

The Accessibility Analysis for the Special Needs Students in Lambung Mangkurat

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Abstract: The accessibility of building and environment is a part of the effort to fulfill the rights for disabilities. The people with disabilities is that every person who have the physical impairment, intellectual, mental, and also the sensoric for a long time which obstacle their interaction with the environment to fully participate. This research conducted to identify the condition and the availability of the building and environment in Lambung Mangkurat University. This research are conducted in 24 point of location which spread on 11 faculties in Banjarbaru and Banjarmasin regio and using the qualitative method and descriptive-analitic approach. The data collection technique in this research is that observation, measurement, and direct interview to the subject of the research. The result of this research will be a recommendation that can be a consideration to the stake holder to fulfilling the right of disabilities regarding the building and environment ini Lambung Mangkurat University.

Keywords: Students with disabilities, accessibility, building and environment.

INTRODUCTION

As we know that every citizen have a right to get the education for the rest of their life. This is no exception for citizens of persons with disabilities as stipulated in Law Number 8 of 2016. The right to education for persons with disabilities includes the right to get quality education in education units in all types, paths and levels of education in an inclusive and special manner, having Similarity Opportunities to become educators or education personnel in education units in all types, paths and levels of education, have the same opportunities as providers of quality education in educational units in all types, paths, and levels of education, and to get adequate accommodation as students.

In line with the above, it has been regulated regarding special education and special service education in universities in the Republic of Indonesia PERMENRISTEKDIKTI No. 46 of 2017 in order to expand opportunities and improve the quality of special education and special service education for students in universities. With this set of policies, it can be seen that the government is currently working to give attention to the fulfillment of the rights for persons with disabilities.

One of the efforts made by the government is the promotion of the Partition and Empowerment Program for Students with Special Needs and Persons with Disabilities by appealing to university leaders not to restrict them from participating in the new student admissions process in 2017. In implementing policies related to students those with disabilities, of course, have consequences that must be accepted by universities.

Lambung Mangkurat University is one of the higher education institutions that has implemented

the aforementioned policy by accepting students with special needs in 2017. The students with special needs who are undergoing lectures include 8 students consisting of 5 students with hearing impairments, 1 disabled student, 1 blind student, and 1 autistic student in the Special Education Study Program, Faculty of Teacher Training and Education. In 2018, Lambung Mangkurat University received 2 students with special needs with a distribution of departments, 1 student in the Teaching and Education Faculty History Education study program, while 1 other person was in the Law Faculty.

Whiteneck, Harrison-Felix, Mellick, Brooks, Charlifue, & Gerhart stated that A person with disability may face three types of barriers: environmental, attitudinal, and technical. Environmental barriers are barriers that environmentally limit persons with disabilities from accessing and using public facilities. Attitudinal barrier means discriminating a person with disability through people's attitude, ideas, and assumptions (e.g., assuming a person with communication disorder cannot understand you). Electronic or technical barrier happened when a technology cannot be reformed into another format accessible by assistive devices. Gilson also state that Even though law enforce eliminating such barriers, some universities are physically inaccessible (Alsalem and Doush, 2018).

The essential aim of inclusive higher education is to grant physical, psychological, and social accessibility in teaching and learning in Finnish higher education institutions (HEIs), so that everyone has the same right and access to study regardless of one's characteristics (Karhu, 2014). In order to succeed in inclusive higher

education in accordance with the policies and regulations set out above, the consequences of Higher Education are not only limited to accepting students with special needs, but more than that universities are also obliged to provide services or facilities needed by students with special needs. These services and / or facilities as accommodation for students with special needs undergo lecture activities.

One service or facility that can accommodate students with special needs is physical and non-physical accessibility. Both of these are a necessity for students with special needs, and their availability is one of the fulfillment of rights for students with special needs. The provision of physical and non-physical accessibility in the campus environment will not reduce the academic community's rights. On the contrary, the availability of accessibility both physically and non-physically will facilitate all academics.

In line with this, Indonesia basically has a policy that regulates the establishment of buildings and buildings, which includes Law No. 28 of 2002 concerning Building Buildings which then the Implementation Regulations are elaborated through Government Regulation No. 36 of 2005. The two laws and regulations contained in the implementation of the provision of accessibility or convenience for persons with disabilities. Based on the considerations regarding the regulation above, it is necessary to have technical guidelines for facilities as well as optimizing the regulation of the requirements for the ease of buildings and the environment. This was stated in Minister of Public Works Regulation No. 30 / PRT / M / 2006 concerning Facility Technical Guidelines and Accessibility in Building and Environment Buildings, and Regulation of the Minister of Public Works and Public Housing of the Republic of Indonesia No. 14 / PRT / M / 2017 concerning Ease Requirements for Building Buildings.

In the Law of the Republic of Indonesia No. 28 of 2002, Building is a physical form of the results of a construction work that is united with its place of domicile, partially or entirely above and / or in the land and / or water, which functions as a place for human activities, both for residential or residential areas, religious activities, business activities, social activities, culture, and special activities. The description in the PU Ministerial Regulation. No. 14 / PRT / M / 2017, the environment is an area around a building or group of buildings that can be accessed and used by everyone. In its construction, buildings and environments are equipped with infrastructure and facilities, these facilities are the provision of facilities that suit the needs of all age groups and persons with disabilities to provide accessibility for users and visitors to activities in buildings.

Visitors are all people other than permanent users of buildings, while persons with disabilities are those

who experience physical, intellectual, mental, and / or sensory limitations for a long time who experience obstacles and difficulties in interacting with the environment to participate fully and actively. The accessibility is an amenity that is provided for all people to realize the same opportunities that in this case are the use of buildings and the environment. Dalam (Jefri, 2016) the principle of accessibility in providing access to infrastructure and facilities, including: (1) Salvation, that is, every building which is of a general nature in a built environment, must pay attention to safety for everyone, (2) Ease, that is, everyone can reach all places or buildings that are general in an environment, (3) Usability, that is, everyone must be able to use all places or buildings that are general in an environment, (4) Independence, that is, everyone must be able to reach, enter and use all public places or buildings in an environment without the need for help from others.

Persons with disabilities have accessibility rights, this is stated in Law No. 8 of 2016, which includes the rights to getting the accessibility to utilize public facilities and get decent accommodation as a form of accessibility for individuals. An important element in the accessibility of buildings and the environment included in the Republic of Indonesia Public Works and Housing Peraturan Menteri No. 14 / PRT / M / 2017 covering facilities and infrastructure. The facilities for managing the building functions include stairs, ram, elevators, stair lifts, escalators, and / or walking floors. In addition, the completeness of the infrastructure and facilities for the use of buildings in these regulations includes the worship room, dressing room, lactation room, toilet child care (TPA), hand sink, shower, urinal, trash can, communication and information facilities, waiting room, control equipment and equipment, signs and markers, meeting points, parking lots, automatic parking systems, and surveillance camera systems.

Accessibility refers to 'the degree to which an environment, service, or product allows access by as many people as possible, in particular people with disabilities' According to World Health Organization [WHO]; World Bank 2011) at (Chiwandire and Vincent, 2017). 'Accessibility' entails making it possible for 'persons with disabilities to live independently and participate fully in all aspects of life'. Signatories to the Convention are thus obliged to take appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to the physical environment, to transportation, to information and communications, including information and communications technologies and systems, and to other facilities and services open to or provided to the public. As Chanika stated that participation also depends on physical access, such as the shape and design of buildings (Magreth, 2016)

Amka (2018) stated that even though the national government regulations have been issued nationally

to implement inclusive education in higher education, but if the policy is not implemented, then that's policy does not affect changes as desired. It means the students with special needs cannot be served well to get the opportunity to access the higher education. In its application, the provision of accessibility to buildings and the environment has a major impact on persons with disabilities which include individuals or groups with motor and mobility barriers, individuals or groups with visual impairments, and seniors (elderly people). As Gandiya (2016), most of buildings that do not have ramps and handrails which give difficulty to people with disability to access the buildings. Buildings constructed must be fully accessible to students with disabilities. In addition, alterations to buildings must "to the maximum extent feasible" be "readily accessible to and usable by handicapped persons." According to Kurniawan, (2014) several requirements that must be fulfilled in providing accessibility for the three individuals or groups are as follows: (1) Wheelchair users, all types of furniture are placed in a place that allows it to be reached; Meet the minimum minimum area requirements; Providing elevator facilities to address rooms with mileage that inhibits wheelchair users and provides ramps in facilitating wheelchairs to reach the destination; The floor surface is made of smooth and hard material, (2) Persons with visual impairments (blind), Areas must be easily identified; Avoid open-plan areas that are too broad by using furniture; The corridor is on the right; The room is made bright, glare free, and without shadow; Square-shaped room to facilitate front-rear and right-left orientation; The door must open from a busy circulation area with a non-busy circulation area; Important elements, such as reception desks, stairs, elevators and toilets, must be placed in a clear and predictable place; Provision of orientation instructions that arise; Provision of handrail equipped with Braille information; Use of broken glass on wall and door elements using glass; Visual markers equipped with audio markers; and consistent acoustic creation throughout space, (3) Older people, endangered areas must be removed; Completing accident prevention features (handrails and / or antislip); Accessible bathroom equipped with a bench; and provide orientation tools (signs etc.)

There is a high level of variability across institutions in the ways they meet these needs, as institutions are differently resourced and differentially prioritize accessibility. Some of the ways higher educational institutions may provide meaningful access include provision of auxiliary aids or services (i.e. provision of a sign language interpreter or a screen reader), modification to nonessential academic requirements (i.e. allowing a student to complete an exam orally rather than in writing or have additional time to complete exams), reasonable

adjustments to policies, procedures or practices (i.e., increasing number of allowable absences, exception to no-pet policy). Ultimately, ensuring access is not simply an issue of legal compliance, but a reflection of an institution's commitment to creating educational settings in which all learners can participate, develop, and contribute (Thurber and Bandy, 2017).

This research is an effort to identify the actual conditions regarding building and campus environment through surveys which include observation of facilities available in the campus environment, interviews with building managers related to accessibility, advocacy of services to building managers, and the results of audit surveys on campus environment facilities at Lambung Mangkurat University. The results of this study are expected to be a recommendation and consideration for stakeholders who are stakeholders at Lambung Mangkurat University in fulfilling the rights of persons with disabilities related to the accessibility of buildings and campus environments.

METHOD

This study uses a qualitative method with a descriptive-analytic approach, according to Sugiyono dalam (Ufie, 2013) qualitative methods are used to obtain deep data and a data that contains meaning. This research was conducted by empirical observation through the process of observation, measurement and interviewing to the parties concerned.

Primary data collection in this research is carried out by direct measurement and observation to identify the actual conditions of buildings and the environment. In addition, data collection is also carried out by in-depth interviews with building managers and the environment to find out in detail about the policies and efforts of stakeholders in meeting the accessibility of buildings and the environment in the managed area.

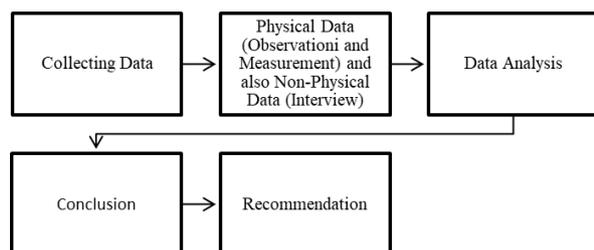
The object of this research is all elements of the building and the environment found at Lambung Mangkurat University which includes lecture rooms, public facilities, and supporting facilities. Buildings and environments are scattered in all locations as many as 11 faculties and the main public facilities are located at the center of the academic activity area located at Lambung Mangkurat University. The results of data collection are then identified and reduced according to the research conducted. Procedures and technical processing of research data includes several steps, including: (1) Sort and classify collected data; (2) Provide a code (Coding) on the data collected; (3) Confirming data to data takers to obtain; (4) Analyzing data in accordance with the research objectives.

Table 1. Accessibility Elements of Building and Environment

No.	Element of Accessibility	Minimum Standard
1.	The Gates	<ul style="list-style-type: none"> • The signpost • Difable symbol • Guiding Block/ Warning Block
2.	Pedistrian Sirculation	<ul style="list-style-type: none"> • The minimal of width of one direction sirculaiton 130 cm, for two direct 180 cm • Slope of line 50-70 • Road Surface (Stable, strong, and weather resistant) • Road texture (non slippery surface) • Guiding Block/ Warning Block • Pedestrian free of barriers • Pedestrian edge about 10 cm wide, 15 cm wide along the pedestrian path.
3.	Guiding Sirculation	<ul style="list-style-type: none"> • The width of sirculation at least 120 cm • Tile Texture • Warning texture
4.	Parking Area	<ul style="list-style-type: none"> • Signs with disabilities • Difabled symbols (wheelchair) in the parking area • The width Parking lot at least 375 cm • The access of the main door are available • The distance to the entrance max. of 60 m • Connecting with the ramp • Connecting with pedestrian • Guide sirculation/ warning • Railing Handle • Guiding Block/ Warning Block
5.	Drop Out Area	<ul style="list-style-type: none"> • Minimum Width of 360 cm • Maximum length of 600 cm • Connecting with ramp in pedestrian path • Maximum Slope of 5⁰ • There are signs for disability
6.	Ramp	<ul style="list-style-type: none"> • Minimum width of 80-90 cm • There is bordes of 120 cm in every length of 900 cm • There is a guide lane • There is a handrail in every sides • Non-slippery surface • Guiding Block/ Warning Block
7.	Hall/ Lobby	<ul style="list-style-type: none"> • There is Signpost • Guiding Block/ Warning Block • Counters/ information (minimum lower height of 65 cm, maximul heigt up of 85 cm) • Table (minimum lower height of 65 cm, maximul heigt up of 85 cm) and places to sit • Corridor and door • Ramp Stump (minimum height of 10 cm) • Stairs (maximum footing height of 15 cm, footing width of 27-30 cm)
8.	Door	<ul style="list-style-type: none"> • Minimum width of 90 cm • The handle height is easy t reach with the maximum of 110 cm • Open direction (sliding) • The doors with 180⁰

9. Lift	<ul style="list-style-type: none"> • The buttons with letters appear/ Braille + voices • The height of buttons (90-120 cm) • There is a handle in lift (maximum height of 80 cm) • Non-slippery floors • The minimum width room of 140x140 cm • Lighting • Emergency exit
10. Toilet	<ul style="list-style-type: none"> • The signpost • Open direction • Door with minimum width of 90 cm • Toilet seat (height of 50 cm) • handrail
11. The sink	<ul style="list-style-type: none"> • The sink height of 95 cm (the sink of 85 cm, tap water from the sink of 10 cm) • Maximum the sink room width of 120 cm (conditional) • The sink sticks or hangs on the wall • The type of faucet is not swivel
12. Electric Socket	<ul style="list-style-type: none"> • Maximum height of 90 cm • The clamp plug next to the plug
13. Supporting Facilities	<p>The trash bin</p> <ul style="list-style-type: none"> • Maximum height of 60 cm • The type of trash bin is swing Table • Maximum height of 85 cm • The minimum free space around the the table of 140 cm Cupboard • Maximum height of 120 cm • The sign are using appear letter (braille) • Using contrast colour • The position is not disturbing the sirculation path

Figure 1. Research Flowing



The data that has been analyzed is then concluded and important things that can be considered are recommended to the relevant stake holders in order to fulfill the accessibility of buildings and the environment in the next development and improvement.

FINDINGS AND DISCUSSION

Analysis of accessibility of buildings in the University of Lambung Mangkurat is carried out by the process of observation, measurement, and interviews. The instrument used in the process of collecting data is an elaboration of regulations or regulations that have governed the accessibility of buildings and

the environment. In this case the instruments used include 1) observation instruments related to the availability and conditions of the accessibility elements in buildings and the environment; 2) interviewing instruments for building management and the environment regarding understanding, commitment, regulation, implementation, monitoring and evaluation, and reference to accessibility of buildings and the environment as a form of knowledge mapping and advocacy for the procurement of facilities and; 3) audit instruments that contain measurement activities on the conditions of accessibility of buildings and the environment.

According to (Cox, Murray, Pay, Robertson, I., Tallintire, and Webster, 2009) When considering inclusivity in higher education building design, thought should be given to the various environmental and cultural barriers that can be encountered. Barriers can include inaccessible or inappropriate main campus buildings, circulation areas, accommodation, social spaces and amenities, and poor teaching and learning environments. Inclusive building design aims to remove barriers and enable the environment to be used by everyone without the need for much individual customisation.

Figure 2. The availability of building and environment facilities in Lambung Mangkurat University

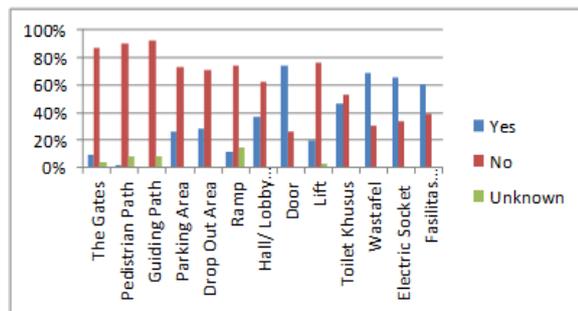


Figure 3. The condition of building and environment facilities in Lambung Mangkurat University

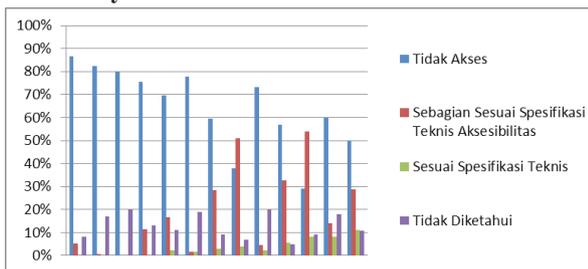
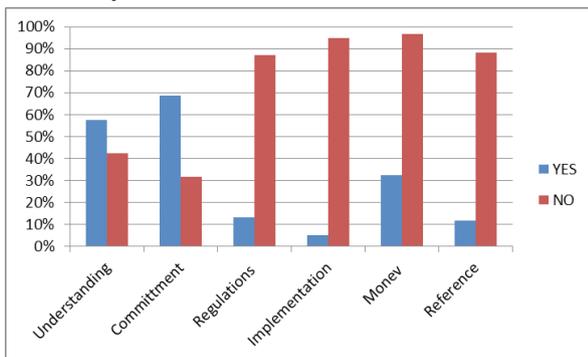


Figure 4. The interview with manager of building and environment in Lambung Mangkurat University



Based on the diagram on Figure 2. Basically 9 of 13 element of building and environment accessibility at 25 location point which spreading in two regiois still not available in Lambung Mangkurat University. Based on the survey, we can know that the accessibility often met in the new buildings rather than the old buildings. That's cases related with the statement of (Chard and Couchmaking, 2010) that old buildings accessible to all and preserving their heritage can be a difficult and costly task. There does not appear to be a correlation between age of a building and problems with access for disabled people. Some of the original, but modernised buildings have excellent access and design, other buildings, constructed in recent years have considerable access problems.

The condition of building and environment can be known from the Figure 3. That shown that 11 of 13 element of accessibility still categorized as not access. With regard to higher education accessibility for students with disabilities, barriers include physical, architectural, service deliveries, provisions of learning materials and equipment, attitudinal and cultural influences. Apart from the multitude of barriers that affect the education of students with disabilities, physical barriers are visibly challenging these students. Free movement in the university campuses is assumed to be the right stated by IDEA. Tirussew and Tirussew & Ellena state that Accessible classrooms, dormitories, halls, dining rooms, recreational areas, library, service delivery units, dormitories, exit passageways in emergency situations are all elements of physical accessibility, however these basic conditions are not adequately met (Muzamil, 2018).

Based on the result of interview with building and environment manager who one of stake holder which most important to realize the right fulfillment of building and environment accessibility, the diagram shows that the rate of manager building and environment understanding about disabilities and also their rights are categorized quite high. In the terms of commitment related to the readiness of the realization of accessibility for persons with disabilities, building managers have sufficient willingness to implement regulations that basically have no regulatory products in each faculty and campus environment. The unavailability of regulations governing the accessibility of buildings at the faculty level has impacted to the effort to realize the accessibility of buildings, so that there is no monitoring-evaluation agendas. And also the buildings cannot be reference as a suit building. Those result relate with the statement of Raue & Lewis that a few of the barriers cited by institutions as preventing the implementation of Universal Design include limited resources for training on accessibility issues, the expense of purchasing new technologies, and other competing priorities on campus (McGinty, 2016).

CONCLUSION

The survey of buildings and environment accessibility at Lambung Mangkurat University has only been conducted at 23 points. Not all building position points are surveyed because of limited time, fund, and energy. However, it can be concluded that all of buildings (old buildings) and the environment are almost had same result. Based on the result of survey which conducted at 24 point of location, it is stated that there are still many buildings (special facilities or public facilities) that are not in accordance with the specification of technical accessibility.

From 23 points of locations of survey the buildings are still difficult for people with disabilities, especially for wheelchair users, crutches, and blind people. There are still many places that are not facilitated by ramps or elevators as a substitute for ladders or other media, making it difficult for persons with disabilities to be able to access them independently or with help of others. From 24 point of locations the most complete facilities for persons with disabilities is that the postgraduate buildings, but most of them still not fulfilling the standards yet. The policy makers states that they have a high commitment to implementing the regulation of accessibility, but they are constrained by the absence of work programs which related to the accessibility, funding, and also the technical knowledge.

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