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Implementation Study: Universal Design Implementation in Kongkow Park, Jambi City

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ABSTRACT

Public open spaces, such as city parks, serve an important role in improving the communities' quality of life by providing areas for recreation, social interaction, and ecological balance. However, not all city parks are designed with universal design principles that allow access and comfort for all user groups, including people with disabilities, the elderly, and children. Previous researches indicate that the implementation of universal design in public spaces can enhance accessibility and the quality of social interaction, necessitating further research on the implementation of universal design with specific case studies. This research addresses the limited empirical evaluation of universal design implementation in public parks in Indonesia, contributing to the literature by focusing on Kongkow Park as a case study. This study aims to discuss the gap in the implementation of the existing design by analysing it based on the principles of universal design as a variable for the concept of a disability-friendly park in Kongkow Park in Jambi City. The research method adopted is a descriptive qualitative method with a comparative analysis approach. Kongkow Park still has a public facility design that cannot accommodate the needs of people with disabilities. The lack of compliance in applying the principles of universal design creates difficulties for users with disabilities to do their activities. The findings underscore the need for improved regulations and physical adjustments to ensure accessibility for people with disabilities in city parks.

Keywords: City Park, Universal Design, Accessibility.

ABSTRAK

Ruang terbuka publik, seperti taman kota, memiliki peran penting dalam meningkatkan kualitas hidup masyarakat dengan menyediakan area rekreasi, interaksi sosial, dan keseimbangan ekologi. Namun, tidak semua taman kota dirancang dengan prinsip desain universal yang memungkinkan akses dan kenyamanan bagi semua kelompok pengguna, termasuk penyandang disabilitas, lansia, dan anak-anak. Penelitian terdahulu menunjukkan bahwa penerapan desain universal pada ruang publik mampu meningkatkan aksesibilitas dan kualitas interaksi sosial sehingga perlunya penelitian lebih lanjut mengenai implementasi desain universal dengan studi kasus tertentu. Penelitian ini membahas evaluasi empiris yang terbatas terhadap implementasi desain universal di taman-taman umum di Indonesia, memberikan kontribusi pada literatur dengan berfokus pada Taman Kongkow sebagai studi kasus. Penelitian ini bertujuan untuk membahas kesenjangan penerapan desain yang ada dengan menganalisis berdasarkan prinsip-prinsip desain universal sebagai variabel konsep taman yang ramah difabel pada Taman Kongkow di Kota Jambi. Metode penelitian yang digunakan adalah metode kualitatif deskriptif dengan pendekatan analisis komparatif. Taman Kongkow masih memiliki desain fasilitas publik yang belum bisa mengakomodir kebutuhan bagi kaum difabel. Kurangnya kepatuhan dalam menerapkan prinsip-prinsip universal desain membuat pengguna penyandang disabilitas kesulitan dalam beraktivitas.. Temuan ini menggarisbawahi perlunya perbaikan peraturan dan penyesuaian fisik untuk memastikan aksesibilitas bagi penyandang disabilitas di taman kota.

Kata kunci: *Taman Kota, Desain Universal, Aksesibilitas.*

1. INTRODUCTION

Public space is a functional space that everyone can share together (Carr, 1992). One of the public open spaces in urban areas is city parks, city parks are especially important for the community as not only a place for leisure but also as a counterweight to the urban atmosphere. City parks serve various types of public functions such as art centre activities, commerce, community places, education, and so forth (Krier, 1979). Urban green open spaces with large areas and facilities that are sufficiently complete and diverse can turn green open spaces into favourite public places for all communities (Andreas, 2021).

The availability of city parks that are safe for all users, especially for people with disabilities, is currently minimal. Thus, to fully assist the activities of people with disabilities, support and accessibility that is tailored to the user's capabilities are needed. In many city parks in Indonesia today, there are a lot of facilities with poor accessibility that are not in accordance with existing regulations and standards, causing difficulties for people with disabilities in carrying out their activities. The existing accessibility causes users to need more assistance and endangers them—in this case, it makes people with disabilities less cared for.

Supposedly, everyone, including people with disabilities, has the same rights and opportunities as other people, both in using public facilities and their convenience in activities (Sukmawati & Afandi, 2023). For this reason, the central government, the Ministry of Public Works, and the regions have formulated regulations governing accessibility rights for people with disabilities. One such regulation is Law No. 19 of 2011, which regulates the rights for people with disabilities. However, the current implementation does not seem to facilitate their access. The government continues to consider the ability of people with disabilities to build public facilities in public spaces.

Government Regulation No. 42 of 2020 stipulates that people with disabilities have the equal right to accessibility, as well as to adapt facilities that can be used easily. In the Ministerial Regulation of Public Works and Housing No. 14 of 2017 which discusses universal design, it states that no preferential treatment is required for users in using public facilities and the design that is built must be in accordance with established standards.

Although previous studies, Kurniawan et al. (2020) explored public space facilities that employ universal design for people with disabilities. The results stated that city parks are required to have facilities to meet the needs and comfort of users in social interactions based on universal design principles. Different with Diartini et al. (2022), which focuses on universal design principles during the main planning stage, each existing facility is required to be implemented with universal design principles, allowing for a more efficient design to

improve accessibility and the quality of social interaction. Furthermore, as suggested by Tarsidi, (2011) the most common thing for people with disabilities is the problem of accessing spaces in public spaces. Currently, most spaces neither provide accessibility nor pay attention to the applicable standards of the local government. Based on the studies conducted, further research is deemed necessary concerning the implementation and effectiveness of universal design with specific case studies aimed at improving accessibility and the quality of social interaction in public open spaces. An empirical evaluation of its practical application, particularly in medium-sized cities in Indonesia, is still scarce. Hence, this study can be undertaken to address the existing design gaps by analysing the adherence to universal design principles.

As one of the green open spaces in Jambi City Kongkow Park is expected to serve as a convenient and inclusive place for the entire community. However, the observation of the policy and its implementation in the field revealed several shortcomings in the application of universal design such as the lack of accessibility infrastructure, the lack of supporting facilities for vulnerable groups and the less-than-optimal implementation of the policy. The purpose of this study is to examine the gaps in the application of existing accessibility based on the principles of universal design as a variable for the concept of disability-friendly parks in Kongkow Park in Jambi City.

2. METHOD

The research method applied is a descriptive qualitative method with a comparative analysis approach. Descriptive research is a research method that aims to comprehend a phenomenon in depth using qualitative data such as interviews, observations, and documentation (Rusandi et al., 2021). The comparative analysis approach is adopted to compare two or more research objects to identify similarities, differences, and patterns that emerge in existing designs with universal design studies.

Mace (1997) defines universal design as the design of products and environments that are applicable to all users, as widely as possible, regardless of the need for adaptation or specialised design. The principles of universal design were originally discovered by a group of fellow engineers in 1997 with Ronald Mace as the chairman from the University of North Carolina. They put their universal design thoughts in a book entitled *The Center for Universal Design*. The book defines universal design as an area or space that should be designed in an accessible manner, enabling users to conveniently use it and not requiring major adjustments.

Design that uses the concept of universal design must refer to all users without limitation, especially for people with disabilities.

The principles applied in designing with the concept of universal design are as follows:

1) Equitable Use

   Designing areas or spaces that require equality to all users without exception.

2) Flexibility in Use

   The results of the design are expected to be adaptable for each user.

3) Simple and Intuitive Use

   Each user has different experiences and abilities; thus, the design needs to be simple and easy to understand.

4) Perceptible Information

   Designing must be followed by ease of information for users to avoid difficulties in accessing.

5) Tolerance for Error

   The design created requires users to be able to minimise hazards and adverse effects.

6) Low Physical Effort (efficient and comfortable)

   The use of small physical activities allows users to do activities that require a comfortable and easy design.

7) Size and Space for Approach and Use

   The design created for users with disabilities must adapt to the conditions of the shape, size, and circulation.

These universal design principles lay the foundation for the design of inclusive public spaces, including city parks and green open spaces—ensuring that these spaces can be accessed and used by all levels of society without barriers.

Comparative analysis is conducted by systematically matching field observations with the universal design principles outlined by Mace (1997) and validated by cross-referencing with previous research (Kurniawan et al., 2020; Diartini et al., 2022).

3. RESULTS AND DISCUSSIONS

The location of Kongkow Park is quite strategic, right in the city centre and the development of a fairly dense area as the centre of government and business. Located on Jl. Kopral Sardi, Paal Lima, Kota Baru, Jambi City. The east side of the park is adjacent to the location of SMPN 25 Jambi City, the north is bordered by residential areas, the south borders residential areas, and the west abuts the Royal Prima Hospital.

Figure 1 Kongkow Park Area
Source: Authors, 2024

The park covers an area of 1,873.46 m^2 and is frequently visited as a place to relax or *kongkow*, which is an activity of gathering and chatting with friends and colleagues. Visitors can do other activities such as exercise and recreation. In addition, the Kongkow Park also serves as an educational space by providing interesting play and learning facilities for children. The visitors are not limited to young people or teenagers, but also children and adults or parents. This park allows visitors to do any kind of activity freely.

Kongkow Park is designed with various facilities such as plaza area, toilet, fish pond, fountain, pavilion, play furniture area, prayer room, parking lot, and reading corner area.

The following are several results of data and analysis related to accessibility in the Kongkow Park based on universal design principles:

1) Pedestrian Path

The construction of the pedestrian path in the park is not the same, the pedestrian path is made slightly meandering due to the elongated and uncontoured condition of the park land. The unavailability of guiding blocks causes people with visual impairment to experience difficulties when they move on the pedestrian path. The width of the park pedestrian path is 120 cm, ensuring smooth movement of wheelchairs for users with disabilities.

Figure 2. *Pedestrian Path*
Source: Authors, 2024

The pedestrian path allows both the able-bodied visitors and the visitors with disabilities to move. Most of the time, people come to jog together, which is quite easy for able-bodied visitors to do. Wheelchair users, if not accompanied by others—do not need to expend additional effort to do their activities in the park as the flat pedestrian path eases them.

With such long pedestrian paths, visitors are quite tired when moving on the pedestrian paths due to the long distances. As a matter of fact, if there are park benches or resting spaces for the visitors with disabilities at certain places, it will not be a problem. However, if it does not exist along the pedestrian path, it will be a problem. The pedestrian path is constructed using block paving material.

2) Ramp

Kongkow Park only has one ramp available, located at the front entrance to the park area. The length of the ramp in the park is 200 cm, the width of the ramp is 120 cm, and the slope of the ramp is 10°. The ramp in this park does not support handrails and has a height of 40 cm, however, there is a hard concrete barrier. The observed ramp design issues are in line with the findings of Kurniawan et al. (2020), that noted that non-standard ramp slopes pose a significant risk to wheelchair users.

Figure 3. *Ramp*
Source: Authors, 2024

3) Stairs

There are three stairs in the Kongkow Park, each with a height of 18 cm for the first stair, 15 cm for the second and third stairs. The stairs are not designed with handrails. The width of the normal footrest on each step is 30 cm wide. Stairs designed without handrails can cause difficulties for users, notably the elderly and children, the problems in this design are in line with the findings of Kurniawan et al. (2020). Stairs must be equipped with a minimum handrail on one side of the stairs, the handrail area must be free of construction elements that hinder the use of the stairs.

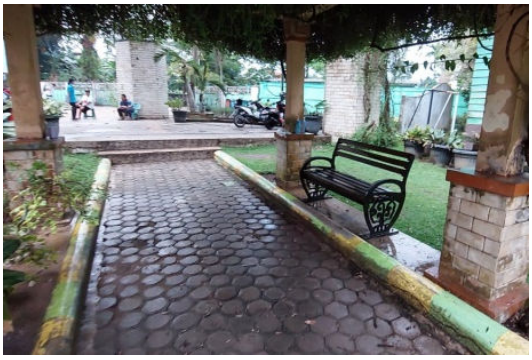

Figure 4. *Stairs*
Source: Authors, 2024

4) Park Bench

Two types of park benches are available at Kongkow Park. The first type of park bench utilises concrete material with a bench length of 100 cm, width of 55 cm, and height of 60 cm. The second type of park bench uses wooden material with a bench length of 130 cm, width of 55 cm, and height of 50 cm. Benches with wooden materials look not in good condition. Park benches are not placed on the pedestrian path but on the edge of the pedestrian path, causing difficulties for wheelchair users.

Figure 5. *Park Bench 1*
Source: Authors, 2024

Figure 6. *Park Bench 2*
Source: Authors, 2024

5) Parking Lot

There are two parking areas, one on the left and one on the right before the entrance to the park. The right parking is reserved for car and motorbike parking while the left parking area is for car parking only. All parking areas are in the front yard of the park. In this park parking area, no parking area is available for people with disabilities, the parking area is still integrated with the regular vehicle parking area. The absence of accessible parking spaces for

people with disabilities contradicts the principles of universal design and the findings of Diartini et al. (2022).

Figure 7. *Right Side Parking Lot*
Source: Authors, 2024

Figure 8. *Left Side Parking Lot*
Source: Authors, 2024

The described results of the application of accessible design at Kongkow Park show that it has not fully applied the principles of universal design to users with disabilities. For this reason, the authors re-analysed the accessibility of Kongkow Park which includes universal design principles based on Mace (1997):

(1) Pedestrian Path

Table 1. Pedestrian Path Analysis

Existing	Principles of Universal Design	Conclusion
The condition of the pedestrian path at the location is relatively flat. On the pedestrian path, there are no road signs for the people with visual impairment.	The principle of ease of information (perceptible information). This principle ensures that the design can deliver the necessary information to all users, including those with sensory limitations such as visual impairments. Guiding paths usually consist of a specific floor surface or texture that provides tactile cues, allowing users to feel and follow the path with no vision required.	The pedestrian path in the Kongkow Park has no signposts or guiding blocks.

(2) Ramp

Table 2. Ramp Analysis

Existing	Principles of Universal Design	Conclusion
The slope of the two existing ramps reaches 10° with a ramp length of 200 cm and a	The principle of equitable use, tolerance for error or low physical effort. This	Ramps in Kongkow Park do not provide handrails, meaning that wheelchair users

ramp width of 120 cm. There is no handrail on the ramp.	principle aims to let the design be utilised by individuals with a wide range of skills without requiring alterations or additional assistance. Ramps allow the elderly, wheelchair users, and people with mobility difficulties to access buildings or specific areas unhindered.	still need the assistance of others and pose a danger to people with disabilities.

(3) Stairs

Table 3. Stairs Analysis

Existing	Principles of Universal Design	Conclusion
The first step is height 18 cm, the second and third steps are 15 cm each. Each step has a step width of 30 cm, which allows normal footing. All three stairs do not feature handrails. The stairs fail to take rain issues into consideration, resulting in water often pooling on the steps causing the tiles to turn slippery.	The principle of low physical effort (efficient and comfortable) or flexibility in use. These principles confirm that the design minimises the use of effort. Thus, stairs designed with accessibility in mind include appropriate handrails, step widths and heights, and slip-resistant surfaces. This design allows safer and more convenient access for users with varying physical abilities.	There are no handrails on the stairs in Kongkow Park. If the weather is rainy, the steps become slippery since there is no rain screen and the floor construction is tiled.

(4) Park Bench

Table 4. Park Bench Analysis

Existing	Principles of Universal Design	Conclusion
There are two types of park benches, wooden benches and concrete benches. The location of the Kongkow Park bench is on the edge of the pedestrian which results in wheelchair users having difficulty reaching the park bench because there is no access for wheelchair users. The condition of the wooden chairs is not well maintained.	The principles of flexibility in use, simple and intuitive, low physical effort (efficient and comfortable), equitable use. Benches are designed with standardised backrests and handles; the park benches should also be easily accessible to wheelchair users and have a comfortable seating height and depth. In addition, park benches are appropriately placed to ensure that everyone, even the elderly and people with disabilities can fairly utilise them.	People with disabilities face difficulties in utilising the benches in the Kongkow Park. This contradicts the principle of universal design which lacks equality in diversity. .

(5) Parking Lot

Table 5. Parking Lot Analysis

Existing	Principles of Universal Design	Conclusion
All parking areas are on the front lawn of the park. Wheelchair users and people with visual impairments can use the parking facilities. The manager does not provide designated parking for the people with disability; therefore, visitors with disabilities who use private vehicles must use the regular parking area.	The principles of equality use, perceptible information, and size and space for approach and use. Under the principle of equality in use, parking areas should be designed in a way that allows people with disabilities to access the facilities without barriers. On the other hand, the parking area should have adequate size, space, and layout to facilitate mobility of wheelchairs or other assistive devices around the vehicle.	The parking lot at the Kongkow Park is already compliant with motorbike and car standards. However, there is no designated parking space for people with disabilities and the access is integrated into the reception plaza. Also, there are no signs or symbols for people with disabilities.

The results of the analysis indicates that Kongkow Park falls short of complying with universal design principles, addressing the research objective of identifying accessibility challenges.

4. CONCLUSION

This research highlights the importance of applying universal design in city park design to create green open spaces that are inclusive and accessible to all communities, including people with disabilities, the elderly, children, and individuals with other special needs. Referring to the results of the comparative analysis between the design of the existing Kongkow Park and the principles of universal design principles by Mace (1997), the design of the Kongkow Park is far from applying the principles of universal design principles. Kongkow Park still has a public facility design that cannot accommodate the needs of people with disabilities. The existing design has not thoroughly implemented the principles of universal design. Besides, the existing components still pose risks and hazards. For instance, the pedestrian path does not have a guiding path formed by guiding blocks. Ramps do not feature handrails, which pose a danger to people with disabilities. The stairs do not provide handrails and do not consider rainfall issues, resulting in water often pooling on the stair tiles, leading to slippery floors. Park benches are on the edge of the pedestrian path which offers no access for people with disabilities. There is no designated parking for people with disabilities in the parking area.

From the problems of the research, there are suggestions to improve the infrastructure of disability-friendly city parks. In order to provide facilities for all users without exception including people who have physical limitations, the Jambi City government needs to plan the application of universal design in all universal design factors. The government has to carry out routine maintenance, conduct accessibility audits every two years. It is also necessary to involve various community groups, including people with disability and the elderly, in the park design process to assist in ensuring that the design applied really suits their needs.

5. REFERENCES

Andreas K.S Mukin. (2021). Kajian Perilaku Pengguna Ruang Terbuka Hijau Taman Nostalgia Kota Kupang. Tesis Tidak diterbitkan. Yogyakarta: Program Pascasarjana Universitas Atma Jaya Yogyakarta

Carr, Stephen. (1992). Public Space. Cambridge University Press. USA.

Diartini, L., Andi, U. F., & Purnomo, Y. (2022). Perancangan Ruang Terbuka Publik Di Kecamatan Pontianak Utara Dengan Pendekatan Desain Universal. *JMARS: Jurnal Mosaik Arsitektur*, 10(1), 75. https://doi.org/10.26418/jmars.v10i1.51638

Krier, Rob. (1979). Urban Space. London: Academy Editions.

Kurniawan, G. K., Sani, A. A., Matondang, A. E., & Aziza, M. R. (2020). Pengembangan Ruang Publik Berbasis Universal Desain Di Kota Bandar Lampung: Studi Kasus Taman Gajah. Jurnal Arsitektur ARCADE, 4(2), 107. https://doi.org/10.31848/arcade.v4i2.450

Mace, F. C., Mauro, B. C., Boyajian, A. E., & Eckert, T. L. (1997). Effects of reinforcer quality on behavioral momentum: Coordinated applied and basic research. *Journal of Applied Behavior Analysis*, *30*(1), 1-20.

Peraturan Menteri Pekerjaan Umum dan Perumahan Rakyat Nomor 14/PRT/M/2017 Tahun 2017 tentang Persyaratan Kemudahan Bangunan Gedung

Peraturan Pemerintah (PP) Nomor 42 Tahun 2020 tentang Aksesibilitas Terhadap Permukiman, Pelayanan Publik, dan Pelindungan dari Bencana Bagi Penyandang Disabilitas

Rusandi & Muhammad Rusli. (2021). Merancang Penelitian Kualitatif Dasar/Deskriptif dan Studi Kasus. *Al-Ubudiyah: Jurnal Pendidikan dan Studi Islam*, 2(1), 48–60. https://doi.org/10.55623/au.v2i1.18

Sukmawati, A., & Afandi, S. A. (2023). Aksesibilitas Penyandang Disabilitas Pada Objek Wisata di Kota Pekanbaru. *Jurnal Dinamika*, *3*(1), 1-9.

Tarsidi, D. (2011). Kendala Umum yang Dihadapi Penyandang Disabilitas dalam Mengakses Layanan Publik.