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## The Physical Accessibility for Children With Special Needs: Study at Inclusive Schools in Surakarta City

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### ABSTRACT

This study aims to evaluate the physical accessibility of inclusive schools for children with special needs under the provisions of UNICEF. The method in this research is descriptive qualitative. Data collection technique is done by interview, observation and documentation. Interviews were conducted with children with special needs, while observation was conducted in four inclusive schools in Surakarta City. Data were analyzed using triangulation. Based on the results of the study found that the problem of physical accessibility for children with special needs in inclusive schools is that it can be concluded that the problems are school yard is still uneven, pebbly, and rocky, difficulties mobility inside or outside the classroom, difficul in classroom due to seating arrangements, and mobility difficulties due to the many stairs in the school. In addition, four schools there are still unmet components of UNICEF's physical accessibility components. So schools should more attention to providing physical accessibility for children with special needs in schools.

**Keywords:** physical accessibility, children with special needs

### INTRODUCTION

Inclusive education is an education system that provides opportunities for all learners with disabilities and has the potential of intelligence and / or talent to participate in education or learning in an educational environment together with learners in general (Permendiknas No. 70 of 2009). Inclusive education itself is basically aimed at children with special needs to obtain quality education in accordance with the needs and abilities.

Implementation of inclusive education requires several things that must be met in its implementation. According to Kustawan (in Khairunnisa et al, 2017) one of the things that must be fulfilled in the implementation of inclusive education is the availability of educational facilities and infrastructure in accordance with standard operating procedures. In addition, educational facilities and infrastructure should also be able to accommodate the needs of all learners in the school, including children with special needs.

Accessibility is part of educational facilities and infrastructure. The issue of accessibility is not new for today. Based on the Kepmen PU number 468 / KPTS / 1998 which means accessibility is the ease provided to persons with disabilities in order to realize equal opportunity in all aspects of life and livelihood. With the accessibility, the disability is able to perform daily activities with greater ease easily.

Physical accessibility is closely related to the ease of entry, exit and use in a building (ASB, 2009). The problem of physical accessibility is often experienced by children with special needs, especially children with visual impairment, hearing impairment, and physical disability. In fact, physical accessibility is very important in the fulfillment of the rights of children with special needs, especially when they access education. So there needs to be an accessible environment that can accommodate their needs. This is in line with Komardjada's (2009) statement which states that people with disabilities have limited physical mobility, requiring easy and secure physical infrastructure.

Based on the results of research in the shows that physical accessibility in schools is not yet friendly to children with special needs. Based on Debele's (2016) study indicating that out of 70 schools out of a total of 728 schools randomly selected from ten cities indicates that the physical environment of schools is inaccessible to implementing inclusive education. This is supported by research conducted Devi, Goyal, and Ravindra (2013) showed that as much as that 52% of wheelchair users face problems in the accessibility of each day, and 77% of them feel a big problem.

In addition, Ramli et al (2013) study showed that 90% of the 60 respondents consisting of teachers and students expect a structuring of the

physical environment of the school, especially the classroom physical environment. After that, with the arrangement of the physical environment is also able to improve student learning outcomes. While research by Kang et al (2017) shows that parents of children with physical barriers often identify barriers that their children encounter in relation to family programs and services, social programs, social assistance and outside support, home and community physical design, transportation, and tools or equipment.

Physical accessibility needs to get more attention, so that children with special needs can perform well as other normal children. So the need for a school building that is friendly for children with special needs. In creating buildings that have physical accessibility for children with special needs, there are some guidelines that can be used, there are Kepmen PU no. 468 / KPTS / 1998, UNICEF, Universal Design, and Building Bulletin related design for children with special needs. It is on this basis that researchers want to examine the suitability of physical accessibility of inclusive schools with existing guidelines. As for this research, researchers want to evaluate physical accessibility of inclusive school for children with special needs according to UNICEF. This is because the guidelines by UNICEF are more specific about the accessibility of children with special needs in schools.

## **METHOD RESEARCH**

The method used in this research is descriptive qualitative. The research data is collected from interview, observation and documentation. Interviews were conducted on four (4) students with special need in four (4) inclusive schools in Surakarta City. Further data are analyzed based on Miles and Huberman model (Sugiyono, 2015: 337) using triangulation consisting of data reduction, data presentation and conclusion. The observations were conducted in four (4) inclusive schools located in Surakarta City, namely School "A", School "B", School "C", and School "D".

Sampling technique in interview is purposive sampling. This is because the researcher needs the participants in accordance with the characteristics to achieve the research objectives. The students interviewed consist of two (2) wheelchair users, one (1) student with hearing impairment, and one (1) student who is not including children with special needs but has barriers related to mobility.

## **FINDING AND DISCUSSION**

### **Problems of Children with Special Needs in School Building Building**

Based on the results of interviews with children with special needs, found some barriers that they experienced while in school.

#### **School "A"**

Schoolyard is still uneven, pebbly, and rocky causing wheelchair users trouble when passing through it. In addition, student with hearing impairment find it difficult to learn in the classroom. This is because children with hearing impairment sit on the backseat even though using hearing aid.

#### **School "B"**

Currently, this school does not have children with physical disability such as blind, deaf or wheelchair users, so there is no physical accessibility problem related to physical environment.

#### **School "C"**

Wheelchair user have difficulty when out of the table in the class due to a fairly large table and bulkhead table one with another table adjacent so that the wheelchair user are not free when moving. Then, wheelchair user find it difficult when moving to the computer lab room located on the third floor. This is because there is no ramp so when Computer Subject, the student picked up his friends.

#### **School "D"**

Student who have mobility problem has difficulty in their school environment because of the many stairs in the school.

### **Evaluation of Accessibility of Physical Accessibility of Children with Special Needs in School Building Building**

To accommodate the accessibility of children with special needs to school buildings need a series of paths that must be taken namely The Accessibility Continuum. The series of pathways is the route of special needs children from home to school, then entering classes, moving inside school, entering and using classrooms and other spaces, water, sanitation and health facilities, playground and emergency evacuation at school (UNICEF, 2014 : 17-24). In this study related water facilities, hygiene and health, researchers only focus on toilets contained in each school.

#### **Walking to school**

The path to the school should be safe, free from obstacles and well maintained, the routes used to reach schools are free from busy traffic and are along a quiet street, there are sidewalks along the path to the school and there is a grill facility in the gutter UNICEF, 2014:17-18)

Based on the observations found that School "A", School "B", School "C", and School "D" are located alongside the highway, but tend to be safe

and free from obstacles and busy traffic. In addition there are sidewalks along the path to the school. But there is no grill facilities in the gutter around the school.

### **Entering to school**

School gate should be wide enough to be easily passed by wheelchair users and other aids. The main gateway to access the duck-free schoolyard, cow catcher, cattle trap or other obstacles. In addition it should have a flat surface and free from obstacles that interfere with people with impaired mobility and vision. Ground surface at the entrance is solid, aligned and well maintained (UNICEF, 2014:18).

Based on the observation found that main gate to access school grounds of School "A", School "B", School "C", and School "D" are wide enough for children using wheelchair or assistive devices. Other than the main gate is the entry route free of ditches, cow catchers, cattle traps or other obstacles. Ground surface at the entrance and within area School "B", School "C", and School "D" SD B, SMP C and SMP D have firm, even, level and well maintained, but ground surface at the entrance and within area School "A" is still wavy, pebbly and sandy.

### **Moving through the school**

Walkways and the hallway should be wide enough to allow a teacher or wheelchair users to pass another child or adult walking in the same or opposite direction. Wall-mounted objects can be detected by people with visual impairments. There are handrails on the stairs. The presence of ramp with a maximum ratio of 1:12. In addition, wheelchair users are able to use the ramp independently. Then there is a change in the floor / height level. As well as all the hallways, walkways and stairs are quite bright (UNICEF, 2014:18-19).

Based on observations found that School "A", School "C", and School "D" have the hallways wide enough to allow a child using a wheelchair to pass another child or adult. But, School "B" has a hallway that is quite difficult to pass by child using a wheelchair because it has changes in floor heights and empty benches on the side.

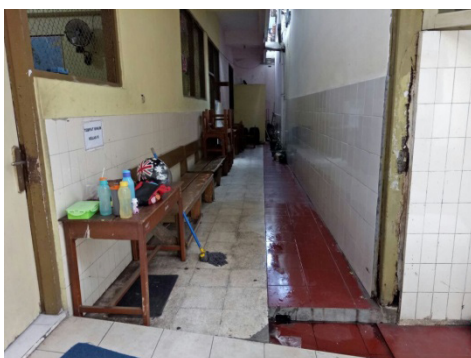


Figure 1. Hallways in School "B"

School "B", School "C" and School "D" have facilities stairs inside the school, but not all the stairs in School "D" have handrails on the stairs.

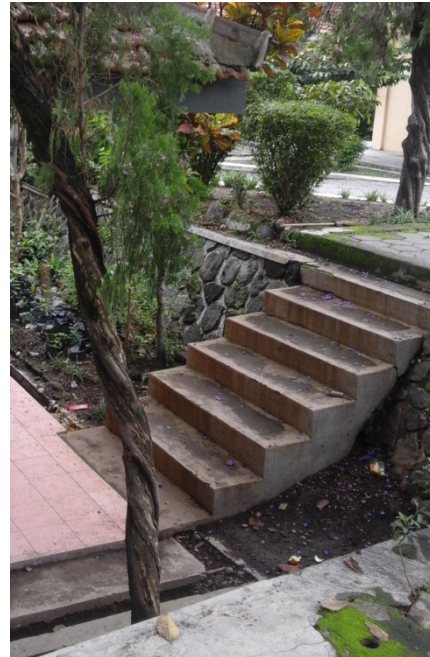


Figure 2. Stair without handrails in School "D"

School "A" and School "D" have ramp facilities at school, but ramp in School "A" without handrails so that child using wheelchair have not been able to use the ramp independently.



Figure 3. Ramp without handrails in School "A"

### **Entering and using classrooms, and other spaces**

The door should be wide enough for child using wheelchair and easy to open. Classrooms and other learning spaces should be bright, well ventilated, quiet and flexible. Age-appropriate furniture and obstacles must be available and enable various students to provide opportunities for a variety of learning activities. Marking on strategic locations with color contrast text / brightness in larger fonts for easy viewing from a distance. Adequate lighting in front of the nameplate for visibility at night or in low light areas. The number and name of the room provided in Braille and also in bold letters



and contrast with the background. Chairs and tables with height adjusted to different sizes and heights. Whiteboard that is easily lowered. As well as the floor is not slippery and changes on the floor that is not too high making it easier for students wheelchair users for mobilization (UNICEF, 2014:20-21).

School "A". School "B", School "C" and School "D" have doors wide enough for child using wheelchair. In addition, the classroom door is easy to open. Classrooms in School "A", School "B", School "C", and School "D" have enough light, well ventilated, quiet and flexible. But School "C" classroom is still not equipped with the appropriate furniture for the student using wheelchair such as table and chair that fit the needs of the child.

In every classroom in School "A", School "B", School "C" and School "D" there has been no marking with bright / color contrasting text in larger font. So far the sign is a board with the name of the class or the name of another room that can not be read from a distance. In addition, marking with Braille symbol was not done in classrooms or other rooms in School "A", School "B", School "C" and School "D".

Blackboards used in School "A", School "B", School "C" and School "D" located at a height enough to be reached by children who use wheelchair. Then, Ground and floor are surfaces a uniform colour with a firm, slip-resistant finish that is even and well maintained.

#### **Toilet**

Toilets should be adequate lighting, well-lit, safe, and privacy. Soap, tissue, water faucet easily reachable, and there are handrails as well. Next, there are Braille and picture marks for easy recognition by visual and hearing impaired children (UNICEF, 2014:22-23).

School "A", School "C", and School "D" have toilets that are bright enough, secure, maintain privacy and are easily reachable. While the toilet in School "B" is quite difficult to be accessed by children using wheelchair because of there is changes in floor and hallways are quite difficult to pass children using wheelchair.

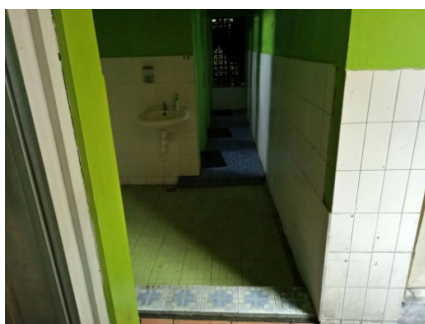


Figure 4. Toilet in School "B"

School "B", School "C", and School "D" do not have special toilet for children with special needs, only School "A" which already have. School "A" has a special toilet with toilet seat facilities. However, there is no completeness related to handrails because the special toilet is still in the process of renovation.



Figure 5. Toilet for children with special needs in School "A"

In addition, there is no Braille or picture marks on toilets in School "A", School "B", School "C" and School "D".

#### **Playing**

The play area should be wide enough to allow a child using a wheelchair to pass another child or adult. Then, ramps are provided where there are changes in level or surface heights. There is space for a sitting area with overhead protection that is connected to a wheelchair-accessible route. And surface of the playing area is firm and safe (UNICEF, 2014:23).

Playing area of School "A", School "B", School "C", and School "D" are located in schoolyard. Schoolyard of School "A" that has ramp, but there are still areas that have wavy surfaces. Schoolyard of School "A" does not have a ramp, that's why it's difficult for the mobility of children using wheelchair. However, about the surface area, School "A", School "B", School "C" and School "D" already have a firm and safe surface playing area.

#### **Evacuating the school in an emergency**

Emergency evacuations plan in schools should be trained on students to anticipate for emergency evacuation. A crowded classroom with children can be dangerous because too many people trying to get away quickly can cause delays and people may be left behind. And then both visual and audio alarms are providing to warn children about emergency situations (UNICEF, 2014:24).

So far, School "B", School "C", and School "D" have not had any emergency evacuation marks, but the school has a bell alarm. This bell alarm can be

used as an emergency alert when emergency coming. But there is no visual alarm and vibrating alarm in schools. The class tends to have enough students, about 30 students so that the need for training so that students are able to respond and take attitude if there is emergency coming.

## CONCLUSION

Based on the results of research, it can be concluded that the problems children with special needs related to physical accessibility in school are school yard is still uneven, pebbly, rocky, difficulty in mobility inside and outside the classroom, difficulty in learning in classroom because of the seating arrangement that is not in accordance with the student barriers, and difficulties in the school environment due to many ladders contained in the school.

According to UNICEF, there are several components that exist in the physical accessibility for children with special needs at school: walking to school, entering to school, moving through the school, entering and using classrooms, toilet, playing area and evaluating the school emergency. While based on the evaluation of the four schools still exist components unmet of the components of the physical accessibility of UNICEF. So the schools need to pay more attention to the provision of physical accessibility in schools for children with special needs.

The suggestions from researcher are: (1) arrange the school environment in such a way that there are no disturbances for children with special needs like gravel, bicycle parking, (2) organize the seat of children with special needs in accordance with the obstacles in order to be able to participate in the class, and then (3) complement physical accessibility that is not yet available in schools such as handrails.

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