



THE EFFECTIVENESS OF USE OF DIFABLE RESIDENTIAL UNITS ON THE DESIGN OF A PROTOTYPE OF STUDENT FLATS FROM PUPR

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ABSTRACT

In the last decade, several universities in Indonesia have received assistance for the construction of student flats since the issuance of the policy on assistance for the construction of flats for universities. One of them is in the city of Bandung at the STAIPI Bandung Campus, Kec. Bojongsoang, Bandung City. This university received donations for the construction of a 1-tower student flat with a prototype design. In this observation, we will discuss the effectiveness of the use of special housing units for persons with disabilities in student flats, so that the housing facilities for persons with disabilities are used properly according to their designation. The research methodology used is qualitative by focusing on the physical condition of the room in each residential unit. In this 1 year, based on observations in the field, several student flats, especially housing units with disabilities, the implementation of inclusive designs has not been effective. One of them, the disabled room units are temporarily filled by other students. The conclusion of the effectiveness of the use of special rooms for the disabled is still not effective, because this student apartment facility has only been operating for 1 year from the 2020 Academic Year to the 2021 Academic Year.
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1. INTRODUCTION

With the issuance of Law Number 16 of 1985 concerning Flats and Regulation of the Minister of Public Housing Number 9/PERMEN/M/2008 concerning Assistance for Simple Rent Flats (Rusunawa) at Higher Education Institutions and Boarding Education Institutions, students receive assistance for education costs. . Student. This educational assistance is in the form of assistance for the physical construction of Simple Rental Flats for existing students and is financed by the State Budget. This Rusunawa is intended to provide physical assistance facilities for Rusunawa buildings to encourage and create higher education institutions and/or boarding educational institutions to meet the needs of dormitories for students/*santri* and housing for educators or education staff and aims as a guide for the Government, regional governments, education providers in submitting proposals for Rusunawa development assistance. Several universities in Indonesia have received assistance for the construction of student flats since the issuance of the policy on assistance for the construction of flats for higher education institutions. One of them is in the city of Bandung on the STAIPI Campus (Persistent Indonesian Islamic School of Religion) Bandung, Bandung City. The design of the student flats given by the government is a prototype. In this Rusunawa only 1 tower was built, there are many pros and cons to this building because this campus is a religion-based campus but the male and female dormitory facilities are temporarily united in 1 tower and there is a separation of floors because this is a student apartment building grant from the government which will be the capital for the development of flats, campuses, and maintenance. There are 43 residential units, 13 units on the 1st floor, 15 units on the 2nd floor, and 15 units on the 3rd floor. For the use of the 1st floor specifically for men, while the 2nd and 3rd floors are exclusively for women. On the 1st floor, there are 2 special residential units for students with disabilities. The residential unit is made different from other units, in terms of an inclusive design specifically for the disabled, such as bathroom facilities, ramps at the bathroom level, and the bathroom is made wider. Persons with disabilities formally have access to non-discriminatory education and have been guaranteed by Law Number 20 of 2003 concerning the National Education System and Regulation of the Minister of National Education Number 70 of 2009, concerning Inclusive Education (Rizky 2014) (Anantika, 2019).

Accessibility is a facility provided for everyone, including persons with disabilities, namely to realize equality and opportunity in all aspects of life (Permana et al., 2020) (Haryanti 2017) (Permana, 2014). In research (Haryanti 2017) This study examines facilities for disabled people who are assessed and viewed based on the Minister of Public Works Regulation Number 30 of 2006 concerning Technical Guidelines for Facilities and Accessibility in Buildings and the Environment (Yosita et al., 2020) (Kencanasari et al., 2020), such as standard sizes of spaces, pedestrian paths, parking areas, ramps, signage, signs, and markings. The activity of providing private and public facilities that can accommodate the needs of groups of people with disabilities is our shared responsibility (Sulistiawan et al., 2019), especially for academics, where this activity can also be a medium for advocacy for inclusive groups in Indonesia to the government or other concerned groups (Suprpto 2020) (Permana et al., 2019). The implementation of the government's policy on accessibility is a form of implementation of an inclusive design that aims to realize a spatial design that is easily accessible and used as much as possible without making it difficult for its users. (Kartika 2018) (Permana & Wijaya, 2017). In this article, we will discuss how effective is the use of special housing units for the disabled in prototype student flats given by the government for higher education institutions or boarding education institutions.

2. RESEARCH METHOD

The research methodology used is qualitative (Jajuli & Munawaroh, 2020) (Rahayu & Swari, 2020), and the research method used is a literature review method. The purpose of using this method is to be able to formulate the effectiveness of the use of disabled housing units, for example conducting observations and interviews by knowing the number of students and gender living in the flats in the last 1 year after the construction period and handover from the government to the campus. This research was conducted at the STAIPI Bandung flats and as a comparison, the research was also carried out at the Siliwangi University (UNSIL) student flats, Tasikmalaya. UNSIL is one of the campuses that received student rusunawa facilities in 2019. This development was carried out in conjunction with 1 package of West Java student rusunawa construction in 2019. This rusunawa design was made a prototype, so all developments in 2019 are rusunawa

designs in terms of size, facade, and other facilities, of course, this is the same. The following is the flow of the research method in this study:

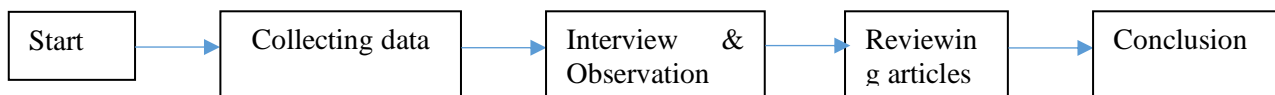


Chart 1. The flow of research methods (Source: analysis, 2021)

3. RESULTS AND DISCUSSION

3.1. Contents of Discussion

STAIPI Private Colleges (Persistent Islamic College) Bandung and Siliwangi University (UNSIL) Tasikmalaya are private universities that receive grants for student flats from the government. This student flat building has 1 tower, there are 43 residential units, the 1st floor has 13 units, the 2nd floor has 15 units, the 3rd floor has 15 units. For the use of the 1st floor specifically for men, while the 2nd and 3rd floors are exclusively for women. On the 1st floor, there are 2 special residential units for students with disabilities. From the results of direct observations to the management and student flats at STAIPI Bandung and at Siliwangi University (UNSIL) it has been seen that the effectiveness of the use of special housing units for the disabled in flat facilities has been seen (Latifah 2017). One form of acceptance for persons with disabilities in the community is the availability of adequate accessibility for them in public facilities; This is also included in human rights (Radissa and Apsari, 2020). Below are some of the implementations of special inclusive designs for disabled students in student flats:

Table 1. Facilities and functions for students with disabilities

NO.	Disabled Facilities	Function
1	Disabled Residential Unit	This residence is a residential facility intended for students with disabilities
2	<i>Grab Bar Toilet</i> in Disabled Residential	<i>Grab Bar Toilet</i> This is a special toilet facility/accessory for a disability that functions as a handrail if the user uses a sitting closet. This facility makes it easier for users to carry out activities in the bathroom
3	<i>Ramp</i> at the toilet level in a disabled residential unit	<i>Ramp</i> This is designed to make it easier for disabled users who use wheelchairs to make it easier for wheelchairs to get out and enter the bathroom without the help of other colleagues to push the wheelchair.
4	<i>Ramp</i> at Entrance Rusunawa	<i>Ramp</i> The Entrance of the Rusunawa is designed to make it easier for disabled users who use wheelchairs to enter the building because the level of the building from MTA (Upper Ground Front) to the 1st floor is 60cm high.
5	Cot, wardrobe, and 1 set of study tables (only 1 user for this disabled dwelling)	<i>Furniture</i> This is intended for all students in Rusunawa

Source: Survey 2021

From this table, the design has been applied to student flats on the STAIPI and UNSIL campuses. Especially in this disabled housing, the facilities obtained in the special residential unit are only 1 user, while in the other student housing unit there are 2 sets of furniture (couch, cupboard, study table). The designation in this other student residential unit consists of 1 unit for 2 users. The existence of disabled facilities on the ground floor is an application of the Government Regulation on Public Housing Number 14/PRT/M/2017 regarding the ease of building buildings that are applied to the design of this prototype student flat (Revelation 2020).

According to Goldsmith (1984), people with disabilities are defined as people who have physical impairments and are unable to use building facilities because of the unavailability of supporting facilities for

their convenience (Wicaksono 2020). There are 2 residential units for the disabled in this student flat with an area of 28.9 m² each. Inside there is 1 bathroom unit measuring 3.51 m² and a balcony drying area with an area of 2.5 m². In the area of this disabled dwelling unit, the Public Housing Government Regulation Number 14/PRT/M/2017 concerning the convenience of building buildings such as a wider bathroom area and in the closet area there is a toilet grab bar to make it easier for residents to stand up after using the closet by holding hands. grab bar toilet. This grab bar has a position and height adapted to wheelchair users and other disabled people, this grip makes it easier for wheelchair users to move (Lustiyati 2019). This bathroom includes a bathroom door with a width of 1 m, as well as other door openings such as the main door and a door leading to the drying area. The following is the appearance of the disability-inclusive implementation facility in STAIPI and UNSIL student flats.



Figure 1. STAIPI Student Flats for Difable Residential Units
Source: Personal Documentation Year 2021

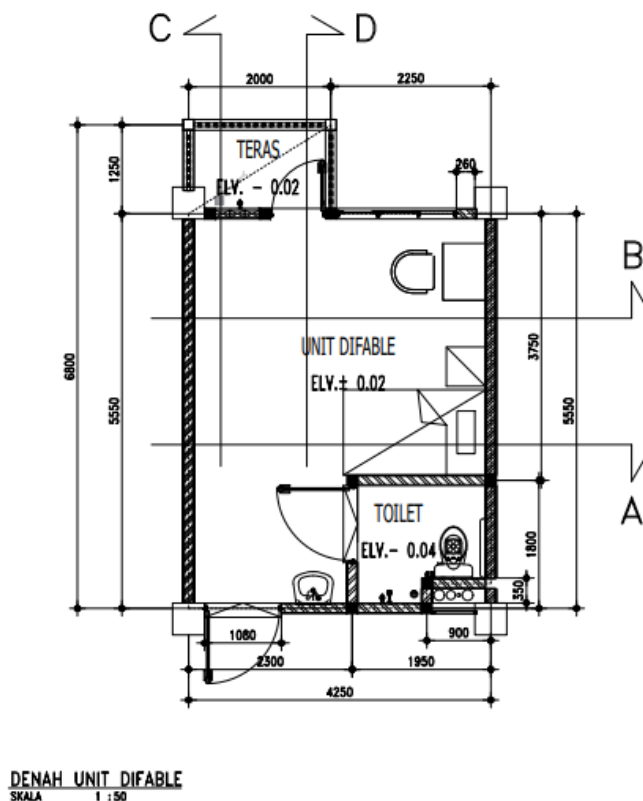


Figure 2. The layout of the Disabled Residential Units of STAIPI Student Flats
Source: Personal Documentation Year 2021

According to Permen PU No. 30/PRT/M/2006, the requirements for the ramp are textured and non-slip, with a maximum interior gradient of 2° and a maximum exterior length of 6°, and a maximum track length of 900 cm (7°). Here is a picture of the entrance ramp area in the student flat that connects the entrance terrace and the parking lot.



Figure 3. Ramp Entrance

Source: Personal Documentation, the Year 2021

This disabled housing unit is facilitated with furniture, namely 2-bed units, 2 units of a study desk, and 2 units of wardrobe. This furniture facility is the same as the usual residential unit facilities, nothing is different.



Figure 4. Residential unit furniture

Source: Personal Documentation, the Year 2021

The use of this student flat was started in August 2019 and completed during the maintenance period in March 2020. This building can already be used in the New Academic Year for the Odd Semester in 2020, to be precise in September 2020. The classification of the users of this flat has been determined, the requirements are that is :

1. Active student
2. The most outstanding student
3. Student recipients of KIP (Smart Indonesia Card) assistance
4. Students outside the island of Java
5. Students with disabilities

From the results of observations, the requirements issued by the campus have not met the criteria because this facility has only been running for approximately 1 year from September 2020 to October 2021. This is because new students are still implementing an online learning system related to the ongoing COVID-19 pandemic situation. This has led to the issuance of social distancing and physical distancing policy regulations to minimize the spread of COVID-19 which encourages all elements of education to carry out teaching and learning activities online (Heliandry et al, 2020). As long as students participate in teaching and learning activities at home, the criteria for flat users are still free and shown to students from any batch to fill the effectiveness of this facilitation. The occupancy rate is Rp. 250.000,-/head.

The following is a list of rusunawa users for the period September 2020 to October 2021:

Table 2. Number of Users of STAIPI and UNSIL Student Flats for the Period September 2020 to October 2021

No.	Building	Number of Occupants (2 heads/unit) (STAIPI)	Number of Occupants (2 heads/unit) (UNSIL)
1	1st floor (9 residential units, 2 disabled housing units, 2 management housing units) Total 13 Units (Son)	22 students 3 administrators	24 students 2 administrators
2	2nd Floor Quantity 15 units (Daughter)	24 female students	26 female students 2 administrators
3	3rd floor Quantity 15 units (Daughter)	30 female students	28 female students

Source: Survey 2021

From the results of observations on the number of users of the STAIPI rusunawa from September 2020 to October 2021, the 1st-floor building has been filled with 22 male students with 2 units each, and there are 2 residential units inhabited by the management, 1 unit is filled by the management and family (wife and 1 baby), the other unit is occupied by 1 male caretaker. On the 1st floor building of the UNSIL campus flat, 24 male students have been occupied with 2 people in each unit, and there are 2 residential units occupied by 2 male administrators. On the 2nd floor of the STAIPI campus flat building, 24 female students have been occupied with 2 people in each unit, on the 2nd floor 3 residential units have not been filled because many STAIPI students prefer to stay at home while online. On the 2nd floor building of the UNSIL campus flats, 26 female students have been occupied with 2 units each, and 1 residential unit is occupied by 2 female administrators, on the 2nd floor there is 1 residential unit that has not been filled because there are several students who have graduated from campus so that they get a job in another city. On the 3rd floor building of the STAIPI campus flats, 30 female students have been occupied with 2 people in each unit, on the 3rd floor all the residences are filled. On the 3rd floor building of the STAIPI campus flats, 28 female students have been filled with 2 people in each unit, there is 1 unit that has not been filled because several students have graduated from campus so that they get jobs in other cities. From the overall data on the use of STAIPI and UNSIL flats, of course, there are some differences in the number of users, but there is something in common between the two, namely that there are no students with disabilities living in the flats.

Based on this observation, in the 2020 and 2021 academic year periods, within 1 year there have been no students with disabilities who have registered on the STAIPI and UNSIL campuses. So the use of the disabled housing unit facilities is used by other students at the same rate. The designation for the disabled unit, which should have been 1 student, was converted into 2 students. The management said that for the time being, while there are no disabled students, this disabled unit room will be temporarily used for other students so that the profits from this flat will continue for the period of developing student flats facilities.

4. CONCLUSION

The Rusunawa facilities on the STAIPI and UNSIL campuses are already running and have progress. Law of the Republic of Indonesia No. 8 of 2016 concerning Persons with Disabilities that Accessibility is a facility provided for Persons with Disabilities to realize Equal Opportunity. This is applied to disabled housing facilities in student flats. In the 1 year, the student flats facilities, especially the disabled housing units, and several applications of inclusive designs have not been effective. For example, the disabled housing unit is temporarily filled by other students. The conclusion from the effectiveness of the use of special housing for the disabled is still not effective, because this student rusunawa facility has only been operating for 1 year from the 2020 Academic Year to the 2021 Academic Year, so there are no students with disabilities who have registered as STAIPI or UNSIL students. The next few years will determine the effectiveness of the use of disabled housing units in these student flats.

5. REFERENCE

- Anantika, T., Wardhani, E., and Halomoan, N. (2019). Application of Green Building Concept (Rainwater Harvesting) at Menara Cibinong Apartment. *Journal of Architectural Research and Education*, 1(2), 75-186.
- Haryanti, RH (2017). Tourism Accessibility for People with Disabilities in Surakarta (Evaluation Study of Minister of Public Works Regulation Number 30 of 2006 concerning Technical Guidelines for Facilities and Accessibility in Buildings and the Environment). *Public Spirit: Journal of Public Administration*, Vol.12, No, 85-96.
- Haryanti, R. H., & Sari, C. (2017). Aksesibilitas Pariwisata Bagi Difabel di Kota Surakarta (Studi Evaluasi Peraturan Menteri Pekerjaan Umum Nomor 30 Tahun 2006 Tentang Pedoman Teknis Fasilitas Dan Aksesibilitas Pada Bangunan Gedung Dan Lingkungan). *Spirit Publik: Jurnal Administrasi Publik*, 12(1), 85-96.
- Heliandry, LD (2020). Learning During the Covid 19 Pandemic. *Journal of Educational Technology*, Vol.22, 65-70.
- Herliandry, L. D., Nurhasanah, N., Suban, M. E., & Kuswanto, H. (2020). Pembelajaran Pada Masa Pandemi Covid-19. *JTP - Jurnal Teknologi Pendidikan*, 22(1), 65-70.
- Jajuli, A., & Munawaroh, A. S. (2020). Kenyamanan sirkulasi asrama mahasiswa Universitas Negeri Lampung (UNILA) berdasarkan persepsi penghuni. *Jurnal Arsitektur Zonasi*, 3(2), 136-143.
- Kartika, SG (2018). The Application of Inclusive Design in the Design of Inclusive Early Childhood Education Studios in Yogyakarta. *Senthong Scientific Journal*, Vol.1, 1-9.
- Kartika, S. G., Mustaqimah, U., & Hardiyati, H. (2018). Penerapan desain inklusif pada perancangan sanggar paud inklusif di Yogyakarta. *Senthong Scientific Journal*, 1(1), 1-9.
- Kencanasari, R. . V., Surahman, U., Permana, A. Y., & Nugraha, H. D. (2020). Enhancing Community Environmental Awareness Through Indoor Air Quality Workshop. *Journal of Architectural Research and Education*, 2(2), 165-175.
- Latifah, S. (2017). Accessibility for Disabled in Hotel Buildings in Surakarta City. *Journal of Disability Studies*, Vol. 04 Nos, 129-136.
- Latifah, S. (2017). Aksesibilitas bagi difabel pada bangunan hotel di kota Surakarta. *Journal of Disability Studies*. 4(2), 129-175.
- Lustiyati, ED (2019). Accessibility of Sanitation Facilities for Diffables in Public Transportation Places. *Journal of Disability Studies*, Vol.6, 95-125.

- Lustiyati, E. D., & Rahmuniyati, M. E. (2019). Aksesibilitas sarana sanitasi bagi difabel di tempat transportasi umum. *INKLUSI*, 6(1), 93–126.
- Permana, A. Y., Akbardin, J., & Nurrahman, H. (2020). Development of Urban Space Based on Student Migrants in Bandung City, Indonesia. *Journal of Physics: Conference Series*, 1625(1), 012003.
- Permana, A. Y., Susanti, I., Dewi, N. I. K., & Jijawa, K. (2019). *Morphology of Urban Space: Model of Configuration using Logic of Space (LoS) Theory in densely populated of Bandung City*. 15(2), 1–23.
- Permana, A. Y., & Wijaya, K. (2017). Spatial change transformation of educational areas in Bandung. *IOP Conference Series: Earth and Environmental Science*, 99(01), 012029.
- Radissa, VS (2020). Overview of Accessibility Conditions of Public Building Facilities for People with Physical Disabilities Users of Wheelchairs in Various Countries. *Proceedings of Research and Community Service*, Vol.7, 406–413.
- Radissa, V. S., and Apsari, N. C. Studi Literatur: Gambaran Kondisi Aksesibilitas Fasilitas Bangunan Publik Bagi Orang Dengan Disabilitas Fisik Pengguna Kursi Roda di Berbagai Negara. (2020). *Prosiding Penelitian & Pengabdian Kepada Masyarakat*. 7(2), 406-413.
- Rahayu, N. N. S., & Swari, L. G. N. (2020). Kajian Perkembangan Sistem Petanda Pada Arsitektur Dan Interior Ruang Publik Di Denpasar Menuju Denpasar Kota Kreatif. *Jurnal Arsitektur ZONASI*, 3(3), 218–234.
- Rahayu, N. N. S., & Swari, L. G. N. (2020). Study of the Development of Signature Systems in Architecture and Interior of Public Spaces in Denpasar Towards Denpasar as a Creative City. *ZONASI Journal of Architecture*, 3(3), 218–234.
- Rizky, UF (2014). Identifying the Needs of Students with Disabilities after High School. *Indonesian Journal of Disability Studies*, 52–59.
- Rizky, U. F. (2014). Identifikasi kebutuhan siswa penyandang disabilitas pasca sekolah menengah atas. *Indonesian Journal of Disability Studies*, 1(1), 52-59.
- Sulistiawan, A. P., Al-ghifari, M. A. A., Fadlilah, F. N., Pakuan, G. M., & Zulfahmi, M. H. (2019). Identifikasi material berkelanjutan pada ruang luar dan ruang dalam bangunan kantor. *Jurnal Arsitektur ZONASI*, 2(3), 160–174.
- Suprpto, R. A. (2020). The urgency of disabled-friendly toilets in homes for people with disabilities. *Seminar Procedure*, 324–328.
- Wicaksono, D. (2020). Study of Ramp Accessibility Elements (For Persons with Disabilities) at Public Facilities, Faculty of Engineering, UNNES. *Indonesian Journal of Conservation*, 106–118.
- Wicaksono, D. (2020). Kajian Elemen Aksesibilitas Ramp (Bagi Penyandang Disabilitas) Pada Fasilitas Umum Fakultas Teknik Unnes. *Indonesian Journal Of Conservation*, 9(2), 106-118.
- Yosita, L., Busono, R. T., & Ahdiat, D. (2020). Analysis of morphology & housing layout in cibaduyut handicraft center in context toward integration with the new system of tod in the future Study Case : Cibaduyut Human Settlement as an area for Crafting Shoes in Bandung City. *Journal of Architectural Research and Education*, 2(1), 25–36.