Ministry of Education

Circular and Guidelines on School Infrastructure and Environmental Arrangement

Ensuring Access to Education for All

Non-Formal and Special Education Branch
Ministry of Education
"Isurupaya"
Battaramulla.

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1 Basic Policy

1.1 How to use the Guidelines

No child must be denied access to education because of inaccessible building, information, or communication setting in schools. This set of guidelines aims to provide minimum standards for the accessibility of school facilities and the learning environment required to ensure that as many children as possible including children with disabilities can access school education and enjoy quality learning in mainstream school. "Accessibility" is interpreted in this set of guidelines as the degree of availability for every student. The concept and definition will be described in 1.3.

This document contains technical requirements for improving accessibility to buildings and facilities for individuals with various types of disabilities. These requirements are to be applied to the design, construction, and alteration of buildings and facilities of all public schools in Sri Lanka. For making the school environment usable for all school users, schools are required to refer to the set of guidelines when making school development plans and making designs/renovation of the specific buildings or facilities in the details.

It should be noted that the learning of every student is not completely secured only by complying with the set of guidelines. The quality learning should be addressed at daily learning scenes by providing reasonable accommodation and necessary support. Environment arrangement should be considered as the basis of this process. Besides, the set of guidelines is expected to be periodically reviewed and amended after the start of the operation.

1.2 Related laws and regulations and decrees

The concept of accessibility underlies this set of guidelines. The technical standards of school accessibility explained here are to supplement the requirements stated in the Protection of the Rights of Persons with Disabilities Act (No. 28 of 1996) and the Disabled Persons (Accessibility) Regulations (No. 1 of 2006). It must be noted that the requirements stated in this set of guidelines is under the environment of inclusive education where students with and without disabilities are learning within the same campus.

1.3 Safe and comfortable learning and living environment

The basic concepts underlying the guidelines are as follows.

1) Accessibility

The Disabled Persons (Accessibility) Regulations (No. 1 of 2006) defines "access" as the ability of a person to enter into, approach, pass to and from and have use of any public building or public place, and the facilities and services provided therein, or any place where common services are available, without the assistance of any other person. Based on this understanding, "accessibility" should be realized as the degree to which service, environment, a product or device, is available to as many people as possible, particularly usable by persons with disabilities. This concept focuses on improving the things which are difficult to access for those social groups. In most schools, innumerable obstacles and barriers hinder persons with disabilities. A person with disability must be able to access and obtain the service or information fully and independently, on an equal basis with others. Every school both in urban and rural areas is required to take appropriate measures to eliminate these barriers indoor and outdoor for allowing children with disabilities to access a quality learning environment.

It must be noted that the obstacles and barriers may include not only physical facilities but also information and communication. The information of school facilities is not accessible when it is provided in a form in which persons with intellectual disabilities, learning disabilities, hearing impairments, or visual impairments are not able to understand, such as school location or school bell.

2) Universal design

Universal design is a broader concept than accessibility which serves for someone with special needs as an add-on to an existing design. This concept plans that the design of products and environments is to be easier for people with a wide range of needs including but not limited to persons with disabilities to use, to the greatest extent possible, without the need for adaptation or specialized design. Human characteristics considered in universal designs may include age, gender, size, ability, race/ethnicity, culture, language and learning preference, etc. It envisages that the design of things should not be an additional requirement set up just for the benefit of only a minority of the population with special needs. These products are often designed to eliminate or minimize the need for assistive technologies. For example, no-step entry benefits all people not only for persons with motor disabilities including the elderly using walking sticks, parents with baby strollers, delivery workers, and others.
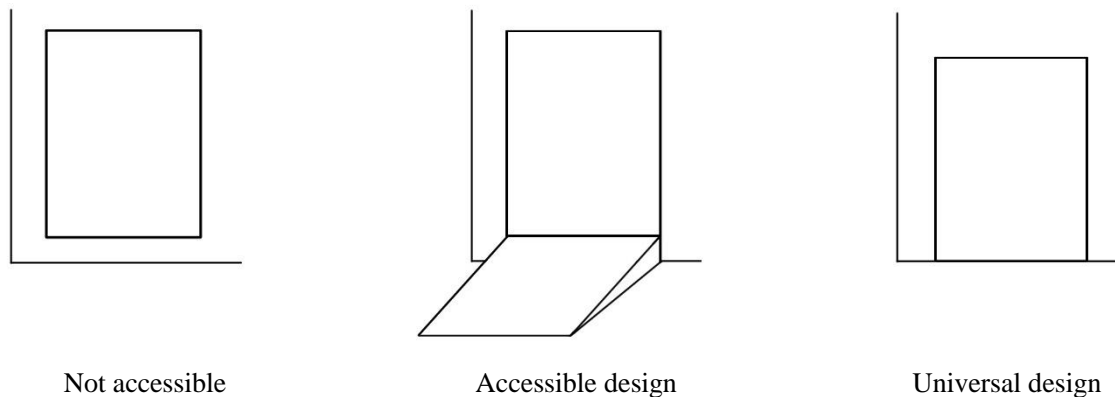

| Not accessible | Accessible design | Universal design |

Figure 1 Concepts of Accessibility and Universal design

Besides, in general, the universal design of schools will make them easier to maintain because the buildings will have fewer stairs/gaps, wider door openings, fewer obstacles, and more durable walking surfaces. Improved lighting and elimination of blockages will lead to fewer accidents.

3) Reasonable accommodation

The United Nations Convention on the Rights of Persons with Disabilities defines reasonable accommodation as "necessary and appropriate modification and adjustments where needed in a particular case, to ensure to persons with disabilities the enjoyment or exercise on an equal basis with others of all human rights and fundamental freedoms." It will be required as far as not imposing a disproportionate or undue burden. At schools, reasonable accommodation is carried out by schools themselves where necessary in particular cases and depending on the circumstance of individual students with disabilities to ensure their equal rights of education. No matter how the school facilities and equipment are made accessible, not all special needs can be covered. The provision of reasonable accommodation depends on the levels of preparation of the fundamental environment such as accessible facilities and equipment. A well-prepared fundamental environment would reduce the amount of effort and the

number of students who require reasonable accommodation. On the other hand, when the school environment is poorly arranged and less accessible, providing reasonable accommodation is the only way to secure quality learning for them. This requires a considerable amount of work. As such, environment arrangement and reasonable accommodation are like two halves of the whole.

4) Scope of the Guidelines

Ramps and special toilets can be seen in some Special Education Unit (hereinafter referred to as SEU). On the other hand, the rest of the school facilities remain less accessible. It should be noted that the number of students with disabilities learning in mainstream classes is rapidly increasing. Besides, members of the community may visit the school and use its facilities since various community activities such as polling stations or evacuation shelters will take place in schools. Therefore, accessible school buildings are likely to increase participation in civic life for all people throughout the life cycle, which may reinforce the value of school. From this perspective, it is desirable that not only SEU but the environment within a whole school, with or without SEU, be designed accessible. Furthermore, it is not only for students with disabilities but for all members with disabilities of the community.

1.4 School environment development planning

In light of the concepts mentioned in the previous clause, schools are responsible to improve and develop the fundamental environment to make it easier for everyone to use. Accordingly, schools must make incremental improvements to achieve the minimum standards of the school environment as a whole based on a practical plan, rather than making changes to accommodate newly enrolled students each year. The plan-making should be based on the following process: i) clarify the vision of the accessible school achievable within a short- to long-term, ii) grasp the current status of the school environment, and iii) formulate a short- to long-term school environment development plan. In preparing the plan, the following three basic principles should be taken into account.

a) Functionality and safety
b) Efficiency and comfort
c) Durability and sustainability

Each principle will be described below.

a) Functionality and safety

Functions of the school facilities and equipment should be set up in consideration of the characteristics of various disability types, their maximum reach, and behavioral characteristics. Likewise, in the planning and design of facilities and equipment, consideration shall be given to the characteristics of various disabilities to ensure their safety.

b) Efficiency and comfort

A short, safe, and smooth circulation path is considered in the successful spatial layout. On the other hand, the paths of SEU students and mainstream class students should not be separated and a place where enables their exchange and communication on a daily basis should be secured.

c) Durability and sustainability

Regular maintenance is essential for keeping the school environment in good condition. It is important to make the facilities and equipment easy to check/maintenance/repair regularly. While constructing solid building structures, indoor layouts and materials should be designed flexible and adaptable to future changes of learning contents and styles.

School environment should be developed with low-cost and low-tech solutions that would have immediate benefits. In many cases, only some extra and a few minor changes would need to be made to make the design features more accessible. It is also recommendable to find locally available materials/products when costs are prohibitive. This cost-effective solution makes the facility maintenance easy and enables long-term use.

1.5 Stakeholders' participation and consensus-building

The consensus that the whole school environment is to be made usable for all school users has to be built among the school community and stakeholders. Based on this understanding, the school development plan should be made with the participation of the people concerned, including students' families, and the community residents from the designing stage, while sharing the goals and obtaining their understanding and cooperation. Besides, it is desirable to obtain usability checks by persons with disabilities and advice from experts of architecture and occupational therapist, etc.

2   Common space

The school infrastructure and environment not only in classrooms but at common spaces must be designed to allow all students to access freely and safely. The major points are described in the following items. The school, however, is required to check the accessibility of the whole school area and make necessary improvements not limited to the following items.

2.1   Pathways and corridors

The school facility is required to provide a reasonable circulation path for students with disabilities to and from SEU classroom. <u>Continuous, concise, and easy-to-understand circulation paths and space composition</u> can reduce the students' psychological and physical concerns. The following examples show the arrangement of school facilities.

- Remove roadblocks to ensure adequate width of the paths/sidewalks avoiding excessive congestion
- Ensure visibility and arouse attention at the corners of the corridor/stairs to prevent collisions
- Prepare consistent signs/guidance using pictograms at effective points such as the junction of traffic lanes throughout the facility[1]
- Color the paths/sidewalks as an effective reminder to approach intersections/destinations
- Shelter the outside paths with roofs in case of extensive rain
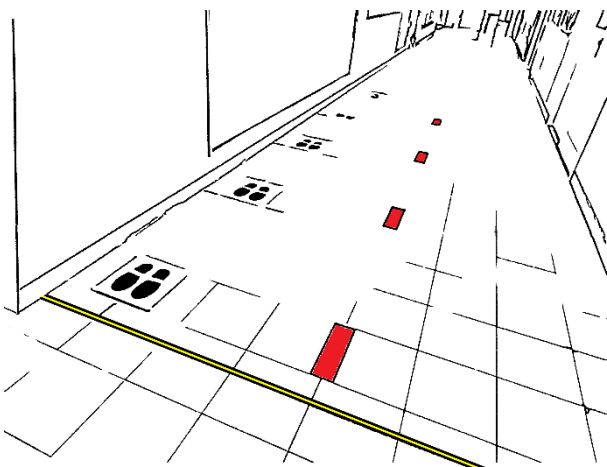- Make the paths cross at right angles

Figure 2 Guidance at corridor

Figure 3 Signs with pictograms (Sample)

2.2   Ground and floor surfaces

The best way to improve accessibility is by avoiding level differences inside/outside the school buildings and making the surfaces as flat as possible. It is preferable to take the following measures.

- Make the school premises flat as much as possible
- Set up ramps to connect different levels when the school premises is not flat
- Eliminate the steps/level differences over 2cm as much as possible

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[1] US Department of Justice (2010) *2010 ADA Standards for Accessible Designs*

- Pave the outside paths with concrete
- Cover the trench drains on the grounds with grating covers which prevent wheelchair casters and canes as well as persons with visual impairments from falling down
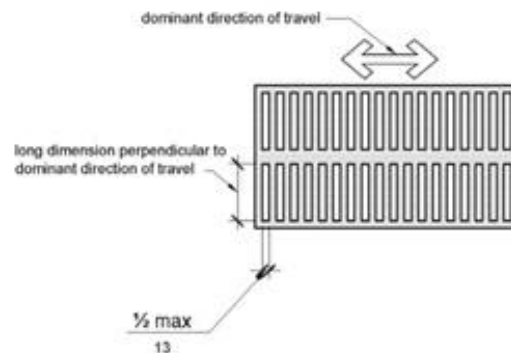

Figure 4 Make the school premises flat

Figure 5 Trench drain cover[2]

2.3 Toilets

Students with intellectual or developmental disabilities might drink a lot of water when they feel anxious or nervous and need to use the toilet frequently. Besides, there would be students using a urine bag due to kidney disease or students suffering from frequent urination due to side effects of medication or psychogenic problems. As such, access to the toilet is a vital issue for students with disabilities.

Secondly, it should be understood that a toilet is a place for keeping optimal health and protecting dignity. Children might hesitate to come to school if they have to hold going to the toilet because it is a dark and dirty place. Or they might refrain from drinking water because they do not want to use the toilet. Holding going to the toilet can increase the risk of urinary tract infection and neglecting adequate hydration can cause a heat stroke. Thus, the toilet has to be kept as a clean, hygienic, and comfortable place.

Thirdly, enough space should be spared at the toilet for the caretaker/supporter's convenience. Some students require support when they use a toilet. Their parents would feel reluctant to allow their children to go to school because of this toileting difficulty. Good toilet design can reduce these concerns.

Taking consideration of these points, it is preferable to take the following measures, in addition to the requirements stated in the Disabled Persons (Accessibility) Regulations (No. 1 of 2006).

- Distribute accessible toilets not only inside/next to SEU, but also in an adequate location where anyone in a school can use
- Consider the circulation path to approach to the accessible toilet and make the path easy to walk
- Install a western type toilet bowl in an accessible toilet compartment
- Install an L-shaped handrail on the side of the toilet bowl for helping the user stand and sit
- Install a drop-down grab bar on the opposite side of the wall for holding the seating position
- Prepare enough number of toilet compartments in consideration of the whole student number
- Make enough space and brightness in a general squatting toilet for common use
- Construct school toilets with an adequate space design that makes cleaning and maintenance easy for keeping

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[2] US Department of Justice (2010) *2010 ADA Standards for Accessible Designs*

the toilets clean and safe

- Shower room or some closed space where students can wash him/herself and change clothes is useful in case students wet themselves or female students have their periods.
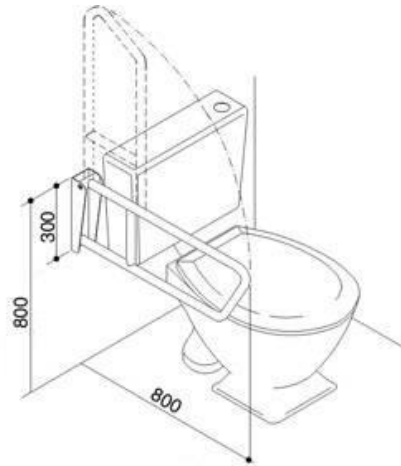

Figure 6 Make enough space and brightness

Figure 7 Drop-down grab bar

2.4 Handwashing area

As stated in the Disabled Persons (Accessibility) Regulations (No. 1 of 2006), an appropriate knee and foot clearance should be provided under the basin, particularly for wheelchair users. In addition to the stated requirements, it is preferable to take the following measures.

- Make a faucet spout long for enabling the users to reach water flow easily
- Choose a lever handle type faucet for enabling the users to turn on easily, not a knob handle type faucet
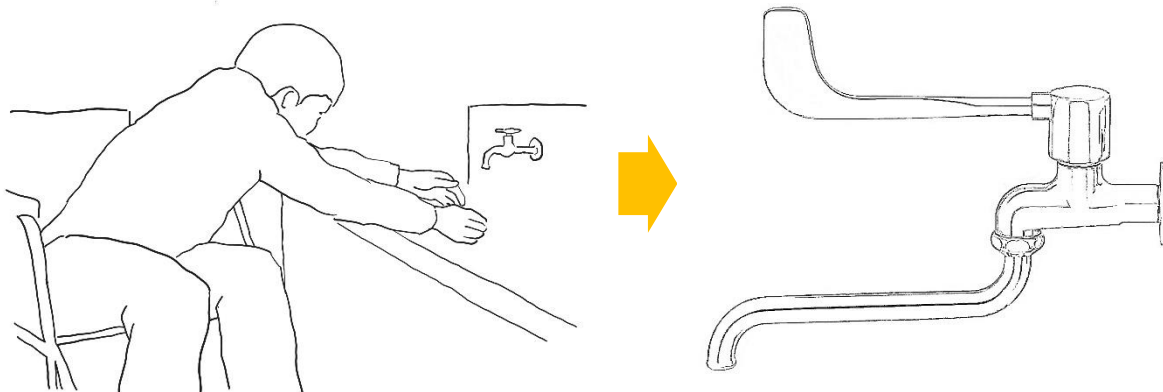- Install grab bars on the side of the faucet, particularly for crutch users

Figure 8 Faucet with a long spout and a lever handle

2.5 Steps and stairs

In addition to the requirements stated in the Disabled Persons (Accessibility) Regulations (No. 1 of 2006), it is preferable to take the following measures.

- Ensure enough space on the foot of stairs/ramps and the landing of the stairs to avoid stagnation

- Paint the walls near staircases in the bright color for making it simpler for students with memory impairments or developmental disabilities to navigate
- Arrange the stairs with the ideal angle which is between 30° and 39°, so that students can go up and down the stairs in a safe manner
- Install two-level handrails in consideration of the different heights of the students and the diverse needs of
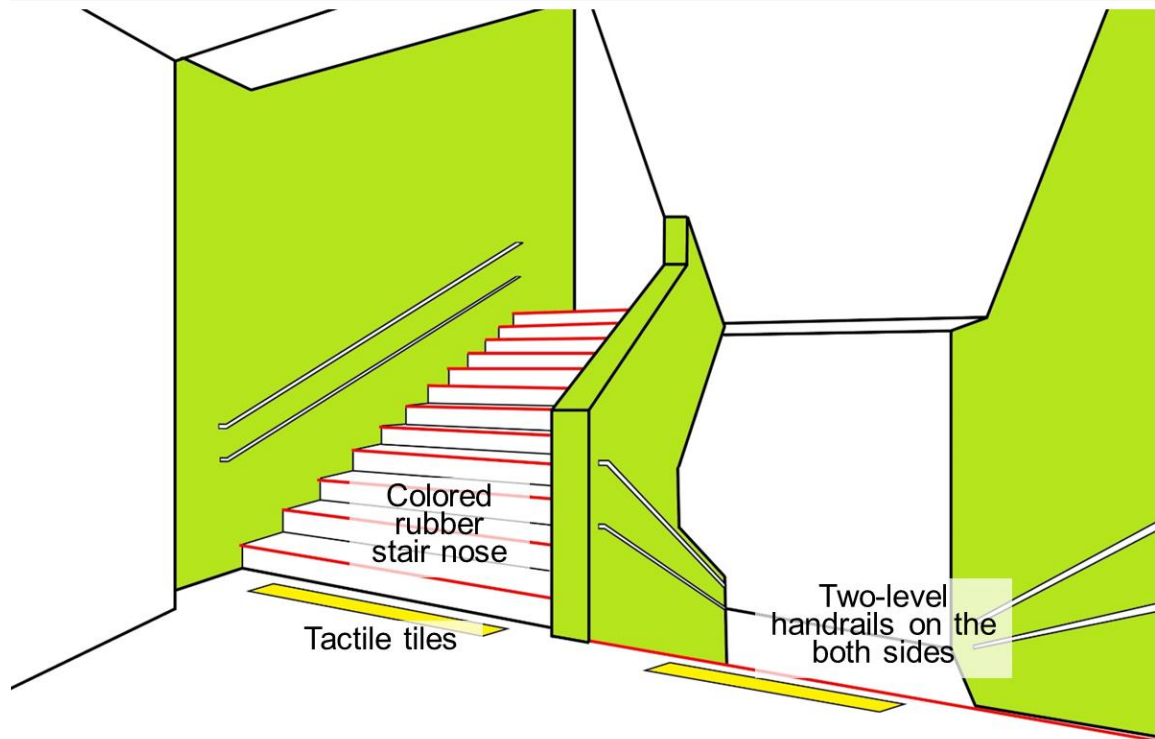

Figure 9 Coloring staircases

users

2.6 Doorways and entrances

In addition to the requirements stated in the Disabled Persons (Accessibility) Regulations (No. 1 of 2006), it is preferable to take the following measures.

- Choose a sliding door rather than a hinged door in consideration of wheelchair users' convenience as well as the risk of collision
- Eliminate raised thresholds and steps at doorways. When needed, thresholds should be recessed or kept low with a gradual transition from the exterior floor surface to the interior floor surface
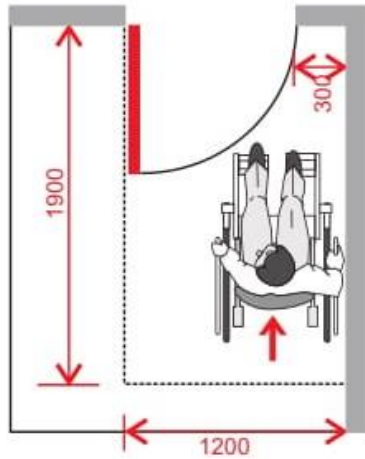
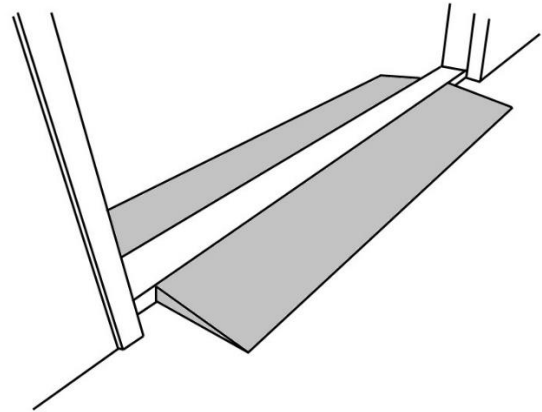**Figure 10** Requirement of circulation space at Hinged door[3]

Figure 11 Thresholds of doorways

2.7 Auditorium and schoolyard

In addition to the requirements stated in the Disabled Persons (Accessibility) Regulations (No. 1 of 2006), it is preferable to take the following measures.

- Provide a way to get up to the stage for wheelchair users in the auditorium, assembly halls, and similar facilities
- Provide shade and/or a resting space with roofs and benches at schoolyard with appropriate ventilation
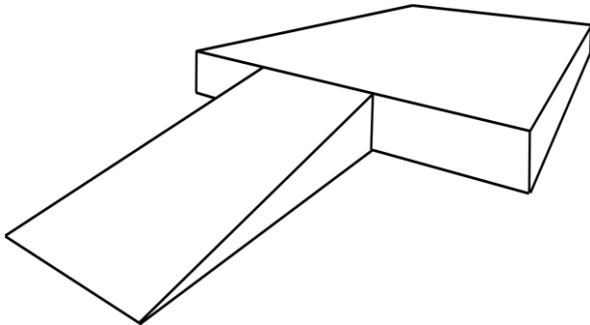

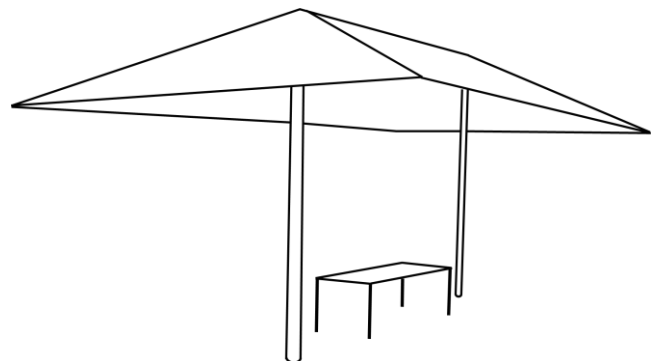**Figure 12** Ramp to get up to the stage

Figure 13 Resting place

2.8 School gate and parking areas

The general standards for accessible parking spaces are stated in the Disabled Persons (Accessibility) Regulations (No. 1 of 2006). Many parents stay around the school gates when they drop off and pick up their children. There is a variety of means of commuting which are walking, bus or tuk-tuk, and driving their vehicles. For their security when dropping off and picking up, the following points should be noted.

- Separate the entrance for pedestrians and vehicles --
- Spare enough space for parents around the school gate so that the cluster does not overhang the roadway
- Take necessary measures to avoid hazards such as jumping out to the roadway when waiting for bus or

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[3] Reprinted from Whybrow, S. (2006)

tuk-tuk

3 Special Education Unit

3.1 Basic points of concern

SEU classroom environment must be designed to allow students' learning and necessary supports for them by not only establishing ramps, special toilets, or handrails but in consideration of their physical/sensory/mental disability characteristics and conditions. The space and form of the classrooms are required to be designed to enable various activities and exercises safely and smoothly. Taking consideration that the daily lives and learning of students with disabilities tend to be greatly affected by environmental conditions, a favorable environment for them should be secured. The classroom also has to be kept tidy and safe by keeping the materials in a locked cabinet and removing/protecting sharp corners of the classroom furniture etc.

3.2 Space design

(1) Flexible space

It is desirable to design classroom to flexibly accommodate a variety of learning content and forms such as change of the number of class students, team teaching, group learning, individual tutoring, and presentation of learning outcomes. In particular, the following actions can be a quick solution.

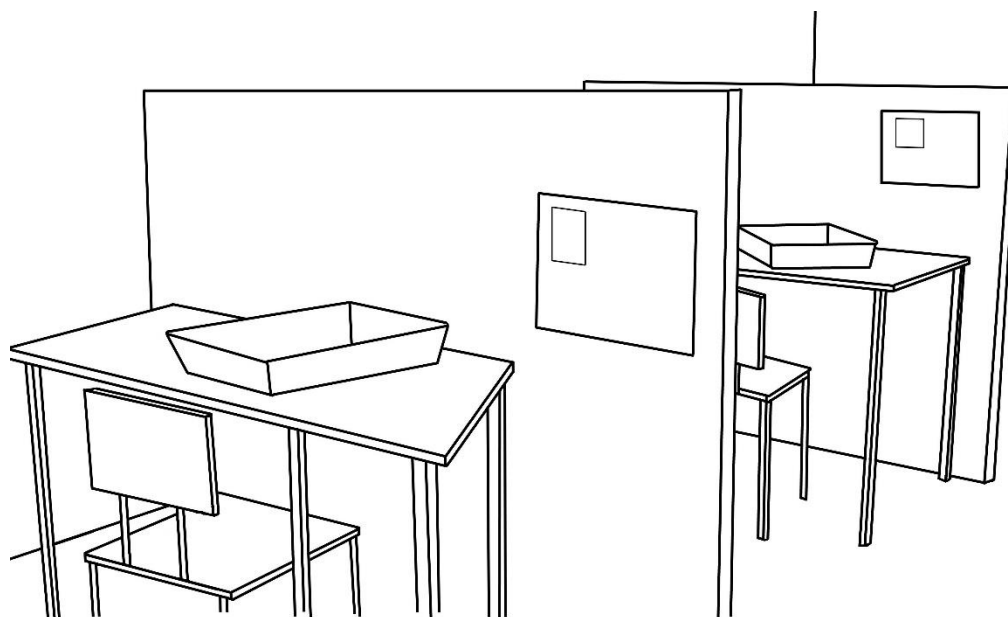- Wider space for classroom
- Adjustable partition walls

Figure 14 Partition walls

(2) Location of SEU classroom / Space for interaction

In consideration of making interaction and joint activities with students of mainstream classes happen even outside of lesson hours, SEU classroom should be located within general school settings similarly with other students as much as possible, rather than in a separate building or distant place. In particular, the following actions can be a quick solution.

- Place SEU classroom in the same school building with other classrooms
- Place SEU classroom close to mainstream classrooms of lower grades, multipurpose classrooms, and social spaces, etc.
- Distribute lounge, alcove, etc., at various locations along the SEU student's circulation path
- Make spaces for the display of art and craft works of SEU students

3.3 Specific responses according to each disability types

The SEU classroom should be flexibly accommodated for a variety of learning activities in accordance with the characteristic of each disability type. On the other hand, there are students with various types of disabilities in a SEU classroom. Accordingly, the points shown below should be referred to as a basic policy and the classroom environment should be developed in a way that does not disadvantage each other while taking account of the interaction between them. It also must be noted that the desirable learning of SEU students can be secured by providing necessary support based on their individual conditions, in addition to these arrangements.

a) Intellectual disability and behavioral disturbance
- Ensure enough space and brightness to check each student's facial expressions for properly understanding the one's condition
- Arrange the environment that the teacher can properly observe each student performs what tasks where, how, with whom and when to start/finish
- Create a safe, relaxing and calm space for psychological stability[4]
- Make a closed space for students to change their clothes
- Remove the factors that would prevent students' attention to learning
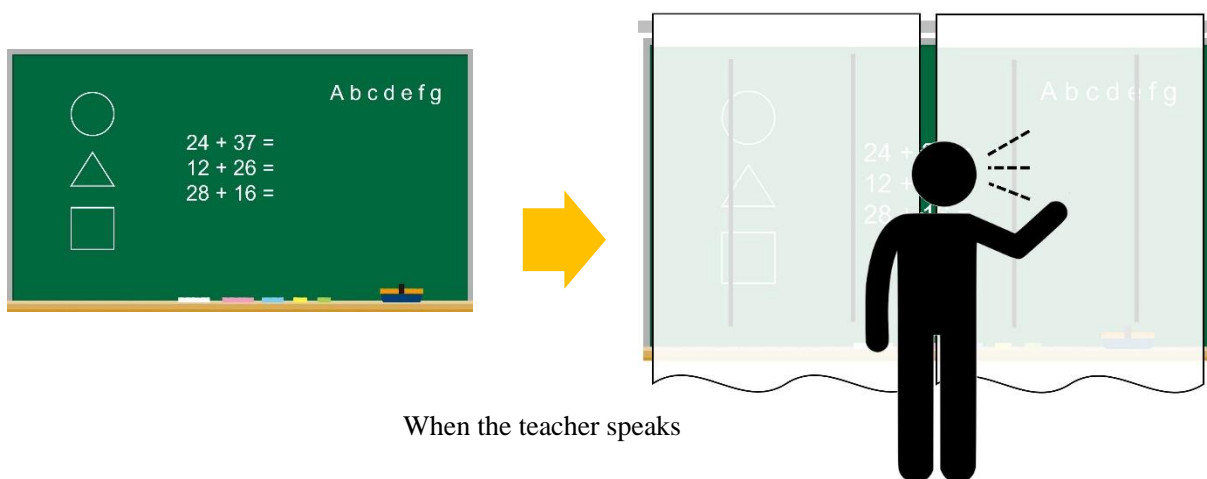- Set up a bed or a bench soda for resting for some students who get tired easily

When the teacher speaks

Figure 15 Reduce too much information

b) Autism Spectrum Disorder (ASD)

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[4] Children with intellectual disabilities or other psychological difficulties tend to be overwhelmed in a busy classroom and become emotionally unstable, upset, or get in a panic. This is a popular practice in many countries and is called in various ways such as calm down corner, cool down spot, safe space, quiet place, den, etc. It is a designated space in/close to the classroom where students can go when they need to take a break and regain their emotional control. The size of the place needs a space for the students to sit at a minimum.

- Ensure the environment where auditory and visual stimulation is controlled

- Adjust illumination in the classroom with natural or incandescent light instead of flickering fluorescent light which some students would be sensitive to

- Protect students from jumping out of the room or breaking lighting equipment in the case of panic

- Prepare a private space to help restore calm

- Arrange the classroom environment in a structured way[5] that visualizes the function of each classroom compartment and procedure etc.

  The structured classroom shown in **Figure 16** is for students with ASD only. In the actual SEU classroom where students with other types of disabilities are learning together, the concept should be partly applied.
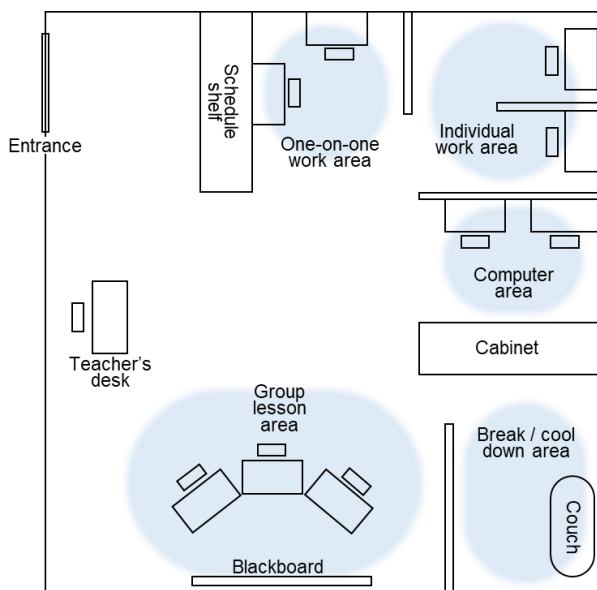
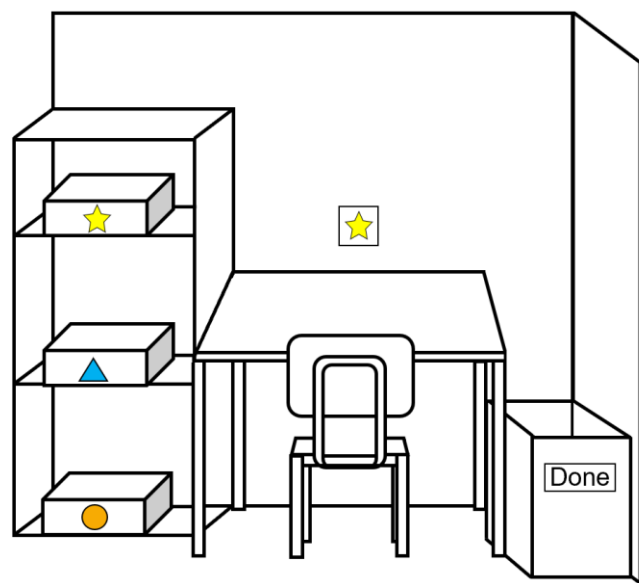

Figure 16 Structured classroom

Figure 17 Structured work booth

c) Hearing/speech impairment

- Ensure adequate space which allows relaxed conversation for practicing the correct speech articulation/pronunciation while checking the student's expression and movement of lips/mouths/facial muscles

- Keep the classroom environment as tranquil as possible for the students using hearing aids.

- Take sound-reducing measures for the classroom construction by using materials with sound insulation and sound absorption

Figure 18 Beacon light

- Introduce visual indicator system such as a beacon or a light bar to tell the students when it is time to go to class or dismiss, instead of school bells
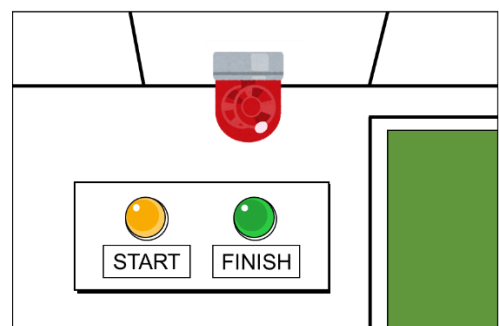
d) Visual impairment

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[5] "Structure" is an idea for setting up environment that is easy to understand for children with ASD. It provides predictable and meaningful routines through the use of visual/structural supports to classroom instruction and activities to increase engagement and independence, and clearly organizing classroom spaces and teaching materials to reduce anxiety and increase appropriate behavior.

- Keep quietness and adequate lighting to ensure sufficient audio information
- Adjust illumination in the classroom to provide soft light with shading curtains and dimmers
- Keep the classroom floor clean and keeping equipment/materials always in the same location

e) Physical disability and health impairment
- Eliminate the steps/level differences over 2cm as much as possible
- Install a ramp for the step/level difference when it is impossible to remove it.
- Install a handrail for the stairs and the ramp which is over 16cm. (The height should be between 75-85cm)
- Give special treatment to ensure a non-slip finish for the classroom floor surface
- Make the space composition suitable for the activities using a wheelchair or other assistive devices. The width should be at least 150 cm
- Adjust the room temperature for the student who has difficulty in controlling their body temperature
- Prepare enough space to keep assistive devices such as wheelchair inside the classroom

4   Mainstream classroom

4.1 Basic points of concern

In addition to the students integrated from SEU, there would be some amounts of students with invisible disabilities such as LD[6], ASD, and other developmental disabilities[7] in most mainstream classrooms. The mainstream classroom environment should be designed to allow these students' learning and necessary supports for them. <u>The guidelines for SEU classrooms described in the previous clause should be applied in mainstream classrooms as much as possible.</u>

4.2 Space design

In light of the relationship between students with and without disabilities and the change of classroom due to promotion etc., mainstream classroom environment arrangement should consider the following points.

- Plan mainstream classrooms and SEU classroom as a consistent unit, with attention to the coordination of each space and the visual continuity
- Place mainstream classrooms for lower grades with other learning and living spaces within the same area
- Plan the school building flexible enough not to disrupt the spatial consistency when there is a change in the number of students
- Prepare an additional space for the students with disabilities to provide individual tutoring
- Minimize the alternation of classroom design with SEU classroom to avoid confusion
- Pay careful attention to environmental conditions such as sunlight, lighting, and ventilation
- Prepare small private space for resting and restoring calm next to or close to the mainstream classroom

4.3 Resource Room

(1) Concept of Resource Room

Resource room is a space where mainstream class students who have difficulties in language, learning, or communication can receive a few lessons a week of specialized instruction to improve and overcome his/her difficulties based on their disabilities, while receiving lessons of each subject every day in their mainstream classes. Even if resource room is not introduced in each school, consideration should be given to establishing one school with a resource room for multiple schools and students who need specialized instructions attend the resource room a few times a week.

(2) Space design

The purpose of specialized instruction in resource room is to ensure that the students become able to spend as much time as possible in mainstream classes with other students. Thus, all that is needed is a designated space for specialized instruction, and the materials and equipment needed for instruction will be prepared individually. However, desks, chairs, blackboards/whiteboards, textbooks can be kept in that space.

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[6] Learning disability. There is no delay in intellectual development, but rather a difficulty to learn in certain areas by significant difficulties in the acquisition and use hearing, speaking, reading, writing, calculation or reasoning. This term tends to be confused with intellectual disability (mental retardation) in some countries but should be discussed separately.   It is categorized as "Specific learning disorder" in DSM-V, and as "Specific developmental disorders of scholastic skills" in ICD-10.

[7] A chronic mental/cognitive impairment incurred before adulthood.   It is categorized as "Neurodevelopmental disorder" in DSM-V, as "Specific disorders of psychological development" in ICD-10.

It is possible to make effective use of existing facilities such as vacant classrooms, libraries, and SEUs without preparing a designated classroom for resource rooms. Installing movable partitions is also effective to ensure the variability of the space.
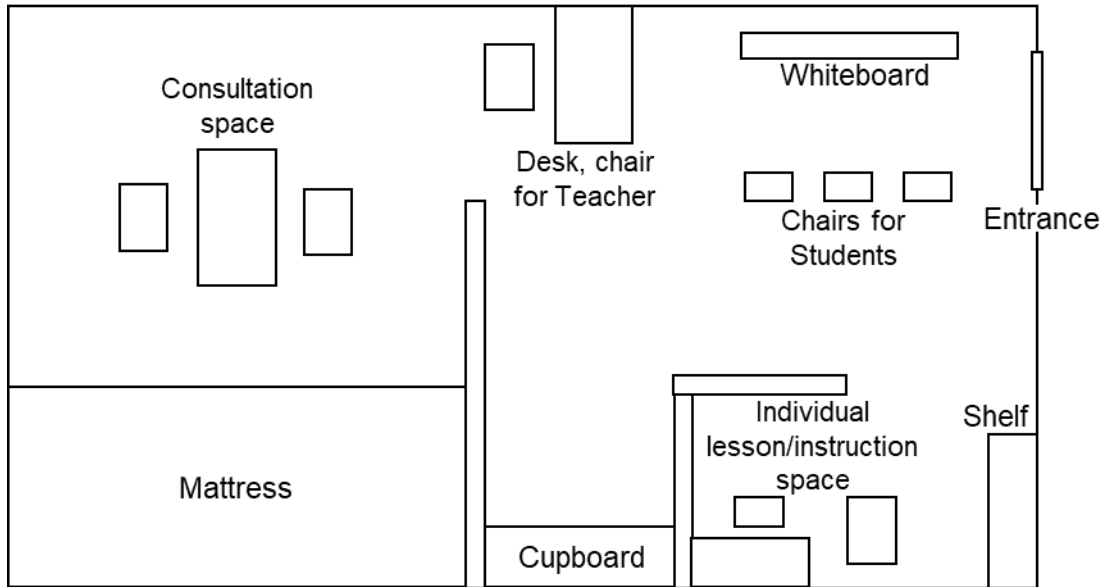

Figure 19 Example of Resource Room

5 Maintenance of School Facilities

The purpose of maintenance of the facilities plays an important role in regular, successful and maximum usage of the facilities. It also ensures the long-term usability and durability of the school building infrastructures, equipment, water and hygiene and sanitation as well as maintaining a sustainable, child-friendly teaching-learning environment while avoiding severe damage and destruction.

The principal is the main responsible person for the basic maintenance and minor repairs with the maintenance committee by implementing the school maintenance plan. Considering the accessibility facilities, the principal can delegate the monitoring to the SEU teacher or Inclusive Education Coordinator of the school and in case of schools without SEU, it can be Inclusive Education Coordinator or a relevant sectional head to do the supervision of the facilities and report the need of repairs and maintenance. It is preferred that they join the school maintenance committee as a member with the support of sanitary laborer or facility users of the school. There should be periodical inspections on daily, weekly, monthly and end-of-term basis as required and planned within the school and minor repairs should be managed by the school at low cost with the financial support of School Development Society (SDS) or other such available resources.

The maintenance of the facilities should be done by implementing the school maintenance plan which includes, identification, how to do, who to do, tools and materials, cost and completion date. The maintenance should be carried out on priority basis.
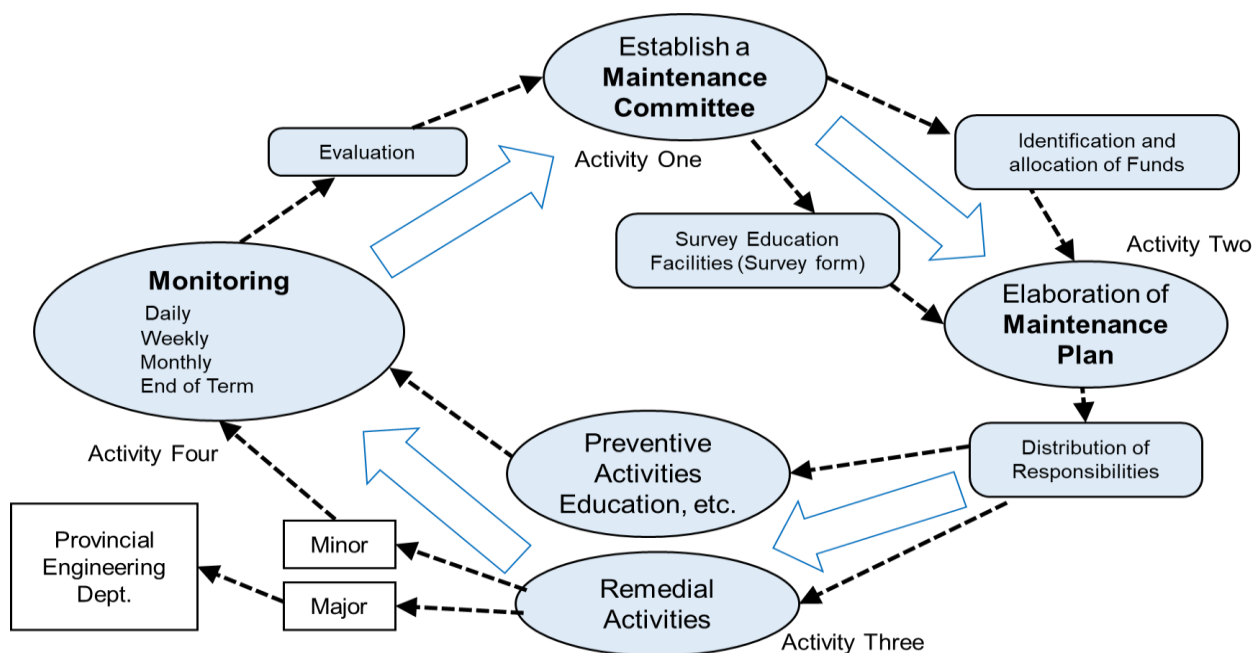

Figure 20 Maintenance Cycle

It is also suggested that the facilities, especially hygiene facilities such as taps, toilets, bathrooms should have instruction manual/guideline displayed and exhibit posters with instructions of using specific tools and materials. These guidelines/manuals can be either in illustrations or ~~is~~ in short -sentences while focusing on the clearness of instructions and ease of understanding. Teachers can be educated on the common usage instructions of the facilities, equipment and tools and through leaflets/booklets and for the teachers to raise awareness among the students to reach wider community.

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