

## Designing Dormitory Student with Modern Architecture Concept at Universitas Sumatera Utara Kwala Bekala

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### ABSTRACT

Universitas Sumatera Utara Kwala Bekala does not have student dormitory facilities, which is the main reason for this project. The application of modern architecture in dormitory buildings is designed with a more minimalist impression and still has the aesthetics of the beauty of the modern building. Modern architecture uses the concept of "forms follow function" by eliminating elements of ornamentation in buildings. The application of modern architecture in buildings is an adequate and practical approach in the form of a dormitory building. The methodology is mix method, namely, primary data from observations in the field at the design site and secondary data derived from informational data (literature) obtained from internet data sources such as journals, articles, and data in book references. This student dormitory research is expected to provide data for designing a building that can meet the needs of students on campus activities and students' daily lives and give comfort to its users.

**Keywords:** Kwala Bekala, Modern Architecture, Forms Follow Function, Student Dormitory, Mix Method

### ABSTRAK

Abstrak. Penelitian ini membahas tentang penerapan arsitektur modern pada gedung asrama mahasiswa Universitas Sumatera Utara Kwala Bekala. Arsitektur modern menggunakan konsep "form follows function" dengan menghilangkan unsur ornamen pada bangunan. Kwala Bekala USU tidak memiliki fasilitas asrama mahasiswa, sehingga menjadi alasan utama dilakukannya proyek ini. Penerapan arsitektur modern pada bangunan merupakan pendekatan yang memadai dan efektif dalam bentuk bangunan asrama nantinya. Penerapan arsitektur modern pada bangunan asrama didesain dengan kesan lebih minimalis dan tetap mempunyai estetika keindahan bangunan saat ini dengan memanfaatkan secara maksimal kebutuhan fungsi bangunan sebagai salah satu cara penerapan desain arsitektur modern dalam bentuk dan penampilan bangunan. Metodologi yang digunakan adalah *mix method*, yaitu data primer hasil observasi lapangan di lokasi perancangan dan data sekunder yang berasal dari data informasi (literatur) yang diperoleh dari sumber data internet seperti jurnal, artikel, dan data referensi buku. Penelitian asrama mahasiswa ini diharapkan dapat menjadi data untuk merancang sebuah bangunan yang dapat memenuhi kebutuhan aktivitas mahasiswa dalam aktivitas kampus dan kehidupan mahasiswa sehari-hari serta memberikan kenyamanan bagi penggunanya

**Keywords:** Kwala Bekala, Modern Architecture, *Form Follows Function*, Asrama Mahasiswa, *Mix Method*.



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## 1. Introduction

Medan is a city that has had a relatively rapid development in education. The University of North Sumatra is one of the favourite universities in Indonesia and is ranked 1201 in the World University Rankings (QS-WUR)

(2023). Quacquarelli Symonds (QS) version with QS Stars 3. According to (Scimago Institutes Rankings) SIR (2023), the University of North Sumatra is The best university, number 8 (eight) in Indonesia, which makes USU one of the top 5 universities that are in great demand by prospective students from within the city and outside the city with a total of 33.966 people (Tribun Medan, 2022). With the increasing number of enthusiasts for USU, the greater the need for land or a place to live for a student, especially students from outside the city. Currently, the USU campus in Padang Bulan is increasingly congested. In 2016, the development of the USU Kwala Bekala campus was planned, and construction started in 2017. With the construction of the second USU campus in Kwala Bekala, there will be a need for supporting facilities for student activities, including the need for a student dormitory building.

In the era of globalisation and the development of science, the quality of educational facilities is a crucial factor in attracting the interest of prospective students (Sitanggang A. Friska et al., 2021). Student dormitories are one of the main components of the campus environment that create optimal learning conditions. The Universitas Sumatera Utara Kwala Bekala campus has a forestry faculty that has been established and active since 2020 and still lacks facilities such as road and internet access (Tata Kelola USU, 2022). Within fifteen kilometres of the USU campus area in Kwala Bekala, there are buildings consisting of campus guards, student dormitories and workshops whose building conditions are significantly damaged, and the dormitory facilities, such as toilets and doors that are no longer functioning (Adriati, 2014). even though, according to architectural researchers, the construction of dormitories significantly influences the quality of life, especially in student education (Dizaj M. et al., 2022). In the development process, planning is required, which is the first stage and must be used as a guide so that the nature of the plan is implementable and applicable (Ngaisom, 2020). Student dormitories at a university are essential after education because they are a substitute for students' homes, which must reflect the environment at home for them (Dijzaj M. et al., 2022). This research uses modern architectural concepts to design student dormitories at the University of Sumatera Utara in Kwala Bekala, Deli Serdang. This concept was chosen not only because of the need for adequate facilities but also as an effort to create a living environment that promotes creativity, innovation, and social interaction among students.

Universities are centres of learning and self-development (Britannica, 2023). Therefore, designing student dormitories that consider contemporary and sustainable aspects is a must. The modern architectural concept proposed in this research not only includes building aesthetics but also focuses on environmental sustainability. Thus, it is hoped that this dormitory will not only be a place to live but also an inspiring place for students to develop holistically. This student dormitory design will explore students' needs and preferences in designing dormitories that can meet the demands of the times (Susanti A. et al., 2019). Apart from that, through modern architectural concepts, this research seeks to create residential spaces that are inclusive and environmentally friendly and support a progressive mindset. Thus, it is hoped that the student dormitory on the USU Kwala Bekala campus can become a model of a modern student dormitory that combines comfort, beauty and sustainability for students.

## **2. Literature Review**

Design is a process that aims to change the object of the design for the better. The process is carried out with the overall aim of according to the ideal view of the designer. The design process is always related to one thing and another, like a circular cycle (S. Kartika et al., 2018). A student dormitory is an environment created as a student residence facility that usually provides supporting facilities for its users (students) activities, such as canteens, libraries, study rooms, residences, etc., during campus (C. Mahardiestya et al., 2018). Student dormitories are buildings financed by universities, schools, individuals, and local governments that are intended as a residence for a student or students. The definition of a dormitory is a building that has an area that has been calculated, has a relationship with an educational institution, and is also associated with students or other students. Students who come from outside the region. Student dormitories are divided into three based on their function, namely as a suggestion to interact with other people, as a means in the academic field, and to help students have a better life (M. Ghoisanie, 2022). In general, the word student means someone who has a high level of role in the world of education, which is a factor in determining the behaviour of a person or can be concluded as a process of thinking patterns of developing more mature (F. Nasari et al., 2015).

According to Jawdet and Borazjani, modern architecture is new and universal, with building designs that are intended or adapted to the modern industrial environment, making changes and details change in a room designed with the same physical properties, which uses a lot of abstract and pure architectural forms. Modern architectural calculations are usually very concerned about the concept of functionalism before seeing

effectiveness and efficiency (N. Amiri, 2016). Utilising the differences in elements and the harmony of this ratio is a concept of modern minimalist architecture (E.L. Wahjutami, 2017). In the modern minimalist architectural concept, the building can have its original characteristics based on the structure and materials used, which also become the aesthetics of the building (A.A. Wicaksono et al., 2014).

The dormitory type has five classifications, which are the occupant classification like woman dorm, man dorm, and mixed dorm. The second classification is by the marriage status of the students, whether they are married or unmarried. The third classification is by the education level of the students, like undergraduate students' dorms, graduate students' dorms, and doctoral students' dorms. The fourth classification is by dormitory ownership status, like belonging and being owned by the local government or a foundation. The fifth classification is based on dormitory location, like on-campus dormitories or off-campus dormitories (Okto B. et al., 2014). The typical rooms of student dormitories are divided into several types of student dormitories, namely the type of dormitory based on its ownership, the type of dormitory based on the occupants, based on the floor plan and the type of dormitory in use. The type of dormitory, based on its floor plan, has a double-loaded corridor type (Figure. 1) and a single-loaded corridor (Figure. 2), which is a linear arrangement of room spaces consisting of both sides of the building, one corridor facing each other. The dormitory is a building that must be a concern, according to UNESCO in 1978. Matters relating to hostel design standards and relationship of occupant behaviour. Standards in dormitory buildings are taken from books that explain the standards of dorm rooms, such as the Times Saver Standard and Architect's Data. Facilities in dormitories are designed to go through data from knowledge of the level of relationship between design and behaviour so that later solutions can be found in designing designs according to the needs and characteristics of users in general (A. Budiarto et al., 2020).



Figure 1. Double Loaded Corridor  
*Source: Gary Sachau, 2002*

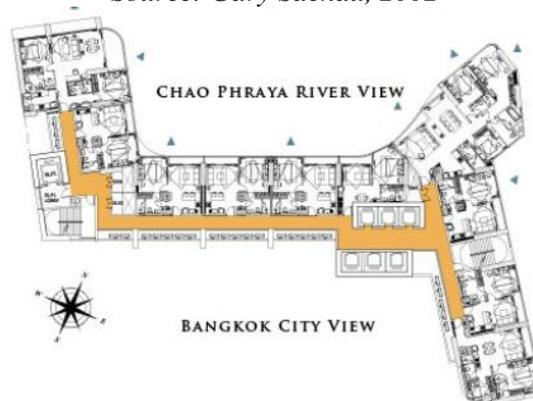


Figure 2. Single Loaded Corridor  
*Source: Menam Residence, 2023*

Modern architecture is an architecture that is practical and economical and has functional and efficient principles. Modern architecture begins with the emergence of the influence of nature on Art Nouveau, which creates the impression of beauty from nature. Then, its development was influenced by Art Deco, which further created developments in technology. Modern architecture is international and has a concept called Form Follow Function, or the shape of the building that is adjusted to its function. Modern understanding itself is defined as something related to things that are new and developing in the present. A residence that uses the concept of modern architecture to produce a building that reflects a building that has a building style that can support the modern lifestyle of the building (M.R.D. Pratama et al., 2018). The form of a modern architectural

building generally has a solid Platonic character that is completely square and does not have monotonous decorations and repetitions. Drastic changes in modern architecture produce a new approach to the design process in buildings. Modern architectural design uses science and their own imagination, which is based on fulfilling buildings that can be efficient and have aesthetics that come from personal thought or individuality (L. Lefaivre et al., 2016).

**2.1 Activity**

The University of North Sumatra (USU) dormitory accommodates three distinct categories of individuals: students, guests/visitors, and management officers. Registered undergraduate students at USU comprise the primary group of residents, engaging in various activities within the dormitory. These activities are classified into main activities, encompassing personal, educational, communicative, recreational, management, supporting, service, and sports activities. Personal activities reflect the individual endeavours of the student residents, while educational activities highlight academic pursuits conducted within the dormitory premises. Communicative activities foster a sense of community and interaction among residents, creating a vibrant living environment. Recreational activities provide avenues for relaxation and leisure. Management activities are overseen by the Management Officer, responsible for ensuring the continuity and quality of services for residents and guests/visitors. Supporting activities contribute to the overall well-being of the dormitory, while service activities cater to the needs of the residents. Additionally, sports activities promote a healthy and active lifestyle among the student residents. Guests/visitors who visit temporarily with an interest in the hostel's residents add a dynamic element to the dormitory environment. In essence, the University of North Sumatra dormitory is a multifaceted space that not only serves as a residence for students but also as a hub for diverse and engaging activities that contribute to the holistic development of its occupants.

**Description of space requirements**

In designing a product, an analysis process is needed in order to get a solution to the problems in the design. In the process of designing a space program, ideas that become a solution to the design will be obtained (S. Kartika et al., 2018). On determining space requirements in student dormitories, namely by registering dormitory users and activities in the room in the dormitory so that the needs for space programs in student dormitories can be described. The table shows the details of the planning of the space program required for student dormitories (Table 1).

Table 1. Description of Space Requirements

Activity	Detail Activities	Activity Actor	Space Requirements
User	- Rest - Studying Shower Cooking Discussion  Laundry Dry Cleaning	Collage Students	Bed Rooms  Bath Rooms Kitchen Discussion Room Administration Room
Manager	Manage administration and filing Supervision	Administrative and archive staff  - Operator - Security	Administration room  - Control room - Lobby
Activity	<b>Detail Activities</b>	<b>Activity Actor</b>	<b>Space Requirements</b>
	Cleaning Service Saving Inventory	Janitor	- Warehouse
	Building technical security	Technician	- Panel - Plumbing room - Generator room
Support Area	parking visiting Discussion	- students - visitors - Dorm	- sport field - Parking lot - Area gym

- supermarket
- Study room

Shopping Exercise - Employee

### 3. Methods

The methodology is an analysis within a field of study or a collection of methods and principles specific to the branch of knowledge used in research (C.M. Lewandowski, 2015). The design method is carried out objectively and systematically from the results of collecting existing data. The use of design methods facilitates the process of solving problems and helps generate ideas in designing. There are two types of data used in this design: primary data and secondary data. Primary data is a collection of data that is done by observing the location of the design site with the aim of gathering information related to the needs of building facilities and infrastructure as well as the condition of the design site. Secondary Data is obtained by collecting design data information from sources such as books, documents, journals, articles, government regulations, and Internet media. The data was collected in the form of data about the theoretical basis, a discussion of the concept of the design approach, and other data needed in the design process.

#### 3.1 Site selection criteria

The selection of location criteria is determined according to the conditions of the location: 1) Reach an easily accessible location. 2) Completeness of city utilities. 3) Have sufficient land area (Y.V Simorangkir et al., 2018) 4) The location of the site must take into account the even distribution of campus distances. 5) The location must be quite quiet and not a lot of vehicle noise so as not to interfere with life in the dormitory and not interfere with student learning time. 6) Easy access for users to reach. 7) Affordable facilities for every day. 8) Close to the main road/ main access (Figure 6). The location of this project is at the university campus of North Sumatra Kwala Bekala (Figure 5) area, near the main road and campus entrance, so as to provide easier access to users and visitors to the building. This location belongs to the University of North Sumatra, which is located on Deli Tua St., Pancur Batu, North Sumatra (USU Campus 2, Kwala Bekala), with a land area of  $\pm 1500 \text{ m}^2$  (Figure 5). The site boundaries of the design location are in the second USU campus area, which is 1) the northern boundary: Simalingkar housing complex. 2) south boundary: Mbacang's house. 3) Eastern boundary: Medan Johor District, Medan Zoo. 4) West Boundary: Letjen Jamin Ginting St.

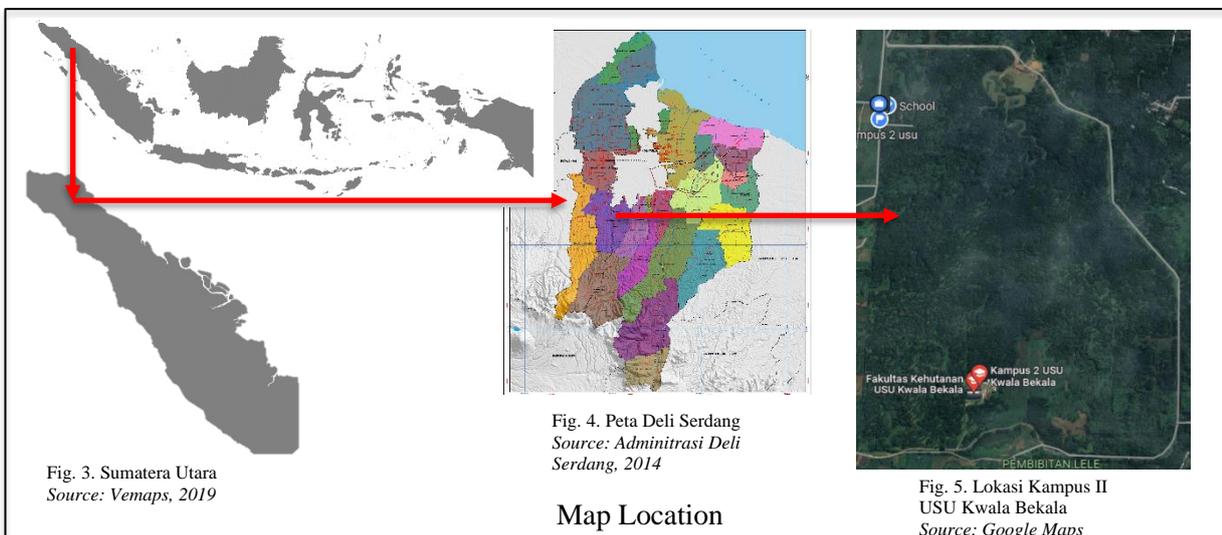


Fig. 3. Sumatera Utara  
Source: Vemaps, 2019

Fig. 4. Peta Deli Serdang  
Source: Adminitrasi Deli Serdang, 2014

Fig. 5. Lokasi Kampus II USU Kwala Bekala  
Source: Google Maps

#### Map Location



Figure 6. Site Location

Site analysis is carried out as a process to identify factors that can influence the design of buildings and the design of space program requirements, such as sunlight, circulation, site view, accessibility, noise, cardinal directions, vegetation, and determining building placement and space zoning (H. Kristić, 2016). The contour of the land tends to be relatively flat. The vegetation at the site location is quite good, but it dominates oil palm plants, so it needs a variety of shady plant forms that can function as shade, dust filters, and noise filters. The climatic conditions at the design site tend to be humid tropical with the movement of the sun from east to west, so the movement of the rising sun will be at the back of the design site and set at the front of the design site.

#### 4. Result and Discussion

##### 4.1 Concept of Composition Mass

The shape used in student dormitory building uses a combination of several basic shapes, namely, rectangles and triangles (D.K. Ching, 2008), that adjust to the shape of the site. The orientation of the building is directed into the site. The orientation of the shape of the building is designed to respond to the form of the site (D.K. Ching, 2008). The building concept also uses the concept of achievement so that the face of the building faces the main entrance. The building also uses the concept of the sun, which designed the elongated building on the east side (Figure 7).

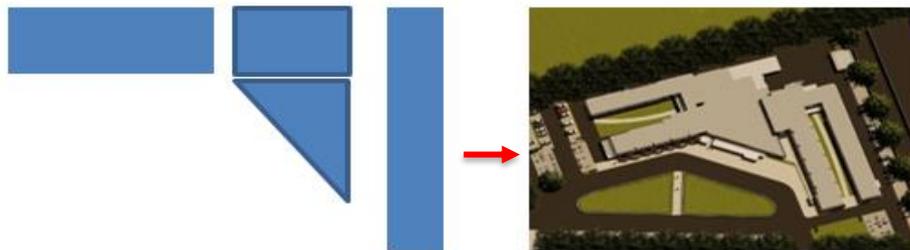


Figure 7. Basic Shape

The concept of mass used in the design is a basic form, namely the arrangement of triangular and rectangular shapes that are arranged repeatedly and monotonously in a vertical direction (Permana et al., 2023). Which is taken from the principles of modern minimalist architecture (Figure 8).

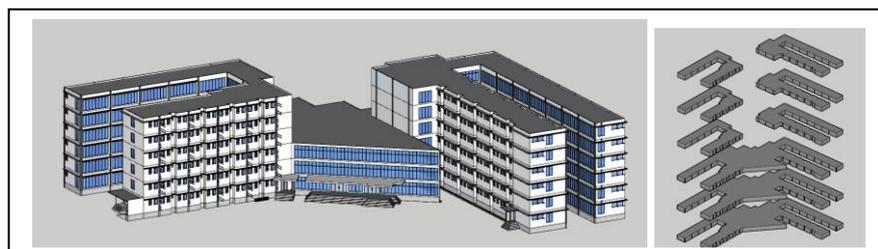


Figure 8. Building Mass

#### 4.2 Exterior Design Concept

In architectural design, indoor and outdoor spaces are parts that are always present in architecture. In designing, indoor and outdoor spaces must complement each other (Navarro R. C. et al., 2020). Conventionally, in the design of outdoor and indoor spaces, the boundaries between outdoor and indoor spaces must be clearly defined and well defined. In general, taking into account certain elements and characteristics pertaining to the open space and landscape of educational environments in schools can improve students' ability to focus and direct their attention, which will promote learning and the overall quality of education in schools (Sam M. et al., 2020). A function has no effect of syntactic values; if it is valid enough, it usually works better than the integration quality, especially indoors. Whether designed or not, outdoor areas—ideally with a view of the outdoors—are essential to academic life. Students can . Interfacing spaces serve as undefined circulation channels or transition spaces if they are unable to create a niche or a shift in level. If not, they are preferred places for social interaction (Ünlü A. et al., 2009).

The outdoor concept is to provide easy access for users, have comfortable circulation for pedestrians as well as cars and two-wheeled vehicles, and be friendly for bicycle users. Outdoor space has a main goal purpose, which is that it can be used by users as well as an area for discussion and sports in order to improve the quality of life of students or users and also give easy access to parking lot facilities (Figure 9).

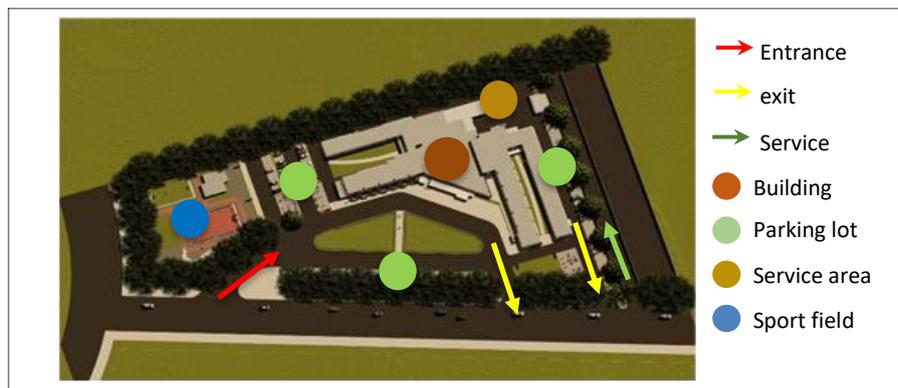


Figure 9. Outdoor Design Concept

The outdoor design of the building site provides dormitory support facilities such as a sports field, a football field, a basketball court, and a jogging track that can be used by students. The outdoor area is given a large green opening area in order to provide a healthy environment. The laying of trees in the outdoor space is done as a media to provide fresh air and is also used as a sound filter from the noise area and as help to reduce the sunlight that goes into the building. The other facilities that the dormitory has are an exterior facility, which is the parking lot, and a place for students to have an outdoor discussion and have fresh air. The sports field also has a changing room that can be used as a place for taking a shower or going to the toilet and changing clothes. This facility is made as a facility that can be expected to be useful by the users (Figure 10).



Figure 10. Exterior Facilities

#### 4.2.1 Circulation Concept

It is believed that circulation is a distinct area of motion that connects different architectural features or parts to create a radical linking of places (Chamass et al., 2021). The site is located in the university support area and the road to Lieutenant General Street Jamin Ginting, Pancur Batu District, Deli Serdang Regency. The location of the site is also close to the campus entrance. Reaching the site location can be traversed by motorbikes and cars. Access site location can be reached from the direction of Clone IV Street and from Secondary Collector Road on the west side with two vehicle lanes. The main access to the site location and access out of the site using the same access. Access in and out of the building have separate access. Access to the site for vehicles is on the right side of the site, and for self-exit access, it is on the left side of the site (Figure 11).

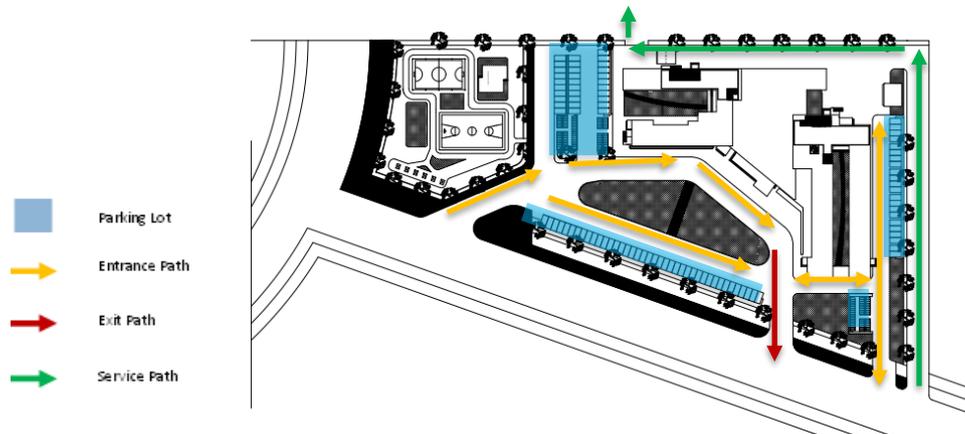


Figure 11. Circulation Concept

The main entrance to the hostel is on the right side of the site, which is determined by adjusting the location of the vehicle driver. The main entrance point of this building is also the centre point of the main aesthetic appearance of this dormitory building (Figure 12).



Figure 12. Main Entrance

On the far left side of the site, a second access point for occupant vehicles is provided, which is more intended for female residents because access to the building is easier and closer (Figure 13).



Figure 13. Parking Area

Access to the lane for large vehicles enters from the left side of the tread, and exit access is at the rear right side of the tread, which is specially made for large lanes such as trucks and other large vehicles, which are for building service purposes (Figure 14).



Figure 14. Service Path

The orientation of the shape of the building is designed by responding to the form of the site (D.K. Ching, 2023). The building concept also uses the concept of achievement so that the face of the building faces the main entrance. The building also uses the concept of the sun, which designs a building that extends on the east side (Figure 15).



Figure 15. Building Façade

The dormitory building is separated between the male dormitory building and the female dormitory building. The dormitory building stretches from the site, and the girls' dormitory stretches from the front of the site. These two buildings are separated by a public lobby building that can be accessed by everyone. Meanwhile, dormitory buildings can only be accessed by certain users or students and employees. Access to the dormitory building is separate from the access to public spaces so that it can be separated between male dormitories and female dormitories (Figure 16).



Figure 16 Main Access Lobby

In the male and female dormitory buildings, there are two buildings that form a rectangle consisting of two buildings forming the letter U. The main access entrance to the male and female dormitory buildings is

separated. In the male dormitory, the main entrance access is at the front of the building and in the middle of the dormitory building (Figure 12). At the female dormitory, the main entrance is at the back of the building, which is adjusted to the distance from the parking lot so that it is closer and easier to access, and the second entrance is in the middle of the female dormitory building (Figure 17).



Figure 17. Male Dorm Access

At the female dormitory, the main entrance is at the back of the building, which is adjusted to the distance from the parking lot so that it is closer and easier to access, and the second entrance is in the middle of the female dormitory building (Figure 18).



Figure 18. Female Dorm Access

#### 4.2.2 Implementing Concept of Architecture Modern Design

Modern architecture has a concept in building aesthetics that dominates the elements of horizontal and vertical lines, massive empty space, symmetry with asymmetry and abstract geometric shapes. The dynamics of the building have clear boundaries but still show harmonious and complementary elements. Utilising the differences in elements and the harmony of this ratio is a concept of modern minimalist architecture (E.L. Wahjutami, 2017).

The application of modern architecture in designing student dormitories by taking elements of the nature of modern architecture that has a functional concept, which can maximise the use of natural light sources with wide openings and save on the use of the mass area in excessively large spaces, namely by minimising the mass of buildings and designs that denser. In the modern minimalist architectural concept, the building can have its original characteristics based on the structure and materials used, which also become the aesthetics of the building (A.A Wicaksono et al., 2014).

The basic concept of designing a student dormitory building is the concept of modern architecture. Space requirements and building facilities are the things that are focused on in the design. The problem in this design is how to create a building that can apply a modern architectural approach. The application of modern architecture to student dormitories by using the original characteristics from the structure and use of the material. This application is inspired by the Bauhaus building in Jerman (Figure 19).



Figure 19. Application of the Bauhaus Building (Architecture modern concept) to the Dormitory Building

Another application of modern architecture in buildings is the use of Horizontal and Vertical Line Elements on the building. This line gives the impression of one of the hallmarks of modern architecture (Figure 20). The use of horizontal and vertical elements as part of the principle of neutrality, namely as a substitute for the principle of using ornaments in buildings and still having the aesthetic value of horizontal and vertical line elements (A.S. Farizi et al., 2021).



Figure 20. Applications Horizontal and Vertical Line Elements

The last of modern architecture applications is using wide glass window openings and natural lighting (figure 21).

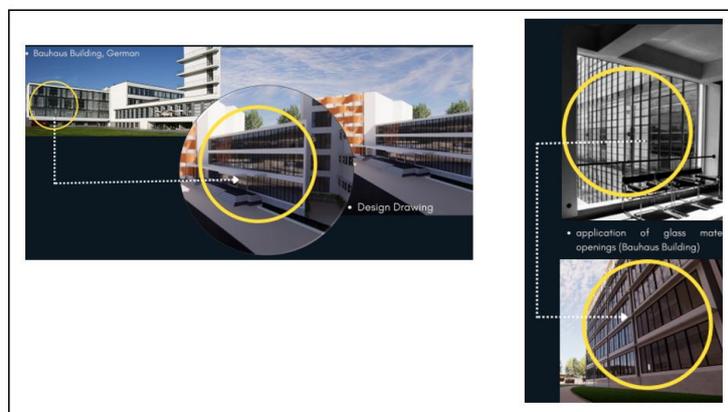


Figure 21. Applications glass window openings and natural lightning from Bauhaus School

#### 4.2.3 Secondary skin applications in building

To make incredibly accurate and effective modifications according to the sun's location in the sky. The system's precision was further enhanced by the independent configuration of each unit, which was based on the sun's location and its target point on the ceiling. The use of secondary skin on the building is a response to the direction of the building that faces the west so as to reduce sun exposure to the building in tropical climates (Manubawa A.E et al., 2020). The application of the secondary skin is also a response to the application from the openings that are widely used on the building that use a lot of glass elements. Secondary skin can also help maintain user privacy and strengthen the horizontal line elements of the façade building. Also, the application of secondary skin to the building creates shadows that can add to the aesthetics of the façade of the building (Figure 22).



Figure 22. Secondary Skin

#### 4.3 Interior Design Concept

Basic concepts of student dormitory building Design University of North Sumatra Kwala Bekala is an architectural concept. In this design, space and building facilities are needed to focus on in the design. In the space program, student dormitory rooms are divided into four groups, namely, residential group, support group, management group and service group. Student dormitories are also divided according to zoning, namely, private rooms, which are student dormitory areas, and public zones, which are areas where students gather and carry out activities such as group work, study focus, eating, sports, etc. Then, the service area is a building maintenance area such as the warehouse, service room, panel room and pump room (Lende et al., 2023). This student dormitory is divided into three parts, namely, the communal building, the men's dormitory, and the women's dormitory (Putri H.W. et al., 2023). These three buildings are combined with a circulation path on the ground floor so that they connect the three buildings so that dormitory residents have easy access to the communal building. This route will also be guarded by dormitory guards who are equipped with CCTV cameras and also use electric card access to maintain security in the student dormitory building. The communal area is designed as a public area, such as an area to support student activities and also as a building service area, and the men's and women's dormitories are private areas where not everyone can access the building except for dormitory residents and dormitory guards.

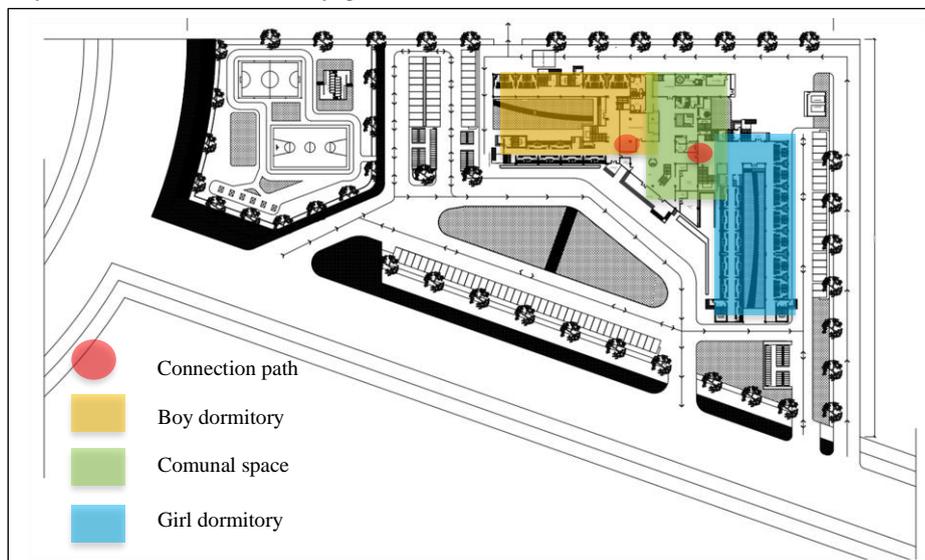


Figure 23. Groundplan

In the design of student dormitories, the focus is on integrating the design with specific spatial needs and adapting to the characteristics of the site. Two types of corridors, namely single and double-loaded corridors, are used to optimize space utilization and adapt to the topography of the location (Mahdiy M.I. et al., 2023). Single-loaded corridors are applied to maximize linear layout on the side of the building facing a specific area, while double-loaded corridors provide a balanced distribution of space around the main corridor. By considering the efficiency of space utilization and the characteristics of the site, this dormitory design creates an efficient and comfortable environment for its residents, aligning functional needs with the contextual nature of the location to produce an optimal and sustainable student dormitory building (McArthur et.al., 2020) (Figure 24).

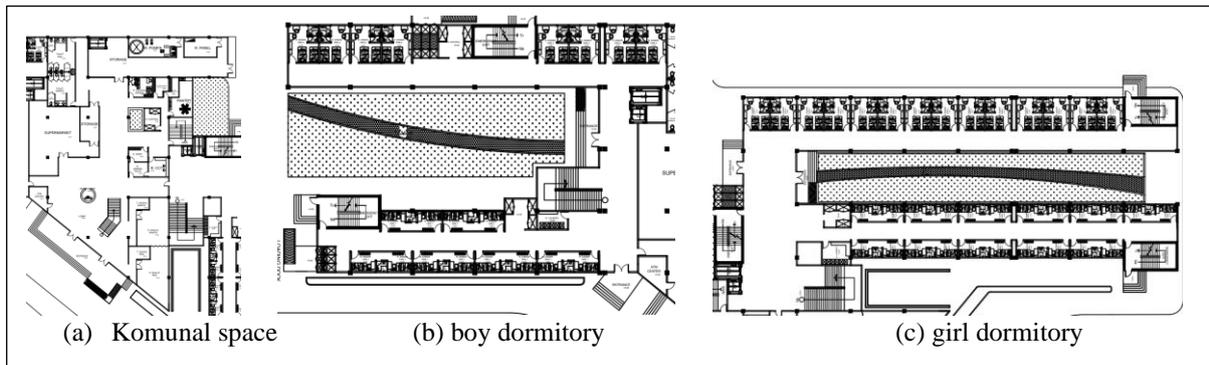


Figure 24. Section Space Program

In dormitory buildings, the priority is on the main function of the building, namely as a dormitory or residence for students; in a dormitory room, there are two types of rooms, namely room type 1, which consists of 2 beds with a separate room connected by a corridor to the bathroom (Figure 25). This room is designed to provide privacy controls for residents (Bettaieb D.M. et al., 2020). This space has direct access to the corridor and provides freedom for residents to go home and go. Privacy is the main emphasis in this room. Privacy for sleeping can be controlled if the separating material between adjacent rooms has a soundproof acoustic level. This room should be structured to allow a second person to study effectively.



Figure 25. Room type 1

For room type 2, it consists of 4 people with one bathroom and two toilets. This room can also socialise, adapt, and shape the characteristics of each individual, learn to tolerate differences and respect each other other residents (Figure 26).

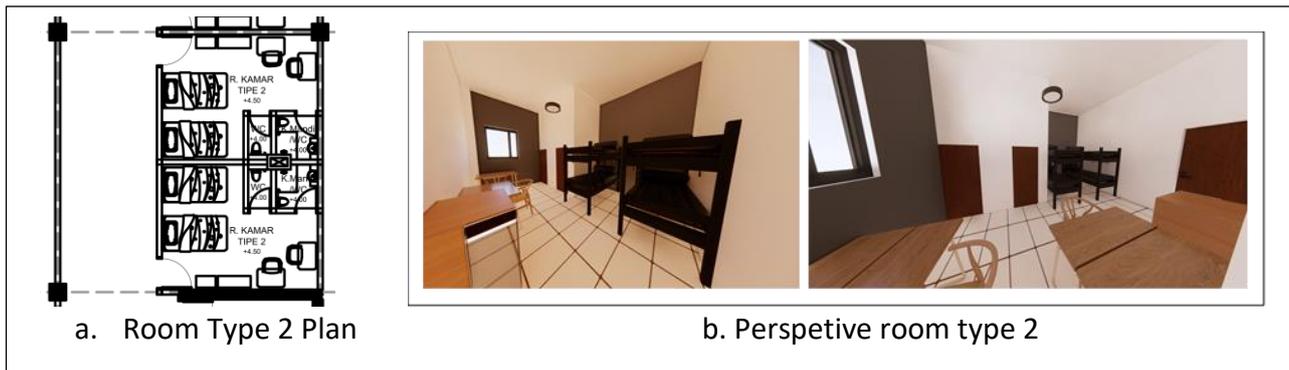


Figure 26. room type 2

The design of this dorm room is to try to provide maximum openings in the room and also comfort for students while living in the dormitory and comfortable while studying with a room that is adapted to the functional needs of the room (Behri D. et al., 2021).

## 5. Conclusion

The design of the USU Kawala Bekala Student Dormitory places a significant emphasis on prioritizing the comfort and overall well-being of its residents, particularly the students. The separation of male and female dormitory units adheres to societal norms, while communal spaces act as vital connectors between the open dormitory buildings. These communal areas, accessible to all users, visitors, and employees, are designed to serve multiple functions, fostering an environment that supports various student activities and promotes social interaction.

Moreover, the integration of modern architectural concepts involves a meticulous analysis of the building's spatial layout. This ensures the creation of a comfortable residential environment by addressing the specific needs of students, considering their health, well-being, and lifestyle. Supporting facilities strategically incorporated within communal buildings include study areas, canteens, lounges, and discussion spaces. The attention to detail extends to the dormitory's facade, where a secondary skin made of rectangular wood planks enhances aesthetics while functioning as a barrier and shading element, providing privacy and protection from the westward sunlight. Overall, this comprehensive and thoughtful approach aims not only to meet functional requirements but also to cultivate an environment that encourages personal growth, independence, and a strong sense of community within the USU Kwala Bekala Student Dormitory.

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