educational offerings for all children and adolescents.

cf., for instance, Abdoll and Barberton 2014, see: http://www.centreforchildlaw.co.za/images/files/publications/Mud%20 to%20Bricks\_Final.pdf

**12** Theunynck 2009, p. 18



PHOTO GIZ Donal Husni

10 http://www.ucl.ac.uk/lc-ccr/centre-publications/workingpapers/WP26\_IE\_Zim-babwe.pdf

8 Sagahutu et al

2013, p.13, see:

http://www.ajol.

info/index.php/

rjhs/article/

view/85423

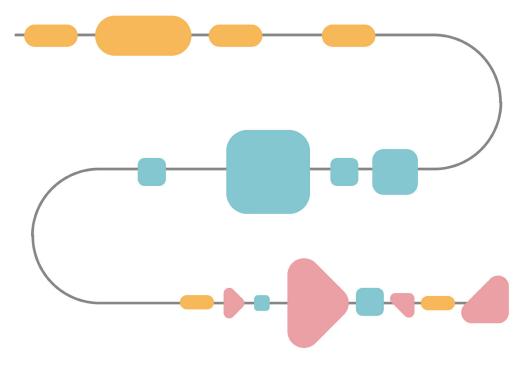
eenet.org.uk/ resources/docs/

schools\_for\_all.

pdf

# SCHOOL DESIGN BASED ON THE UNIVERSAL DESIGN APPROACH

DESPITE THE LIMITATIONS of the research findings, it can be concluded, as a conceptual principle, that guidelines and policies should follow the universal design approach: 'Universal design' means the design of products, environments, programmes and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. 'Universal design' shall not exclude assistive devices for particular groups of persons with disabilities where this is needed' <sup>13</sup>. Isolated strategies for enhancing accessibility and inclusion for people with disabilities are insufficient; they are too often considered as additional, costly and optional measures in support of a minority.



ELEMENTS OF A

BARRIER-FREE SCHOOL

ENVIRONMENT ACCORDING

TO THE UNIVERSAL

DESIGN IN EDUCATION

(UDE) STRATEGY

THE WAY TO SCHOOL

## THE INFRASTRUCTURE OF SCHOOL BUILDINGS

- SCHOOL ADMINISTRATION
- SCHOOLYARD
- WORKSHOPS
- RETREAT AND THERAPY ROOMS
- SCHOOL CANTEEN
- SANITARY ROOMS
- CLASSROOM

EXTRACURRICULAR
LEARNING
SPACES INCLUDING
TRANSFER

UNCRPD,

ACCORDING TO THE UNIVERSAL DESIGN APPROACH, THE BARRIERS
TO ATTENDING SCHOOL FOR CHILDREN AND ADOLESCENTS WITH
DISABILITIES THAT ARISE FROM THE PHYSICAL SCHOOL ENVIRONMENT
MAY BE CATEGORISED AS FOLLOWS:



THE WAY TO SCHOOL This concerns the distance from home to school, the accessibility/quality of roads under different weather conditions (rainy season, drought) with particular respect to users of wheelchairs, walking aids and walking sticks, safety aspects on the way to school (girls with disabilities are especially at risk of specific forms of violence) and the accessibility of public transport.



THE INFRASTRUCTURE OF SCHOOL BUILDINGS The school building is supposed to ensure full access for all learners, including, in particular, children and adolescents with disabilities. This not only includes the classroom, but relates to the school canteen, school administration (head teacher's room/school office, staff room, library etc.), workshops and the school garden as well. For all rooms, aspects such as circulation space (for users of wheelchairs, walking aids and walking sticks), seating and workplace design (furniture and fixtures, space requirements) along with the possibility to

provide orientation have to be taken into account. When addressing the issue of the limited usability and accessibility of school toilets, commonly regarded as a major 'weakness', cultural, religious and disability-related aspects must all be considered <sup>14</sup>. Children and adolescents with disabilities may need special retreat or therapy rooms, where they can have time out to better cope with the demands of the school day. These rooms must be incorporated into the planning of school buildings as well.

cf. http:// www.eenet.org. uk/resources/ docs/wedc\_inclusive\_design\_ of\_school\_latrines\_2011.pdf



EXTRACURRICULAR LEARNING SPACES, INCLUDING
TRANSFER The significance of extracurricular learning spaces
as barriers to school attendance is commonly underestimated.
It is generally not perceived as a problem when children with
disabilities are not able to attend cultural or political events,
school trips or field trips to nearby companies or institutions
and instead are left behind and excluded from their class.
This exclusion from common learning processes is sometimes
even misinterpreted as positive, based on the argument that
it gives children with disabilities more time for individual
support or relaxation. What is required here instead is to
provide a thorough analysis of the barriers encountered in
these learning spaces (institutions, companies, theatres, museums)
or in the related transfer and to address these accordingly.

## 5 TRANSFERRING RESEARCH RESULTS INTO PRACTICE

WHEN IT COMES to eliminating the barriers identified above, especially those relating to the physical school environment, simply preparing a data checklist is not enough. Isolated technical data based on international norms such as ISO 21542 ("Building construction — Accessibility and usability of the built environment") set the standards for the width of doorways and hallways, the height of handrails, the ways of approaching and entering the building and for circulation/ turning spaces. Such normative guidelines may even prove counterproductive, as there may be a considerable gap between aspirations (such as the three types of toilets for wheelchair users, allowing for a variety of possible transfer positions<sup>15</sup>, which are comprehensively covered by ISO 21542) and reality (where schools have no water supply, electricity or wastewater treatment system <sup>16</sup>). This obvious gap may lead to resignation or to a significant postponement of the building project as a whole, with dramatic effects.

Thus, analysing the specific requirements in a given situation and context, while also considering traditional, cultural and fiscal frameworks, will certainly yield more useful results <sup>17</sup>.

AS A FIRST STEP in the creation of an inclusive school environment, the different target groups need to be considered together to be able to structure the areas of realisation.

Afterwards the target structures should be examined, and finally the structure for establishing the 'universal design in physical spaces' approach as an element of 'universal design in education policy' and for anchoring it there has to be addressed.

of. exemplary solutions with raised toilet seats and handrails in: Jones 2011



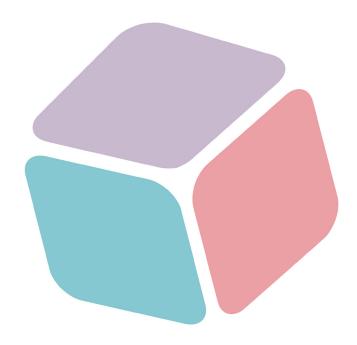


15 ISO 21542 p. 61-66

of., for instance, Abdoll and Barberton 2014, p. 23, 24



## ACCESSIBILITY TO PHYSICAL ENVIRONMENT: UNIVERSAL DESIGN OF PHYSICAL SPACES



## THE AIMS OF ACCESSIBILITY

- ACCESSIBILITY/AVAILABILITY
- ORIENTATION
- SAFETY AND USABILITY

## THE PROCESS OF IMPLEMENTING AND ANCHORING

INSTITUTIONS AND ORGANISATIONS

- LAWS
- STANDARDS
- KNOWLEDGE AND ATTITUDES

## STRUCTURE OF REALISATION IN REFERENCE TO THE TARGET GROUPS

- PHYSICAL
- SENSORY
- COGNITIVE

## STRUCTURE OF REALISATION IN REFERENCE TO THE TARGET GROUPS

For the very reason that the basic principle here is the universal design approach, it is vital to consider different target groups. Only by including the requirements of all groups in the solution does the system become truly usable by all, thus making it a universal design. For the universal design of physical spaces, then, people with limited mobility, with motor and physical disabilities and with cognitive, linguistic, visual, hearing and mental impairments need to be taken into account. Consequently, the areas of realisation include the following aspects:

- PHYSICAL ASPECTS Ramps instead of steps, doors without thresholds, sufficient width of doorways, hallways and entryways, learning and working places with adjustable heights to allow wheelchairs underneath;
- SENSORY ASPECTS Adherence to the 'principle of two senses' 18, room signage with lettering of sufficient contrast and size, use of the Braille writing system and/or raised letters, alarm systems with light or acoustic signals;
- COGNITIVE ASPECTS Arranging pictograms and textual information in such a way as to make them recognisable and fully comprehensible to people with different linguistic and cognitive abilities.
- All sorts of information
   especially safety-relevant instructions
   must be communicated in different modes, in such a way as to address at least two of the three senses of seeing, hearing and touching.

## THE AIMS OF ACCESSIBILITY are:

- AVAILABILITY Steps, stairways and landings in front of buildings or part of buildings and roads that are muddy and full of water when it rains and have a hard uneven surface in dry seasons make it impossible for wheelchair users and people with walking aids to enter the building on their own;
- ORIENTATION High-contrast signage on doors etc. provides safe and unassisted guidance for people with visual impairments;
- \* SAFETY AND USABILITY According to the principle of accessibility, being able to 'physically get into a room' is not sufficient. More than that, it must be possible for people to use this room for its intended purpose in the usual way, without additional effort or assistance. Thus, in a workshop, for instance, it must be possible to use a workbench. The workbench should therefore be adjustable to allow wheelchairs underneath; grab bars and fixation devices may also be needed. In the school garden, raised beds should be installed alongside regular beds.

Moreover, in all accessibility-related solutions based on the universal design approach, safety aspects — such as the quick, complete and safe evacuation of pupils and teachers in a storm, flood, forest fire or earthquake — are to be considered. For the most part, both aspects — safety and usability — are strongly connected: The aisles in the classroom need to be wide enough and must not be obstructed by school bags or other objects so that pupils using a wheelchair or a walking aid/stick are able to use these areas without assistance. At the same time, sufficiently wide aisles not obstructed by

objects are essential for evacuation in emergencies. Similarly, step edge markings are not just indispensable for people with visual impairments, but also helpful to reduce the number of accidents on stairs as a whole.

THE PROCESS OF IMPLEMENTING AND ANCHORING an accessibility policy is supported by various institutions and organisations. The following areas are involved in the process:

- ► LAWS On the development of infrastructure, public transport, school infrastructure, school building programmes, construction;
- STANDARDS Of direct relevance: norms such as ISO 21542 and national implementation processes <sup>19</sup>; of indirect relevance: a focus on the key principles and their implementation, with due consideration for traditional, cultural and fiscal frameworks (example of toilets) and topographic conditions (e.g. arranging for buildings to be constructed on a slope so as to facilitate access without additional ramps);
- ► KNOWLEDGE AND ATTITUDES The assumption that the causes of the problems lie in the child's disability and the conviction that these cannot be changed constitutes the major barrier. It is therefore crucial to promote the knowledge that problems can be alleviated or eliminated by changing the environment, that there are measures available to ensure accessibility and that these measures as set by the universal design approach are indispensable, necessary or at least convenient for all users. This change of perspective regarding knowledge and attitudes concerns all areas of society, but in particular decision—makers at all levels.

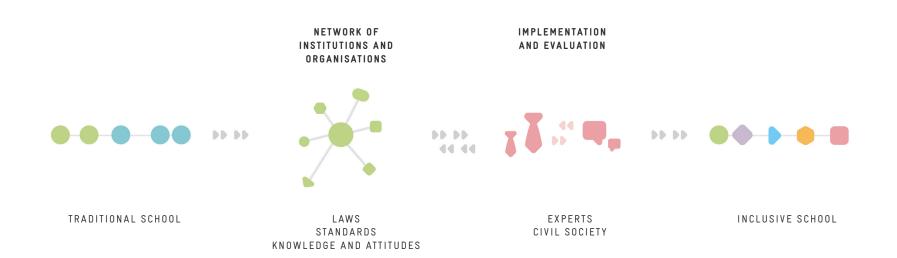
of. concept
'ISO and
developing
countries' —
see, for instance:
http://www.
iso.org/iso/
home/about/
iso-and-developing-countries.
htm

THE PROCESS of implementing and anchoring an accessibility policy, especially in relation to 'universal design in physical spaces', must emerge from the efforts of society as a whole.

THE DEVELOPMENT PROCESS OF A
BARRIER-FREE SCHOOL ENVIRONMENT:
'UNIVERSAL DESIGN IN PHYSICAL
SPACES' AS A SECTION OF 'UNIVERSAL
DESIGN IN EDUCATION POLICY'

FOR THE DEVELOPMENT of relevant laws, norms, standards and recommendations — for the granting of an award for outstanding school design or a similar strategy, for instance — various models of implementation are under discussion <sup>20</sup>. For this purpose, the network comprising the local (school) community (the users), civil society, NGOs and governmental institutions at all levels should design practical measures and at the same time aim to identify and address basic requirements for change. From an accessibility perspective, then, the historically and culturally evolved understanding of steps as reification of hierarchical structures will be challenged, thus facilitating decisions such as choosing a ramp instead of — and not in addition to — stairs or steps.

cf., for instance,



21 https:// openknowledge. worldbank. org/bitstream/ handle/10986/ 10324/388640 EdNotes1August 2005CostOf Access12.pdf?

sequence=1

The network should also be supported by experts in all phases of planning and implementation. This helps to prevent a situation in which, in the functional planning of a building, for instance, a classroom is placed directly adjacent to a noise-intensive supply room or tactile ground surface indicators are installed not as a guide but simply as a visually appealing element. The effectiveness of all measures and the work of the experts require constant evaluation by the users and other stakeholders, as no law, no standard and no planning process (alone) can ensure the sustainable implementation of universal design.

THE IMPLEMENTATION PROCESS has to focus on different time periods, considering short -as well as medium- and long-term goals. It has to be noted, however, that a post-ponement of building measures to create accessibility to a 'later date' or to when a "particular need arises" not only contradicts the principle of universal design, but also entails considerable additional costs. 'Research has demonstrated that the cost of accessibility is generally less than 1% of total construction costs; however, the cost of making adaptations after a building is completed is far greater' <sup>21</sup>. In the end, the creation and maintenance of accessibility include various activities that do not necessarily incur costs and are not strictly dependent on governmental or non-governmental decision-makers: Providing and keeping a visually clear structure in the classroom, preventing

disturbing noise, keeping aisles clear of obstacles (paying attention to where school bags are placed etc.), providing adequate wheelchair storage and circulation/turning spaces (preventing misuse of the spaces for stocking purposes etc.) and several other strategies do not necessitate the implementation of cost-intensive measures at all. Instead, they simply require the combined efforts of all the people involved: the teaching staff, the service staff, and the children and adolescents and their parents.

### BEST PRACTICE - UGANDA

Accessibility Standards were published by Uganda National Action on Physical Disability and the Ministry of Gender, Labour and Social Development in 2010 <sup>22</sup>. They are part of the guidelines for the construction of public buildings, including schools <sup>23</sup>. Accessible toilets and classrooms have been constructed in recent years <sup>24</sup>.

## BEST PRACTICE - NEPAL

<sup>\*</sup> Tribhuvan Madhyamik Vidhyalaya [school] is well equipped in terms of accessibility and physical infrastructure. The school is adjacent to the highway; this makes it easy for children with wheelchairs to access the school area. Within the building, children using wheelchairs do not face difficulties. There is a special toilet with a ramp <sup>25</sup>. <sup>\*</sup>

- Uganda National
  Action on Physical
  Disability UNAPD)
  and Ministry of
  Gender, Labor and
  Social Development
  (2010):
  Accessibility
  Standards A
  practical guide to
  create a barrierfree physical
  environment in
  Uganda.
- http://zeroproject.org/ wp-content/ uploads/2013/12/ Obligatoryaccessibilitystandards\_ Uganda.pdf
- cf. Theunynck 2009 p. 26f, p. 59
- http://www. unicef.org/rosa/ InclusiveNep.pdf p. 23

INCLUSIVE EDUCATION AND ACCESSIBILITY [6] SCIENCE TO POLICY IMPLICATIONS

## 6 SCIENCE TO POLICY IMPLICATIONS

26 Transferring the universal design approach to learning processes brings about concepts such as that of 'universal design of education' (cf. http://www. washington. edu/doit/ or 'universal design for learning' (Rapp 2014; http://www. udlcenter.org/), which need to be embedded at all levels (curriculum development, provision of learning materials, training of teaching staff etc.) in the progression to-

wards education

for all.

FOLLOWING THE 'ONE EDUCATION FOR ALL' APPROACH, the schools and educational systems in the countries of the Global South will have to fulfil the criterion of accessibility with respect to infrastructural, architectural and educational <sup>26</sup> aspects if children and adolescents with disabilities or impairments are not to be restricted in their access to education or even denied access altogether from the very beginning.

- Education policy, development cooperation and educational science will identify and comprehensively analyse the specific local barriers material, fiscal, socio—spatial and infrastructural that hinder or prevent children and adolescents with disabilities from attending school.
- Education policy, development cooperation and educational science will also investigate the local social, economic, cultural and political conditions in order to illuminate the genesis and social function of barriers and to challenge and potentially change them.

FOLLOWING AN ISOLATED ACCESSIBILITY APPROACH in education policy, development cooperation and educational science (and elsewhere), however, will certainly not be successful, as it traditionally involves additional costly adjustments or rebuilding measures introduced at a later stage for people with disabilities or impairments. The universal design approach may prove more suitable here, because it considers the usability of products, services and facilities for all people from the very beginning.

- Education policy, development cooperation and educational science will actively promote the idea of designing educational systems based on the principles of universal design in all fields of education policy. Education policy, development cooperation and educational science will insist on strict adherence to the principles and standards of the universal design approach in the planning, implementation and evaluation of educational programmes, also in the Global South.
- Education policy, development cooperation and educational science will, moreover, conduct and critically assess programmes aimed at testing and evaluating how the global concept of universal design can best be transferred into the educational systems of the Global South. Education policy, development cooperation and educational science therefore not only consider the universal design approach as a guiding principle, but will substantially contribute to its further development.

INCLUSIVE SCHOOL DEVELOPMENT in the countries of the Global South relates to all areas of the school environment and aims to design all infrastructural, architectural and educational fields according to the universal design approach, ensuring comprehensive accessibility for all children and adolescents, including those with impairments and disabilities.

- education policy, development cooperation and educational science will consider the needs of children and adolescents with limited mobility, with motor and physical disabilities and with cognitive, linguistic, visual, hearing and mental impairments in inclusive school development, enabling accessibility, orientation, safety and usability on the physical, sensory and cognitive level.
- education policy, development cooperation and educational science aim to create accessibility, orientation, safety and usability of educational programmes for all children and adolescents both on the way to school and in all rooms and facilities in the school building. The often-neglected extracurricular learning spaces in the school context also form part of the inclusion efforts.

FOR THE CONSISTENT DEVELOPMENT OF SCHOOLS and educational systems according to universal design, international, national and municipal guidelines and policies are required in order to make all necessary information, feasible implementation methods and tried and tested quality assurance tools available and usable across all levels.

- education policy, development cooperation and educational science support the formulation of laws, norms and standards as part of an accessibility policy to enable the sustainable implementation and continuous evaluation of the basic underlying ideas, principles and strategies of universal design in the institutions and organisations of the education sector.
- Education policy, development cooperation and educational science combined with training for all the various stakeholders (school planners, architects, head teachers, school administration) and with the participation of parents and pupils alike will promote the establishment of local/municipal networks for all those who are interested in the universal design approach and in discussing and implementing it in the context of their school's development.

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