

# The evolution of modern architecture style in context of postcolonial campus

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# The evolution of modern architecture style in context of postcolonial campus

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## Abstract

The development of Indonesian architecture in the post-colonial era were the phase of new experiment and ideas that gave a birth to the awareness and spirit of exploring nation identity. Universitas Gadjah Mada is recognized in Yogyakarta as a post-colonial and the oldest national campus founded in 1949. This paper aims to investigate the evolution of modern movement in the sense of campus architecture. Case study material is drawn mainly from post-colonial campus architecture research at the central zone of Universitas Gadjah Mada. The method used is a qualitative methodology in which data is obtained from literature reviews and field observations. The development of modern architecture theories and styles have been studied through the precedent of architectures. The finding of this study showed that a socio-political transition of the old order, the new order, then and now, and the vision of the architect, contributed to the production of modern architectures.

**Keywords:** *post-colonial campus; modern movement; evolution of modern architecture*

## Introduction

Architecture plays an important role in shaping the interpretation of what a country was in a society's history. (Hanum, Lukito, Kurniawan, 2020) In the post-colonial sense, architectures were not design items that focused more on the use of modern material and technology to convey modernity, but paid more attention to non-physical forms that shape the history of construction designs and their theory and political means. (Syahid, Mushab, 2018) The development of a national university in the post-colonial period is seen as an image of a deliberate decolonization movement and to understand the related problems. (Peters, 2019)

Politics plays an important role in modernization in transforming thought on how to accomplish a goal. There was, therefore, someone behind the power who gave orders and instructions, the actors who were the key to the revolution. (Hanum, Lukito, Kurniawan, 2020) According to Abidin Kusno, a post-colonial Indonesian scholar of architecture, the notion of "modern" in Indonesian was once linked to a "movement." The birth of modernity in Indonesia was therefore viewed as a nation's

post-colonial architecture that was designed to free the country from the colonial picture. This interpretation was in Soekarno's parallel thought. In Indonesia, the new revolution is a spirit of transition in terms of democracy and liberty, to sever the relationship with the historical elements of the past, and instead to take inspiration from international modernity. (Syahid, Mushab, 2018) Indonesian presidents have been seriously developing their nation in the post-colonial era. The government aimed to create modern Indonesian architecture that no longer reflects the colonial images of the Netherlands. Thus, Indonesia's urban and architectural growth was a significant stage of development in the 20th century after the Independent. Indonesia has undergone a drastic transition to Western hegemony in architectural scenes that question regionalism and nationalism. (Wiryomartono, 2013)

For further discussion on the creation of post-colonial universities, Universitas Gadjah Mada (UGM) was raised as a case study. This campus was established in 1949, 4 years after Indonesia successfully declared independence. The establishing of this national university made a first move at the Central Zone. This area has been known as the core zone of UGM and through its architectural expression has also presented the identity of the Indonesian

national university. The construction of this campus took more than 60 years and experiencing the political shift of Old ordered, New ordered, then and now era, between 1951 and 2012 to complete the development of campus buildings in this area. In the political era of Old Ordered, President Sukarno interpreted his political ideology of nation-character building growth in a campus building of the UGM. As a result, the President Sukarno had ordered architect Hadinegoro to interpret his political ideology into the design approach of the Central office's building (Kantor Pusat) (Subroto, 2016). After that in the New ordered, then and now political's era, the following campus's buildings were designed by other architects with different approaches. Each architect designed their building carefully to maintain a balance between modernity, locality, and identity. These buildings, however, were constructed in a multi-architecture style approach to modern architecture, but they are moving on the same philosophy of campus identity formation. After the 2000s until the present time, UGM is undergoing a huge development of campus building in the Central Zone and the surrounding zone. However, the campus buildings in this area have different design approaches but they speak the same languages to their neighbors. In contrast the architectures in surrounding area of central zone are not designed in the same theme. If continuing this independent development approach could lead the UGM region to become a multi-colored, identity-free campus of architecture trends.

This article focuses on the evolution of modern architecture in the context of campus design with a case study in the central area of the campus of Universitas Gadjah Mada (UGM). It is anticipated that the results of this research will contribute to science, particularly in the field of architecture, particularly with regard to the history of architecture in the city of Yogyakarta, by providing an overview of the characteristics of the facade of the building. In addition, a resolution to the sense of urgency for historical study of modern architecture on a national campus was shared by the outcome of this research. The result could therefore lead to significant consideration of the growth of the campus. Furthermore, this research has contributed to the study of Heritage and Conversation architecture as a precedent study of post-colonial architecture in Indonesia.

## Literature Review

### 1. The rise of the post-colonial campus

The goal of establishing post-colonial campus has a direction to reaffirm the cultural values and identity. There were two directions of cultural' reaffirmation. One direction is to reaffirm the civilizational cultural values of precolonial 'university' that under colonized by a Western modernist. This case is now formed onto the new type of university that has become a truly global institution. Meanwhile, the other way is to defend, develop and adapt indigenous knowledge. The other direction is a reassertion of cultural values comes with the first experimentation of the indigenous university. In both forms, the inspiration comes in part from an interpretation and analysis of Western colonization and the different ways in which universities of European influence were a means of social control and knowledge production. (Peters, 2019)

The orientalism based on Said's (1979) states that the exclusion strategy of Foucault offers a general theoretical model for examining and interpreting the university as a locus for cultural influence and power/knowledge circulation. A postcolonial university, according to Chaturvedi (2015), seeks to decolonize the university, its curricula, and its modes of organization and administration through a practice that rehabilitates traditional knowledge at the same time while opposing the new round of globalization and the university discourse of the world class that universalizes neoliberal experience. Only some basic imperatives that require action are present. The return to the local should inspire the means at any stage of creativity and growth to promote openness to the colonial history of the past and openness to the future that does not prevent new ways of thinking and doing. In this sense, at the beginning of independence at the end of colonialization, the postcolonial university is not merely an institution of the university, but an attempt to rethink the institution of the university that distinguishes it from its colonial forms and opens up new possibilities of becoming another type of institution. (Peters, 2019)

As a case for further discussion, the first establishment of the post-colonial university by Indonesians was seen in the mid-twentieth century, Universitas Gadjah Mada (UGM) is recognized in Yogyakarta as the first post-

colonial campus architecture and the oldest Indonesian national university founded since 1949, immediately following the year after Indonesian independence was successfully claimed.

## 2. The movement of modern architecture in Indonesia

Since the Dutch colonial architecture movement, post-colonial architecture (transition of modernity and locality), contemporary architecture, the Indonesian modern architecture movement has taken place. Indonesia's new trend in post-colonial architecture has been driven by political influence and government. In Indonesia, the notion of "modern" was linked to a "movement" described by Abidin Kusno. The birth of modernity in Indonesia was therefore viewed as a nation's post-colonial architecture that was designed to free the country from the colonial picture. The first phase of post-colonial architecture was under the influence of Indonesia's first president Sukarno. In Indonesia, the modern movement is a spirit of transition in terms of democracy and liberty, to sever the relationship with the historical elements of the past, and instead to take inspiration from international modernity. (Syahid, Mushab, 2018)

During the early independent declaration of sovereignty in the Indonesian post-colonial era, Indonesia's first and second presidents took architectural development seriously as a tool for

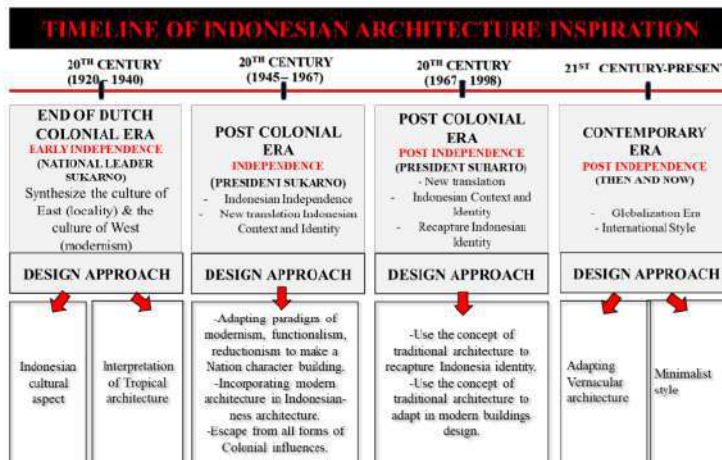
nation building. Both of them, however, have the same objective of building the nationality and identity of Indonesian, they had a different leading direction to the development of architecture. In the period of Indonesian first president Sukarno (1945-1967), the new architectures embodied by the order of adoption model in the approach to design for modernism, functionalism and reductionism. In the period of President Sukarno, modern architecture was post-colonial architecture that followed the design paradigm of modern architecture that focuses more on function and simplicity. In postcolonial architecture, Sukarno's intention is to escape from the colonial trace of architectural style and create a newly independent identity of the nation-state after colonialism.

In the era of Indonesian second president Suharto (1967-1998), the idea of traditional architecture, local culture, conception and ideology has been carefully adapted and transformed by those architectural products. On the other hand, architectural modernity seeks to combine conventional architectural typology, concept and theory adapted to modern design to foster Indonesian architecture and identity.

In 1998 the era of President Suharto is over. And the minimalist style trend in contemporary architecture has been introduced. Unlike the previous political era, the concept design in contemporary era is free from political power but inspired by the feeling of the client and personal architect. And somehow Indonesian contemporary architecture is an abundance of

Diagram 1. Timeline of Indonesian architecture design inspiration

Source: Author self-organized, 2020. Cited from (Purwaningrum, 2018)



locality and place identity. The contemporary architects of Indonesia tend to adopt modern trends, expressed in both public and residential buildings. Without considering meaning and identity, or less, the contemporary architect has begun to bring modern style into its architecture. The critic appears, after all, on many buildings and so forth. Architects, academics, educators and decision-makers have now begun to reconsider the adequacy of modern style in the Indonesian context. In constructing a building that not only provides a signature on the building but also makes a greater contribution to society, this order gives contemporary architects a challenge. In coping with the Indonesian context, most architects strive to combine modernism with localism, accepting both the temporal context and cultural heritage. (Purwaningrum, 2018)

## Methodology

As a research object located in the central zone of UGM, the research approach used in this analysis is a qualitative method with more focus on campus architectures. Research method is using qualitative research and analyze the characteristic of architecture base on typology approach. The unit observation of this research is limited at the building façade study. This study adopted both a library research and field research. In addition, this study will analyse the data based on content analysis with descriptive method.

## Result and Discussion

### 1. The development history of UGM campus in the central area

In the city of Yogyakarta, Universitas Gadjah Mada (UGM) is recognized as the first post-colonial campus architecture and the oldest national Indonesian university created in the mid-20th century. Historically, the UGM has been known under the name of *Balai Perguruan Gadjah Mada*, supported by the Government of the Republic of Indonesia, as a higher education institution since 1946. Later, in 1948, when the Dutch controlled Yogyakarta, this institution was closed briefly and reopened at the end of 1949. On 19 December 1949, this higher education institution officially established itself as a national university in Indonesia under the name of '*Universiteit Negeri Gadjah Mada*' (UNGM). At that time, this university had certain faculties and delivered lectures at

certain locations in the Royal Palace of Yogyakarta. (Purawanto;Djoko ;Soegijanto, 1999) Due to the large number of students and the demand for more faculties and services, the UNGM has constructed new campus locations at *Bulaksumur* and *Sekip*. After the Dutch occupation of Indonesia ended, the UNGM was then renamed Universitas Gadjah Mada Mada (UGM). (Rencana Induk Pengembangan Kampus 2005-2015, 2004)

Figure 1. The central area of Universitas Gadjah Mada (at the left hand) & campus buildings (at the right hand)

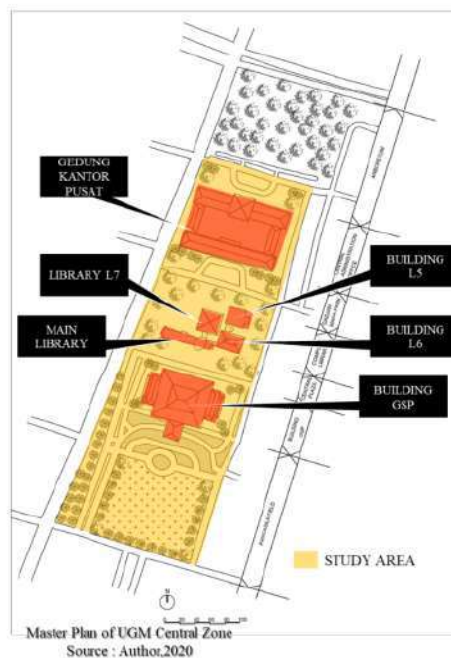
Source: Author, 2021



The position of *Bulaksumur* and *Sekip* as the

Figure 2. The Master plan of UGM at the central zone

Source: Author, 2021



location of the most integrated UGM campus on the border between Yogyakarta City and Sleman Regency, particularly in the northern part of Yogyakarta City, also plays a role in

stimulating Yogyakarta City's northern development. In context of land area, UGM campus development had expanded from 85 ha in 1951 to 167 ha in 2001. Universitas Gadjah Mada's first master plan was developed in 1984-1985. The master plan in 1992 has been justified based on the old master plan in 1985 as following: (1) land use development, (2) university central zone development, (3) faculty group development or clustering, (4) building layout development. (Rencana Induk Pengembangan Kampus 2005-2015, 2004)

The development of *Universitas Gadjah Mada* (UGM) was started in the central area. (Rencana Induk Pengembangan Kampus 2005-2015, 2004) Within this region, there has been a multi-design approach phenomenon that has emerged in the context of campus construction. These buildings were constructed in modern architecture as a theme, but many architects designed this campus building and introduced numerous layout designs and approaches. They range from early modern architecture to the Green Design approach. The development of the campus building began from 1951 to 2012, according to the development timeline of the UGM campus in the central area, to complete the construction of complex buildings within this campus zone. During the modern period of movement in Indonesia, the first building, the Central Office or Kantor Pusat (1951-1956), was developed. The two other buildings were subsequently built in 1975. Library L7 and Library L6, or *Perpustakaan Sekolah Pascasarjana UGM*, were established there. After that, there was a new building construction in 1993-1994, which functions as the *Grha Sabha Pramana* auditorium building (GSP). (Santosa, 2018) And then in 2011-2012 there were another 2 library buildings been developed around building GSP. Those two buildings including building library L1 which is the main library of UGM and the other one is building library L5. (Anonymous, n.d.) Therefore, at present, the campus building in the central area of UGM is as follows: Central building (Kantor Pusat), Complex library consisting of 4 buildings and *Grha Sabha Pramana* building (GSP).

## **2. The interpretation of modern movement ideology in old order, new order, then and now**

### **2.1 Modern movement in Old Ordered Era - Post-colonial architecture**

In architecture and urbanism, postcolonial perspectives provide ways of thinking about constructed form and space as cultural landscapes that are internationally interconnected at once and placed specifically in space and time. Indonesia's post-colonial architecture is a brand-new post-Independence architecture symbolizing the Indonesian nation. It is an age of architectural scenes that question regionalism, and nationalism, to western hegemony.

In Indonesia, post-colonial architecture's design approach has been divided into two distinct design approaches guided by the political of the president. President Sukarno was motivated by one strategy and President Suharto was driven by another. During the early period of independence between 1945 and 1967, architectural developments were under the control of President Sukarno. The architecture was the era of national movement during that time to avoid all sorts of colonial influences. Thus, the presidential ideology that time aimed to escape from colonial trace on architectural style and create a newly independent nation-state identity after Dutch colonialism with the latest translation of Indonesian concept and identity. The design approach was ordered by his philosophy to integrate modern architecture in the process of creating Indonesian architecture by adapting a modernist, functionalist, reductionist model. (Purwaningrum, 2018) During his time, the philosophy of President Sukarno in the creation of a nation-character building was interpreted in many public service buildings. Obviously, in his era, the architectural styles there were two main architectural styles that were New Indisch and Brutalist styles. The Brutalist style was primarily built in the city of Jakarta. On the other hand, in Yogyakarta city, President Sukarno's ideology was also found in the Universitas Gadjah Mada (UGM) campus building creation in the central region. Architect Hardinegoro was influenced by the philosophy of President Sukarno to design the central office building

(Kantor Pusat) in the shape of the New Indisch Architecture.

### a. New Indisch Style

New Indisch Style is a new version upgrading from the old version of Indisch architecture. Indisch Architecture or Indische Empire was the Empire building style from the development of architecture in the Netherlands that had a major influence on the city of Batavia (Jakarta) and several other cities in Java (Imam; Hajar, 2019). The New Indisch Style is a style of architecture which appeared between the late 19th century and the 20th century before the Second World War. The 'New Indisch Style' is an architectural style that, considering local environment, material and culture, interpreted the Dutch architecture. On the basis of three key perspectives of colonial architecture towards the humid-tropical climate, the understanding of Dutch colonial architecture in Indonesia has been applied. New Indisch Style was developed by architect using the approach of Neo-Vernacular architecture in order term. They provide the consciousness of the impacts of wind, sun, and rainfall.

Figure 3. The Central Office – View from North  
Source image: <https://www.ugm.ac.id/en/about> , access 16/01/2021



This approach has interpreted the architecture's typology design as a pitch roof shape to anticipate rainfall, a corridor covers the building to isolate direct heat from the sun, open plan concept to link building with the other to serve as a shaded area, building carefully design with high ventilation system consideration such as high ceiling, widely opening windows and a wide roof eave. (Antonius et all , 2015) In the construction of a post-colonial campus, UGM, these core features of New Indisch Architecture have been reflected.

The central office (Kantor Pusat) building was regarded as Indonesia's first modern architecture. Furthermore, this building was designed in 1951-1956 by the Indonesian architect *Hardinegoro*. The construction of this building was under the direct command of President Sukarno. The president ordered architect Hardinegoro to design a campus building for Indonesia's national university that could reflect modern architecture and present the character and identity of the country. (Subroto, 2016) As a result, in the form of modern architecture integrated with the New Indian Style, the typology of this building was planned. This feature has been recognized by façade typology that shares the same characteristic as New Indisch Style such as a pitch roof of *Limasan* typology, has a corridor around the building either for esthetic purpose and produces shadow and isolate heat from the building, good ventilation system management through large-scale windows, open layout, floor-to-floor high ceiling design. Furthermore, through the façade decoration by using façade panel of Javanese artwork pattern, the nation character presented in this building. The façade panel was installed in the Kantor Pusat building's North and South view façade. In addition to taking into account the philosophy of nation-character building, architect Hardinegoro also considered the approach of modernism, functionalism, and reductionism that President Sukarno also ordered. The author believed that the design of the Kantor Pusat building was influenced by the Five Point of Architecture, a manifesto of architecture noted by Le Corbusier (1926). This inspiration defined the best offer for office construction through the basic rectangular building shape. In addition, the link-building for the study environment to generate open space and shade area. Moreover, this building's modernism can be defined by a streamlined façade scheme, a grid-like layout and aesthetic, the simplicity of geometry composition elements such as rectangle, box or square, exposed and plain column, and the minimalist use of decoration, etc.

### 2.2 Modern movement in New Ordered Era - Regionalism approach

The architecture was under the leadership of President Suharto in the New Order period. Between 1968 and 1998, architectural designs were under the control of President Suharto. During that time, the philosophy of the second

president had the same goal with the previous president to building the national character buildings. President Suharto had, however, ordered a different approach to architecture during his era. His philosophy was to establish modern architecture, but to foster the understanding of the identity of architecture. Thus, by adapting traditional typology, conception and theory, he made the order to merge traditional architecture with modern architecture. (Subroto, 2016) Many architects have perceived Suharto's new order in their approach to architecture design. Regional architecture, as a concept, closely reflects trends in vernacular architecture, but integrates contemporary construction materials and technologies. Climate and usable construction materials are the key characteristics affecting architecture. The bulk of their architectural output was portrayed in the form of architectural regionalism. Many precedent architectures were developed following President Suharto's order, including campus building, administration office, mosque and other buildings of public service.

#### A. Regionalism architecture

As a reaction explicitly to internationalism or indirectly to modernism, regionalism is the primary critical movement. Modernism includes reverence for the intrinsic qualities of building materials, structural expressiveness, practical justifications for building-constituted forms. The regionalist approach identifies at one extreme the vernacular building modes, and at the other the rediscovery of Edwin Lutyens and Frank Lloyd Wright. While it covers such a wide spectrum of attitudes, regionalism has at its heart a reverence for local culture, environment and often technology. The following are the divisions to be observed in regionalism if one has to identify the approaches, although the limits of distinction are not too distinct, of course; vernacularism and modern regionalism. (Robert; Iftekhhar, 1985)

The categories of vernacularism have been categorized into two methods. The conservative approach is one approach, while the interpretative attitude is the other. The ideals of both styles of vernacularism are to bring a modern and contemporary life to vernacular forms and spatial structures, differing in the way technology and society are viewed. The interpretive version of vernacularism is here

referred to as neo-vernacularism, which has emerged for modern and contemporary functions as an approach to bringing a new life to vernacular heritage. Neo-vernacularism has created less hierarchical conditions, becoming more in line with the local setting. They also helped to establish a modern architecture vocabulary embedded in the creation of a specific culture's heritage. On the other hand, modern regionalism can be used at all stages of construction activity, in contrast to vernacularism, as it derives from the monumental architecture of the past, as well as from the civil architecture to which vernacularism is confined. Contemporary regionalism may be employed within two reference types: concrete and abstract. When these buildings are lined with sacred ideals of symbolic meaning, they become much more appropriate in their current form because of the values attached to the original. (Robert ; Iftekhhar, 1985) The understanding of modern regionalism is in various types of architecture; one of the styles may be the style of brutalism, however.

#### B. Brutalism Style

In British Post-War Modernism, which began from 1945 to 1985, there are three separate stages. The first or early era began roughly between 1945 and 1960. Most buildings were essentially versions of the international pre-war style or of Scandinavian influence during this time. Then the 'Massive' period came between around 1960 and 1975, where the use of rough-cast concrete predominated in chunky, asymmetrical shapes. The word 'Transitional' came from 1975 to 1985. At that time, architect started to use brick combined with concreted and less monumental forms, stepping towards what would become the 'Neo-vernacular' architecture. Brutalism is a modern type of architecture that emerged and evolved between 1945 and 1975 in Britain and other European countries. Brutalism's construction materials and structure follow functional concepts. This style of architecture of Brutalism, taken from the French 'béton brut' ('raw concrete'), shows the aesthetics of concrete material and has a box shape, strong, rough (without finishing) and unrefined by avoiding the use of ornament. In Indonesia, the Brutalism building style is a modern architecture style that is free from any architectural critic's attention. During the time of the Old Order, cement was the main raw



material for infrastructure growth. Consistent with the vision of the First President of the Republic of Indonesia, Ir. Soekarno must also be portrayed by works of robust and lasting monumental architecture in order to create the character of a modern nation in the Guided Democracy period (1957-1965). In the New Ordered political era, this ideology had still continued to practice. There was a broader opportunity for Indonesian architects to explore and improve their skills. In office and campus buildings, the unfinished concrete structures of Brutalist architecture started to emerge. (Nia, Kemas, 2018)

There were three buildings built in the era of President Suharto in the sense of UGM campus building creation that author believed each building's architect had influenced but indirectly ordered from the New Order of President during that period.

Library L7 was the second building built in 1975 in the UGM campus area that was under the political influence of President Suharto in the New Ordered Period. This library building is one of the buildings that were constructed during the modern era of the Indonesian movement. This building was designed by Romo Mangun, an Indonesian architect. This library building was designed by Architect Romo Mangun, influenced by President Suharto's philosophy, integrated with his personal design theory, *Guna* and *Citra*. *Guna* refers to the function of the building, and *Citra* refers to the building's meaning.

Figure 4. Building Library L7, View from North (left hand photo); 3D View (right hand photo)  
Source image: Author, 2021



Through the facade of the building of library L7, the Brutalist style architecture has been articulated in the context of a modern regionalism. It is distinguished by its monolithic type of architecture, which is built to communicate its construction with a single piece of raw concrete material and its rigid geometry types. This structure is a type of

Structural Expressionist structures that show their structure on the outside as well as on the inside, but with a visual focus on the skeletal structure of the internal concrete as opposed to external concrete walls. This building facade's aesthetic is represented by the pure representation of the structure of the building and pure concrete content. Emphasize the horizontal design of the façade reflected with the strips line vertical wall pattern. Building Material of façade, at the 1st floor, tempered glass for wall, windows and doors and at the 2nd and 3rd floor, the façade is solid design, every side elevation has been covered by concrete wall, except the opening (window).

On the other hand, there are two campus buildings within this campus area that have been built to conform to the policy of regionalism. These two buildings, including the L6 Library or known as *Perpustakaan Sekolah Pascasarjana UGM*, built in 1975, and the other building called the *Grha Sabha Pramana (GSP)* building auditorium, built in 1993-1994. Both buildings have been designed for the interpretative version of vernacularism in the categories. The modern and contemporary functions have emerged from the architect of these two buildings, introducing a new version of vernacular forms and spatial structure as an approach to bringing vernacular architecture to existence with a new life. The design of these architecture had also been environmentally friendly. According to the aesthetic, both buildings were influenced by the *Joglo* roof style of traditional Javanese architecture. The building concept and scale were transformed from a private housing function of *Joglo* House to a public building function. In addition, architects have changed construction materials from traditional materials such as wood to new building materials such as cement and glass.

Figure 5. Building Library L6 View from East (Left hand photo); View from South (Right hand photo)  
Source image: Author, 2021



Figure 6. Auditorium building Grha Sabha Pramara (GSP) view from South  
 Source image: Author,2021



### 2.3 Modern movement in then and now – Green architecture

The Green Architecture concept is the philosophy, science and style of buildings designed and built-in accordance with environmental standards, also known as 'sustainable architecture' or 'green building.' (Ragheb, Elshimy, & Ragheb, 2016) Green architecture or green design is a development technique that minimizes damaging effects on human health and the environment. (Thomas, LEED AP, Niklas, 2009) The phase of green construction starts with an intuitive knowledge of the site in all its beauty and complexity. (Elshimy, Ham, 2015) Green architecture's main aim is to be completely sustainable. Ventilation systems designed for effective heating and cooling, energy-efficient lighting and appliances, water-saving plumbing fixtures, landscapes designed to optimize passive solar energy, minimal harm to the natural environment, renewable energy sources such as solar power or wind power, non-synthetic, non-toxic materials. (Ragheb, El-Shimy, & Ragheb, 2016) Therefore, green architecture is a design strategy that has been applied to attain a target of sustainable design. Construction and life-long activity ensure that the ecosystem is as safe as possible while representing the most effective and least destructive use of land, water, energy and resources. Green design is an application term in buildings for environmentally friendly technologies. Building technology is not only the construction of buildings and environments, but it also requires the use of electricity, the use of water and the reprocessing of water and has a limited effect on human health.

In the following century, after the political era of

the New Ordered Period came to an end, the architectural discourse called as then and now began to show new faces. In this era, the modern architectures have two directions of design approach. One direction was the adaptation of vernacular architecture and minimalist design was the other direction. These two methods were interpreted in the form of Green Architecture in the sense of the construction of UGM campus buildings. The Library L1 (UGM Central Library) and Library L5 were planned and installed in 2011-2012 to adapt the approach to green buildings.

Figure 7. UGM Central Library (L1) View from South (Right hand photo), View from West (Left hand photo)  
 Source image: Author,2021



The UGM central library (L1) has applied the ecological concept well through several strategies. In addition, the design of this building has inspired from the principle of Sim Van der Ryn with parameter of ecological accounting, design with nature and making nature visible. The building has been aimed at achieving green design by many techniques in the Ecological Accounting criteria, such as maximizing green open space, using green roofing, minimizing the allocation of use of air conditioning, using natural materials, and optimizing natural lighting and air circulation. The building has applied construction materials that are suitable to the construction orientation and purpose of each space in the parameter of design with nature. In the north and south view of this building façade, both horizontal and vertical external shading systems have been applied. The natural lighting and air ventilation in the building are provided by these shading systems. This building has applied a lot of glass window opening in order to engage reading area with outdoor view in the parameter of making nature accessible. Furthermore, a sky light roof was located in the main lobby of this building to allow natural light into the library building and to see the natural views of the sky. Such characteristics save energy costs and make the indoor atmosphere lively. (Adi, Alifiano, 2017)

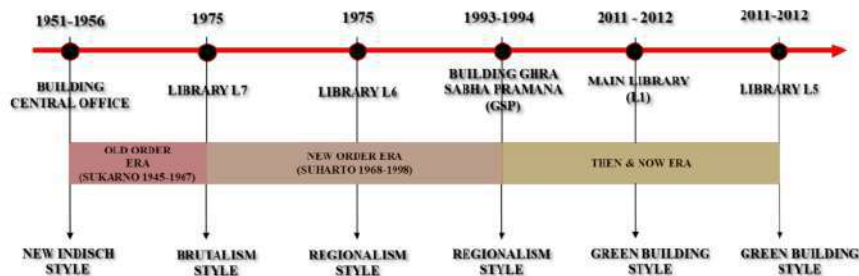
The L5 library, on the other hand, is one of the library buildings in the UGM library complex. This building was designed with the central library UGM in the same year (L1). Because of the typological features of this house, such as the building shape, the application of construction material used vertical ventilation, glass window in accordance with the building orientation North-South, whereas the solid wall with some glass box was used in the East-West to let natural light into the building, and all the materials are used in the same method. Therefore, the author believes that the green design method was also adapted by the L5 library. Both buildings were built in the campus area, taking into account their environmental effects and promoting renewable sources of energy.

Figure 8. Library L5 View from East (Left hand photo), View from North (Right hand photo)  
Source image: Author,2021



In Figure 9 below, the overview of the timeline of the construction of UGM campus buildings and the architectural style is briefly illustrated.

Figure 9. Summary of campus building development timeline  
Source image: Author,2021



## Conclusion

Universitas Gadjah Mada (UGM) was founded in the post-colonial period as a national university. The central zone was the initial zone of this campus construction. The study found within this field that there was a process of the evolution of the modern architecture design movement. In addition, this research also showed that the design of modern architectures resulted from the personal philosophy of the architect and that each development process is also influenced by a political ideology. Due to the precedent architectures of this campus area, the study found that in context of UGM campus building development, the ideology of each political era has been interpreted into different design approach and architecture characteristic. In the political era of Old Ordered, architect has translated political ideology into architecture in form of New Indisch Style. And in the New Ordered era architect has translate the political ideology into architecture in form of regionalism style. One regionalism style was a modern regionalism which translated into a brutalism style. And other regionalism style was a vernacularism which translated into a regionalism architecture inspired from a traditional Javanese architecture. In the following political era that this study called as then and now period, the architecture production in that period didn't result from the political factor but architect would rather follow the architecture trend when the green design was the influence architecture style and solution to architecture growth of 21st century.

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