

SCIENCE TO POLICY BRIEF INCLUSIVE EDUCATION AND ACCESSIBILITY

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ABSTRACT

KEY REQUIREMENTS for inclusive education are barrier-free school environments. 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.

BACKGROUND INFORMATION

BARRIERS ARE USUALLY ASSOCIATED WITH MATERIAL OBSTACLES - PHYSICAL BARRIERS SUCH AS FENCES OR WALLS THAT HINDER OR PREVENT PEOPLE FROM FOLLOWING THEIR WAY.



PHOTO GIZ Liliana Aldana, EDUVIDA 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 membership by presenting a valid membership or ID card. Barriers may thus also 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, 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

2 EXEMPLARY RESEARCH ACTIVITIES

WHEN EXAMINING the potential barriers

that deny children and

adolescents access

to school¹, different

usually distinguished

dimensions are

in research:

MATERIAL CONDITIONS (e.g. lack of school buildings, insufficiently 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);

SOCIAL PRODUCTION of inequality and discrimination against social groups based on collective stereotyping (sex/gender, skin colour, diseases such as HIV/AIDS, certain disabilities, linguistic, ethnic, religious or sexual minorities, social ostracism of orphans or street children etc.).

1 cf., for instance, http://www. globalcitizen.org/ en/content/10-barriers-to-education-around-the-world-2/



GIZ Leyton Alvarado

and

http:// educateachild. org/ ALL BARRIERS TO EDUCATION THAT ARE BASED ON STEREOTYPING HAVE ONE THING IN COMMON: THEY RESULT FROM PEOPLE'S THINKING ABOUT OTHERS²

2 also see http:// www.eenet.org. uk/resources/ docs /barriers%20 to%20 education.pdf 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 requirements to attend school. Thus, a paradigm shift is necessary when it comes to investigating the reasons for dropping 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, though, 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"³

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. 3 UNICEF 2013 p. 28, 29, see: http:// www.unicef.org/ sowc2013/files/ SWCR2013_ ENG_Lo_res_24_ Apr_2013.pdf

KEY RESEARCH FINDINGS

PHOTO GIZ Donal Husni

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 central 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 when it comes 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 the meantime in some emerging and developing countries the legal framework for embedding the principle of accessibility has been established in the form of appropriate political regulations. Comprehensive legal regulations have been introduced. inter alia, in Brazil (2008), Uganda (2010) and South Africa (2013). Among the 24 countries that participate in the programme "ISO/ TC 59/SC 16 – Accessibility and usability of the built environment", with the exception of a few industrialised countries, there are primarily emerging countries (South Africa, China, Colombia, Ecuador, Brazil and Uruguay); India and Bolivia are involved as observing countries only⁴.

4 http:// www.iso.org/iso/ home/ standards_ development/ list_of_iso_ technical_ committees/ iso_technical_ committee.htm?commid=291991

5 Handicap International, Jahresbericht 2013 https:// www.handicapinternational.de

6 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 THE COUNTRY REPORTS examined here document, for the most part, building projects for barrierfree school facilities. Handicap International, for instance, conducts regional projects on inclusive school development in Burkina Faso, Liberia, Mali, Niger, Senegal and Togo that in some cases take aspects of accessibility in the planning of school buildings into account⁵. Other NGOs organize similar projects in Bangladesh, Kenya, Nepal or Cambodia⁶. 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

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

7 Sagahutu et al 2013, p.13, see: http://www.ajol. info/index.php/ rjhs/article/ view/85423

⁸http://www. eenet.org.uk/ resources/docs/ schools_for_all. pdf

9 http://www. ucl.ac.uk/ lc-ccr/centrepublications/ workingpapers/ WP26_IE_ Zimbabwe.pdf

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

11 Theunynck 2009, p. 18 toilets, seats or chairs, playground, doors and class should be designed in a way that also considers children with disabilities"⁷. With respect to the physical environment, the study "Schools for All: Including disabled children in education"⁸ examines the significance of the areas of transport and school buildings. This analysis on the situation in Zimbabwe⁹, provided by the Leonard Cheshire Disability and Inclusive Development Centre in cooperation with the 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 situation¹⁰ and the establishment of norms - a distance norm, for instance, defining the "maximum distance children are expected to travel to school"¹¹ 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 "teacher-student ratio" indicate, solutions eliminating barriers 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.

SCHOOL DESIGN **BASED ON** THE **UNIVERSAL** DESIGN **APPROACH**

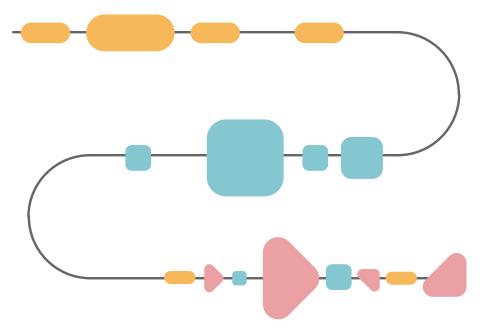
12 UNCRPD, Art. 2 DESPITE the limitations of the research findings, it can be concluded, as a conceptual principle, that guidelines and policies should follow the universal design approach:

"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"¹²

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

EXTRACURRICULAR LEARNING SPACES INCLUDING TRANSFER

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



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

weather conditions (rainy season, drought) with

particular respect to users

of wheelchairs, walking

aids and walking sticks,

safety aspects on the way to

school (especially girls with

disabilities are at risk of

specific forms of violence)

as well as the accessibility

of public transport.

accessibility/quality of

roads under different

THE INFRASTRUCTURE OF SCHOOL BUILDINGS

The school building is supposed to ensure full access for all learners and in particular for 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 or 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 considered a major "weakness", cultural, religious as well as disabilityrelated aspects are to be united¹³. Children and adolescents with disabilities may need special retreat or therapy rooms, where they can have some time off to better cope with the requirements of the school day. These rooms, thus, have to be incorporated into the planning of school buildings as well.



EXTRACURRICULAR LEARNING SPACES INCLUDING TRANSFER

The importance 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 being left behind and excluded from their class. This exclusion from common learning processes is sometimes even misinterpreted as positive, as it would leave 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.

13 cf. http:// www.eenet.org. uk/resources/ docs/wedc_inclusive_ design_of_ school_ latrines_ 2011.pdf

5 TRANSFERRING RESEARCH RESULTS INTO PRACTICE



PHOTOS GIZ Leyton Alvarado



WHEN IT COMES to eliminating the barriers identified above, especially those relating to the physical school environment, the pure preparation of a data checklist is not sufficient. 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 or 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 positions¹⁴, that are comprehensively covered by ISO 21542) and reality (where schools have no water supply, electricity or wastewater treatment system¹⁵). 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 results¹⁶.

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 are to be examined, and finally the structure for establishing the "universal design in physical spaces" approach as a section of "universal design in education policy" and for anchoring it there has to be addressed. **14** ISO 21542 p. 61-66

15 cf., for instance, Abdoll and Barberton 2014, p. 23, 24

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



THE PROCESS OF IMPLEMENTING AND ANCHORING

INSTITUTIONS AND ORGANISATIONS

- LAWS STANDARDS
- KNOWLEDGE AND ATTITUDES
- ACCESSIBILITY/AVAILABILITY
- ORIENTATION

THE AIMS

SAFETY AND USABILITY

OF ACCESSIBILITY

STRUCTURE OF **REALISATION IN REFERENCE TO THE** TARGET GROUPS

- PHYSICAL
- SENSORY
- ♦ COGNITIVE

ACCESSIBILITY **OF THE PHYSICAL ENVIRONMENT: UNIVERSAL DESIGN OF PHYSICAL SPACES**

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 when including the requirements of all groups in the solution, the system becomes truly usable by all, thus making it a universal design system. 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"¹⁷, room signage with lettering of sufficient contrast and size, use of the Braille writing system and/ or of raised letters, alarm systems with light or acoustic signals;

Cognitive aspects arranging pictograms and textual information in such a way as to make them perceivable and fully understandable to people with different linguistic and cognitive abilities.

17 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 as well as roads that are muddy and full of water when it rains and display 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. enables safe and unassisted orientation 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 what it is intended for in the way that is common, without additional effort or assistance. Thus, in a workshop, for instance, it must be possible to use a workbench. This requires its adjustability to

allow wheelchairs underneath and maybe also grab bars and fixation devices. In the school garden, raised herb beds should be installed alongside regular beds. Moreover, in all accessibility-related solutions based on the universal design approach, safety aspects - the aim of a quick, complete and safe evacuation of all pupils and teachers in case of thunderstorm, flood, forest fire or earthquake, for instance - are to be considered as well. For the most part, both aspects, that of safety and that of 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 sized aisles not obstructed by objects provide the necessary prerequisite for evacuation in case of emergency. 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, building legislation;

Standards

on a direct level: norms such as ISO 21542 and processes of national implementation¹⁸; on an indirect level: with a focus on the key principles and their implementation under consideration of traditional, cultural and fiscal frameworks (example of toilets) as well as topographic conditions (e.g. arranging for buildings on a slope in such a way as to enable entrance without additional ramps);

Knowledge and attitudes

The assumption that the reasons for 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. The process of implementing and anchoring an accessibility policy, especially when it comes to the area of "universal design in physical spaces", must emerge from the

efforts of society as a

whole.

cf. concept "ISO and developing countries" - see, for instance: http://www.iso. org/iso/home/ about/iso-anddevelopingcountries.htm

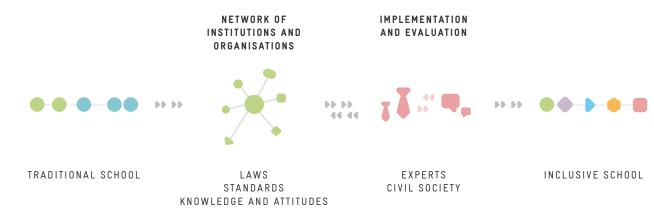
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THE DEVELOPMENT PROCESS OF A BARRIER-FREE SCHOOL ENVIRONMENT: "UNIVERSAL DESIGN IN PHYSICAL SPACES" AS A SECTION OF "UNIVERSAL DESIGN IN EDUCATION POLICY"



society, NGOs and governmental institutions of all levels is to design concrete measures and at the same time aims at identifying and addressing basic requirements for change. From the perspective of accessibility then, the historically and culturally evolved understanding of steps as reification of hierarchical structures will be challenged, which contributes to facilitating decisions such as choosing a ramp instead of – and not in addition to – stairs or steps.

ALSO, THE NETWORK is supported by experts in all phases of planning and implementation. This help to prevent that in the functional planning of a building, for instance, a classroom is placed directly next to a noise-intensive supply room or that tactile ground surface indicators are installed not as a guiding pattern but just as a visually appealing element. The effectiveness of all measures and the work of the experts, though, require constant evaluation by the users and the people concerned, as no law, no standard and no planning process (alone) can ensure the sustainable implementation of universal design.



cf., for instance, Theunynck 2009

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 postponement of building measures to create accessibility to a "later period" or to when a "particular need arises" not only contradicts the principle of universal design, but also means considerable additional costs.

20 https:// openknowledge. worldbank.org/ bitstream/ hande/ 10986/10324/ 388640Ed Notes1August 2005CostOf Access12.pdf? sequence=1le /10986/ 10324/388640 EdNotes 1August2005 CostOf Access12.pdf? sequence=1

"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 greater²⁰". In the end, the creation and maintenance of accessibility includes 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 as 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 at all necessitate the implementation of cost-intensive measures. Instead. they just require the combined efforts of all people involved: the teaching staff, the service staff as well as the children and adolescents and their parents.

BEST PRACTICE - Uganda Accessibility Standards have been published in 2010 by Uganda National Action on Physical Disability and the Ministry of Gender, Labour and Social Development²¹. They are part of the quidelines to be consulted for the construction of public buildings including schools²². Accessible toilets and classrooms have been constructed in the last years²³.

BEST PRACTICE - Nepal "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.²⁴"

21 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.

22 http://zeroproject.org/wp-content/ uploads/2013/12/ Obligatoryaccessibilitystandards_ Uganda.pdf

23 cf. Theunynck 2009 p. 26 f. and 59

24 http://www. unicef.org/rosa/ InclusiveNep.pdf page 23

6 SCIENCE TO POLICY IMPLICATIONS

FOLLOWING THE "one education for all" approach, the schools and educational systems in the countries of the global south will have to fulfil the criteria of accessibility with respect to infrastructural, architectural and educational²⁵ 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 particular local material, fiscal, sociospatial and infrastructural barriers 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), though, will certainly not be successful, as it traditionally refers to additional costly adjustments or rebuilding measures introduced at a later period for people with disabilities or impairments. The universal design approach may prove more adequate 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 the 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.

25 Transferring the universal design approach to learning processes brings about concepts such as that of "universal desian of education" (cf. http://www. washington.edu/ doit/ or "universal design for learning" (Rapp 2014; http://www. udlcenter.ora/). which need to he embedded at all levels (development of the curriculum. provision of learning materials. training of teaching staff etc.) within the development process of an education for all.

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, thus, 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 at designing 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 intend to create accessibility, orientation, safety and usability of educational programmes for all children and adolescents both on the way to school as well as in all rooms and facilities of the school building. The often-neglected extracurricular learning spaces in the school context are also included in 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 methods of implementation 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 of an accessibility policy to enable the sustainable implementation and continuous evaluation of the basic underlying ideas, principles, standards and strategies of universal design in the institutions and organisations of the education sector.
- Education policy, development cooperation and educational science will – aided by the training of all people involved (school planners, architects, head teachers, school administration) and with participation of parents and pupils alike – promote the establishment of local/municipal networks for all those who are interested in the universal design approach and in discussing it and implementing it into practice within the context of the respective school development.

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p. 16–17: **Fig. 1** Elements of a barrier-free school environment according to the universal design in education (UDE) strategy; © Sven Degenhardt & Joachim Schroeder

p. 22-23: Fig. 2 Accessibility of physical environment: universal design of physical spaces;
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p. 26–27: **Fig. 3** The development process of a barrier-free school environment: "universal design in physical spaces" as a section of "universal design in education policy"; © Sven Degenhardt & Joachim Schroeder HERAUSGEBER Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

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