iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 10 **Issue:** VII **Month of publication:** July 2022

DOI: https://doi.org/10.22214/ijraset.2022.45877

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 10 Issue VII July 2022- Available at www.ijraset.com

Critical Regionalism in Architecture with Respect to the Jaipur City

Divya Pandey[1], Tamnna Tyagi[2]
[1, 2]*Faculty of Architecture & Planning, Dr. A.P.J. Abdul Kalam Technical University, Tagore Marg Campus, Lucknow, Uttar Pradesh 226007, India*

Abstract: ***Critical regionalism has emerged as an attack on the universal and homogeneous image of utopian modernity in architecture. Critical regionalist theory is used to address the literal imitation of folk style and the importance of a universal architectural environment. Critical regionalism is an architectural concept that aims to remedy sterile and abstract modernism by focusing on local needs, native wants, and potential using contextual influences. Critical regionalism provides resistance to the homogenizing pressures of global modernism as economic processes disrupt and supplant local construction traditions in India's metropolitan centers. This study examines important architectural importance in Jaipur from history to the present day that incorporates critical regionalism ideas into their designs. The many strategies used by regionalist architects to deal with local climate, topography, materials, and socialism complexes are discussed. By focusing on urban regionalist works, the paper aims to emphasis that important regionalism is more than a collection of aesthetic preferences; it is a conceptual framework capable of producing varied types of architecture despite identical external forces coming from similar site conditions. (bahga, 1 May 2019). This post attempts to understand the main theory of critical regionalism as an approach to post-independence Indian architectural practices. The city of Jaipur, Rajasthan takes advantage of these qualities for research. The current discussion of critical regionalism is a case study of two institutional buildings in Jaipur, 20 years apart, with a critical regionalism of from a theoretical approach to a practical approach in two very different approaches. Analysing the translation. Supported by research. These studies will help determine how to translate and approach critical regionalism in more recent Indian architecture.***
Keywords: Critical Regionalism, vernacular architecture, fenestration, parameter of regionalism



I. INTRODUCTION

Jaipur region as part of diverse india. the jaipur city area was chosen to understand applied theory through case studies. built in the 18th century, this city is one of india's classic and planned cities that has withstood the times in the midst of many foreign influences. it carries the historical heritage of rajput architecture with traces of mughal architecture. the architecture of the area shows a strong traditional identity, depending on the climate, geography, terrain, materials, construction techniques and more. this is a challenging and interesting context that critical regionalist theory corresponds to. the cases described here are based on the response to a particular criterion and are better than the other criteria.

II. PLANNING AND EVOLUTION OF JAIPUR

The city of jaipur is considered a historic indian classic city, as its traditional city planning has not been compromised to this day. this is considered to be one of the most sophisticated examples of the city of rajasthan imposing a planned grid layout on the landscape. jaipur followed the principles of vasstu purushamandala with nine seats and a city palace in the center or center of the grid. despite its solid grid, the city has grown organically over time. the city palace itself has a variety of guest rooms. today, the city of jaipur is part of the famous golden triangle, delhi-jaipur agra, in northeastern india, traditional with handicrafts, crafts, museums, history, cuisine, and most important cultures. you can see indian architecture by sightseeing.

©IJRASET: All Rights are Reserved

ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 10 Issue VII July 2022- Available at www.ijraset.com

III. CRITICAL REGIONALISM IN ARCHITECTURE

Critical regionalism is an approach to architecture that strives to counter the placelessness and lack of identity of the international style, but also rejects the whimsical individualism and ornamentation of postmodern architecture. the styling of critical regionalism seeks to provide architecture rooted in the modern tradition, but tied to geographical and cultural context. critical regionalism is not simply regionalism in the sense of vernacular architecture. it is a progressive approach to design that seeks to mediate between the global and the local languages of architecture.

source: kenneth frampton

• The term critical regionalism was first used by alexander tzonis and liane lefaivre and later more famously by kenneth frampton. (raheja, 2019)

• In the 1980's a few architects and theorists were disappointed with the direction that architecture was taking under the influence of postmodernism.

• Critical regionalism is not commonly understood regionalism referring to the local architectural tradition, not derived from the archetypal sentiments or from direct opposition to modernism. It is also important first of all to identify architectural projects in order to understand the development of critical regionalism in india.

(its philosophy roots go back to the of phenomenology of edmund husserl developed by french theorist paul ricour and its theoretical basis was formulated in the works of norwegian architect christian norberg-schulz: "intentions in architecture" (1963) and "genius loci - towards a phenomenology of architecture" (1980), as well as in the essay "towards a critical-regional" (1983) by kenneth frampton, and the book "archetypes in architecture" (1987) by thomas thiis-evensen.)

• Kenneth frampton created six points (that later became ten) that leads to "an architecture of resistance" which were a reaction for the architecture created by globalization and modern civilizations.

• These six points were inspired from a passage from paul ricoeurs "history and truth" that frampton quoted as a starting point in his article [4].

• The term critical regionalism is not intended to denote the vernacular, as this was once spontaneously produced by the combined interaction of climate, culture, myth and craft.

• "The author claims that "critical regionalism's task is to reinvent architecture through the concept of region."lefaivre (2003) defines formalized formal critical regionalism is a concept. Critical regionalism is an architectural concept that seeks to reconcile disparities. Local requirements and capacities with the progressive lesson of modernization.

FIRST SIX POINTS BY KENNETH	LATER BECOME TEN POINTS BY KENNETH
• Culture and Civilization • The Rise and Fall of the Avant-Garde • Critical Regionalism and World Culture • The Resistance of the Place Form • Culture Versus Nature • The Visual Versus the Tactile	• Critical Regionalism and Vernacular Form • The Modern Movement • The Myth and the Reality of the Region • Information and Experience • Space/Place • Typology/Topography • Architectonic/Scenographic • Artificial/Natural • Visual/Tactile • Post-Modernism & Regionalism

A. Context

Specific architecture on 6 july 2019, unesco world heritage committee inscribed jaipur the "pink city of india" among its world heritage sites. Under the architectural guidance of vidyadhar bhattacharya, jaipur was planned based on the principles of vastu shastra and shilpa shastra. The construction of the city began in 1726 and took four years to complete the major roads, offices, and palaces. The city is also home to the unesco world heritage sites amer fort and jantar mantar. Hawa mahal is a palace in jaipur, india approximately 300 kilometers from the capital city of delhi. The palace sits on the edge of the city palace, jaipur, and extends to the zenana, or women's chambers. The structure was built in 1799 by maharaja sawai pratap singh, the grandson of maharaja sawai jai singh, who was the founder of jaipur.

B. Historical Knowledge

Jaipur got the name 'pink city' in 1853, when the reigning king sawai ram singh painted all royal and official buildings in sandstone color to commemorate the visit of prince of wales to the city. Jaipur gets its name from its founder maharaja jaisingh ii (1693-1744) the great warrior and astronomer. He came to power at the age of ii on the death of his father maharaja bishan singh. The maharaja was told that his son would achieve greatness and he set out to ensure that jai singh had a good education.

©IJRASET: All Rights are Reserved | SJ Impact Factor 7.538 | ISRA Journal Impact Factor 7.894 |

C. Climate

Responsiveness jaipur has a monsoon-influenced hot semi-arid climate (köppen climate classification bsh) with long; extremely hot summers and short, mild to warm winters. The environment of jaipur is hot and semi-arid. The term arid means dry, like a desert. Jaipur receives slightly more rainfall than a desert, so it is referred to as "semi-arid". The environment in jaipur is different to most climates on the u.s. East coast as it has a dry season and a monsoon, or wet season.

D. Materiality

Jaipur has numerous small units that are engaged in the supply and manufacture of building and construction materials like (pink sand stone) sandstone tiles, slabs, slate stone tiles, slate stone slabs, limestone slabs, limestone tiles, granite stone slabs, granite stone tiles, tumbled stone slabs, fossil mint sandstone tiles, raj green sandstone tile, grey sandstone, mandana red sandstone, rainbow marble & golden marbles.

E. Ecological & Landscape

Many botanical gardens , char bagh and parks in jaipur, a large majority to the trees in the area are restricted to the hills. Sterculia urens, commiphora wightii, anogeissus pendula, boswellia serrata, lannea coromandelica, rhus mysorensis, adina cordifolia, diospyros melanoxylon, wrightia tinctoria, cassia fistula, aegle marmelos.

F. Social & Cultural Appropriateness

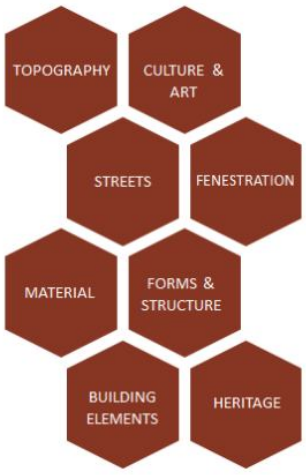
When it comes to the culture it holds the old rajasthani touch in everything. Clothing, languages, festivals and even in the architecture of the buildings is similar to the old ones. Jaipur has many monuments which are visit worthy. The handicrafts like blue pottery, handmade juttis(shoes), jewels and lifestyle. The city of jaipur is best famed for its affectionate people and its well-preserved cultural heritage. Even in the 21st century, you get to see the same traditional flavour in the culture of jaipur. People living here are simple, truly affectionate, warm and courteous. Although jaipur is heading towards modernity of the metropolitan, it still holds its cultural roots firmly.

G. Technology

jaipur's capabilities as a tourism and craft manufacturing centre are unique, but it needs to invest in infrastructure, experiences, livelihood possibilities, and green projects to improve the citizen and tourist experience.

IV. IDENTIFICATION OF PARAMETERS IN CRITICAL REGIONALISM:

Two cases, jawahar kala kendra and pearl academy of design, are examined using these common parameters. Each parameter is evaluated with its sub-parameters as needed. You can use these parameters to analyse any form created. This study focuses on discussing regional approaches to these parameters as a common denominator of analysis. After the case study, the later part will use the same parameters for comparative analysis based on the case study.



The case studies use these parameters of space making to evaluate critical regionalism

TOPOGRAPHY & LOCATION	CULTURE & ART	STREET & MOVEMENT	FORMS & STRUCTURE	BUILDING ELEMENTS	MATERIAL & TECHNIQUE
Siting and location	Painting	Circulation pattern	Layout form	Fenestration	Roof
Relationship to site	mural	build up	Degree of Enclosure	Floor & Walls	Floor
	Inlay	Organization of Structure	Massing Void	Steps Jaali/ Jharokha	Walls
		Movement Distribution		Furniture Niches	Frame structure
		Spatial Construct		courtyards	

Pearl Academy Of Fasion

ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 10 Issue VII July 2022- Available at www.ijraset.com

A. Context

Specific architecture the pearl academy of fashion, in 2006 commissioned the work of designing the academy in the industrial area outside jaipur; rajasthan to the delhi based architecture and urban planning firm, morphogenesis. With 20,000 sq. M of floor area above the ground, the construction of the building was completed in 2008. The academy is located in the hot arid dry climate of rajasthan and houses about 700 users including the students and faculties. The building is 3 stories in height, 21m with the lower ground floor sunken under the ground. The program includes few classrooms, 24 studios, offices, library and auditorium as primary functions. The spatial elements are reinterpreted that the institute creates interactive spaces for a creative group of student occupants to work in various multi-functional zones that harmoniously blend the interior spaces with the exterior Asseamlessly.



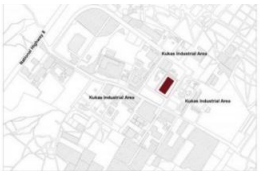



B. Historical Knowledge

"Architectural gems can be found in the most unlikely places. On a normal day on the New Delhi National Highway, you will pass the Kukës industrial area, about 20 km from the famous walled city of Jaipur. Even the impressive Kukas, which incorporates Rajasthan's classicism into kitsch, has little confidence that there are valuable buildings nearby. However, if your curiosity drives you inward or if you are warned by an informant, you will be rewarded accordingly. The rapid development of Jaipur's urban environment leaves the city with common modernist and Universalist projects today. Sudden development and increased wealth seem to have destroyed rich historical architecture and cultural values. The city has witnessed various social and cultural traditions such as Rajput and the Mughal Empire. Globalization puts traditional practices at risk. The design of the Pearl Academy was outsourced to morphogenesis, requiring an advanced campus to meet the modern needs of a new generation of users, while preserving the traditional spirit of the place. The design of the academy digs into the roots of traditional Indian architecture and the architecture of the city of Jaipur, incorporating a regional interpretation: Rajasthan's classicism and the Mughal ruins. The structure is on the conflux of cutting-edge interpretations of the conventional nearby factors of Rajasthan. The architectural factors like self-shading courtyards, water bodies, jaalis and different structures are revisited and reinterpreted consistent with the cutting-edge desires of the program. The notion from nearby may be taken into consideration liberal and avoids mimic or literal translation.







C. Ecological & Landscape Topography, Siting And Location

The academy is located in the unloved industrial area of kukës, explaining the reasons for its introverted personality. Next to the academy is an eight-story hotel that recreates traditional architecture, and the location reacts passively depending on the situation. The location and orientation of the pearl academy is very mediocre. The constructed form is set within a rectangular plot of land by a low composite wall that separates the space. This limitation defines the scope of the academy in a rather strict way. This building takes an optimized rectangular form derived from Jaipur's traditional building morphology, which is typically high density, opaque exteriors with more fluid interiors (Morphogenesis: The Indian Perspective. The Global Context 2017), While there seen cues of the overall rectangular form of the building from the traditional architecture, The response to the surrounding seems to be very introverted for a campus building catering to the social needs of a large student body.

D. Forms & Structure

Layout form the rectangular volume was created to minimize external exposure due to industrial land conditions and the impact of building shape optimization. A large mass was lifted to form the lower abdomen in the basement, creating a natural heat sink that was cooled by the body of water using evaporative cooling.

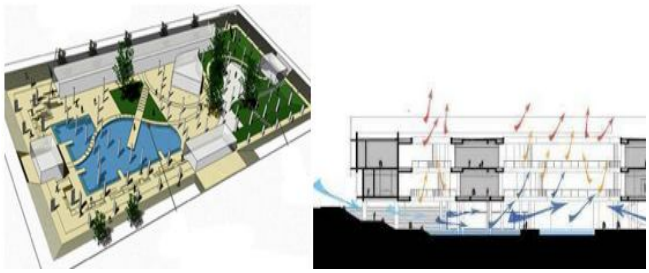
©IJRASET: All Rights are Reserved | SJ Impact Factor 7.538 | ISRA Journal Impact Factor 7.894 |

This gap keeps the area shaded, thermally comfortable and creates ventilation through some courtyards. Massing haveli's typology embodies the idea of a building as a device for environmental control, and the volume scale is tuned for maximum sunlight penetration. Minimal heat input and accommodation of some functions therefore, the design response was an introverted building, mainly considering the industrial environment.

A long low-lying two-floored perimeter block pushes the building envelope to the mandatory setbacks, optimizing the exposed surface area to volume ratio of the form and almost see float above the land (bansal & rastog), 2012). The mass of the constructed form can be interpreted as two different blocks with separate long cube volumes. By digging 4 meters of land, the substructure that lifts the entire building was avoided. This creates a long took fast at the top while it is rooted in the land. "the mass is broken into several courts creating alternative solids and voids which respond to solar geometry. The solids become studios and classrooms, whilst the voids are visual breaks that allow daylight and air through. "(morphogenesis, 2013) "besides having become a very successful model for cost effective passive architecture in desert regions the design and facilities of the campus complement the ideology of the pearl academy of fashion - a cutting edge design institute with a sustainable approach." (morphogenesis, 2013)

E. Void

On the first basement floor of the building, there are several shaded courtyards, bodies of water and green spaces. Raise the entire building 4 meters to form a basement, where the hollowed-out lower abdomen becomes a natural sink and is cooled by the body of water. The volume element of the lower abdomen derives from the traditional Rajasthan concept of Baoli."The water body works on the basic principle of evaporative cooling and was designed on the format of the "baoli" (step well)" (Bansal & Rastogi, 2012). This traditional method employs earth sheltering, thermal banking and evaporative cooling to modulate surrounding temperatures. VOID On the first basement floor of the building, there are several shaded courtyards, bodies of water and green spaces. Raise the entire building 4 meters to form a basement, where the hollowed-out lower abdomen becomes a natural sink and is cooled by the body of water. The volume element of the lower abdomen derives from the traditional Rajasthan concept of Baoli."The water body works on the basic principle of evaporative cooling and was designed on the format of the "baoli" (step well)" (Bansal & Rastogi, 2012). This traditional method employs earth sheltering, thermal banking and evaporative cooling to modulate surrounding temperatures.



F. Street & Movement

Circulation The corridor is the traffic area of all laboratory buildings like the Academy. In many places it can be observed that the walkways are not in direct line of sight with the courtyard. As a result, the corridor is less exposed to direct sunlight, making it a dark and underexposed walkway. Havel architecture, which is usually native to the area, faces the courtyard. In addition, it is covered with jali in many places to provide privacy while filtering light. The corridors and traffic areas are bright and visually connected to the rest of the building. Many parts of the corridor rely on the courtyard for air and light, but some parts of the Pearl Academy seem to lack this connection.

G. Spatial Construct

The overall geometry and planning of the Academy can be seen resembling with the traditional haveli planning. This planning can also be seen at a much larger scale in the Amer Fort, with three courtyards planned within the larger. rectangular fort and minor activities along the edges. "Learning was derived from the built heritage of Rajasthan, replete with havelis, inward-looking blocks with rooms along corridors and in enfilade, surrounding a single or multiple courtyards(Bansal & Rastogi, 2012) The spatial composition is distributed so that the main activities, the classrooms and studios, are placed at the edges of the building parallel to the width and width of the building. The corridor access area spans the studio and all four edges, with three floors via the connectivity staircase.

Overall symmetry and lightness for the construction of institutional typology. Secondary activities and services take place next to the stairwell. The central fixed area is the auditorium and library on the first floor, and the studio and gymnasium on the second floor. These activities are connected to the corridor across the width, optimizing the overall movement within the building. In the basement, there is a cafeteria and other leisure activities under and around the auditorium.

H. Movement Distribution

On the ground and first floor, the internal courtyards are surrounded by classrooms, labs, and administration office, which are even further broken down to fluid curvilinear forms to house the flexible requirements of the studio. The volume on the first basement floor provides a functional space that works in a passive environment. This allowed us to exclude another built volume in the form of a nor without affecting the space of the program or required functionality. Using the stairs at the basement edge as seats creates a natural and makeshift performance area. “The Institute creates interactive spaces for a highly creative student body to work in multi-functional zones that blend the indoors with the outdoors seamlessly. The underbelly is thermally banked on all sides serving a large student recreation and exhibition zone. It also houses the cafeteria and spill out area thus forming the anchor for the entire project. The ramp is multi-functional as a runway during fashion shows." (Bansal & Rastogi, 2012)

I. Build Up

The exterior of the building appears to step inward across the façade section. You will see a similar section of the façade box of traditional Haveli architecture in Rajasthan. The shape of the lower stepping inward and the upper stepping outward responds to the climatic conditions of the region. As mentioned earlier, Haveli goes out to reduce the warmth of the façade. The low levels of sunlight due to the protruding stairs keep the low levels cool. Building Elements

J. Furniture

There are few spatial scale elements that resemble local handicrafts. Like an element that shows a student's work in a half-open corridor space that looks like it's folded like a partition. Fixed to both ends of the floor and ceiling, its shape is reminiscent of crafts. Kabad is a miniature abstraction of a shrine that contains miniature paintings that tell a story. "The Kabad looks like a box with a series of doors decorated with colourful illustrations. When all the doors open, a new chapter in history begins. The story comes from epics such as Ramayana and Mahabharata, as well as local folk tales about demigod heroes (Gatha, 2010). From this, it can be understood that the expression of the region appears to a lesser extent in the academy.



K. Jaali

Jaali (grid or grid screen) is the traditional method of windows for building façade. This architectural element wraps both floors along the perimeter of the educational block and is covered as a double skin that acts as a heat-cushioning material between the building and its surroundings. This is one of the unique elements of Rajasthan architecture interpreted by the Pearl Academy. The screen has various attributes, such as: B. Reduce the increase in solar heat without affecting air flow or sunlight transmission.

L. Light

Jaali uses the traditional concept of getting sunlight into a building. It is a kind of incident sunlight, which is usually severe in the area. As a solution to alleviate this very narrow condition, the double skin acts as a thermal bumper between the constructed form and the context. These skins ultimately reduce the direct heat built-up from Jali's small openings that are diffusing natural light. The porosity of the saal panels varies with orientation of facade. The greater the solar exposure the more opaque it clothes. The variances was made with collect (Bansal & Rastogi 2012). The Jaali at Pearl Academy follows a similar principle to bring in the air. "The wall section is inspired by the Hawa Mahal, an 18th century building with a tapered block with finely screened windows that provide shade and admit cool air." (Bansal & Rastogi, 2012) But the shape of the perforations is such that it cannot produce a Venturi effect. The cross section of Jaali is constant and different from the cross section of Hawa Mahal. This does not generate as much wind as a typical local prison. The inner openings are also glazed, limiting the direct flow of air through the building.

M. Privacy

The double skin facade of the Institute takes liberal inspiration from the autochthonous architecture of the region .The element Jaali is a rooted into the architectural vocabulary and reflected the social life of the Rajasthan. "One of the finest of Jaipur`s 18thcentury buildings is the Hawa Mahal, a tapered block with ninety screened windows that provide shade and admit cool air.

However, the primary purpose of these grilles was to allow women of the court to observe safe in the street without exposing themselves to view (Pear Academy of Fashion Jaipur Architecture & Design Case Study, 2019) this privacy feature does not seem to be essential for an institution-wide academy. No privacy is required in the educational area or classroom. Therefore, quality is addressed by the use of transparent glass windows that provide a better visual connection to the outside world. Therefore, depending on the contemporary needs of the building, a critical review of the quality of the area can be recognized.

N. Expression

Jaali is a representation of a rectangular grid with modules of different densities. Circles are carved into rectangles to form modules. This expression can be seen as an abstraction of the traditional Jali motif. The motif used in the traditional Shekhawati Haveli in Rajasthan, which was influenced by the Mughal Empire and other cultures. To create these Jali, a very complex latex of Islamic or Hindu geometry is carved into the stone. The density of the perforated hull was derived from an analysis of shadows based on the orientation of the façade. (Morphogenesis: The Indian Perspective. The Global Context., 2017) with a circular pattern, Jali achieves a modern shape, but loses the organic properties rooted in traditional filigree Jali. However, certain variations of this element will appear in the printout. The changes in the shape of the horizontal panel are noticeable in order to create a unanimous image for displaying the window on the constructed form.

O. Niches

You can see that the walls of the corridor use niches as presentations and seating elements. The conclusions of these niches can be seen in further architecture, as in the previous year, when the corridors acted as seats or storage areas along Havel's thick stone walls. These walls are usually thatched and have thick hair inside the store. here. Similar thickness was achieved by manipulating the plane.

P. Fenestration

The façade of the library is optimized for the use of natural light, so it uses the most sunlight with the least amount of heat. The entire library is glazed and has French windows in the north facing area. Auroras do not generate much heat and are considered to be ideal for reading. Light-shielding slats are installed in the exposed areas in the south to suppress heat penetration. The fenestrations are highly appropriate for the region like Jaipur where the summer temperatures rise very high-90% of the gross space area relles on natural daylight" (Pansal & Rastog 2012) Due to the courtyards, the singiv shaded corndors are naturality it and ventilated we providing indirections to The classrooms next to the comidors. Material & technique The material palette used for the construction of the Institute includes the natural and locally sourced materials. The materials used for construction are a mix of local stone, steel, glass, and concrete keeping in mind the climatic needs of the region while retaining the progressive design intent. (Bansal & Rastogi, 2012).

There are no materials from a location more than 300 km away from the construction site. The concrete on the walls, piloti, slabs and aluminium on the window sill come from the city border of Jaipur. Traditional Jaali was mostly carved in sandstone, but in the form of a newly interpreted Jaali made of concrete and metal. Instead of traditional engraving, an additive manufacturing process that uses a subtractive process is used.

Q. Floor

Kota Stone, Granite and State are quarried from within the state. These local stones and mosaic tiles in the checker pattern of pavement inside the courtyard enhance the contrast of the extensively glazed concrete-frame building.

R. Frame Structure

The entire building is divided into grids, individual corridors and classrooms, which are naturally illuminated and ventilated from the central courtyard. This grid configuration will provide sunlight, ventilation, and a flexible separation system for the next few years. In the courtyard floor plan, the width of the floor slab is less than 9 meters at all points. In addition, the grid is subdivided so that residents are less than 4.5 meters away from windows or openings everywhere.

©IJRASET: All Rights are Reserved | SJ Impact Factor 7.538 | ISRA Journal Impact Factor 7.894 |

The structure of the beam columns is made of concrete, one of the modern materials of the time. The post-and-beam geometry of the frame structure is followed by the results of the scale requirements of structural material and tissue typology.

S. Roof

Traditionally inspired, cost-effective roof insulation methods have been adopted by the laboratory to reduce heat absorption. This technique is traditionally used to dissipate heat in extreme climatic conditions. Matkas or pottery pots are traditionally handmade mud containers used to store water. These Matkas were sourced from a local market in the city of Jaipur. Hundreds of 35cm wide matkas were placed 2.5 cm apart, the gap was filled with sand and broken bricks, and then cast over with binding layer of concrete. The sandwich of trapped air is applied to horizontal surfaces that are exposed To the sun, becoming a barlier that limits solar heat transmission. The fill and the at within the mutkas provide insulation Matka's (earthen pots) were inverted and placed along the terrace creating an air cavity that thermally insulates the root." (Bansal & Rastog), 2012). To avoid maximum direct sunlight and heat, the pots were placed at the far end of the lower slabs in the corridor. The rest of the Starves under the classroom were not treated as isolated. This technique has the advantage of reducing the effects of healing, but it is not used in traditional techniques on the roof.

T. Culture & Art Colour

"The exterior is painted orange to set off the jaalis, but the interior surfaces are white, to reduce heat absorption and create a cool backdrop for the bustle of activity and the brilliant colours of women's sans." (Pearl Academy of Fashion Jaipur-Architecture & Design Case Study, 2019) Jaali reflects sunlight and is colored white to contrast with the orange walls in the background. Warm colour palettes can be found in many parts of the building. Most of the lab walls are painted white to reflect the heat absorbed by the surface. Only one side of the basement wall is drawn with a circle motif, and it is colored in warm colours with a triangular pattern. This paint application is a modern type of sophistication. The area has a variety of traditional surface coating methods developed by local artisans and resources.

V. DATA ANALYSIS

Seriously studying the concepts and concept of critical regionalism, as counselled with the aid of using diverse historians like curtis, frampton, mumford, ricoeur, tzonis and lefaivre sure questions stay unanswered. Critical regionalism is usually mentioned as a way or procedure instead of a product. This procedure varies broadly in keeping with specific conditions and consequently it turns into tough to outline the concept past a factor and finally lacks in stylistic unity. Another ambiguity is the shortage of definition of area or vicinity. "theoreticians speculate whether or not vicinity is described through its geography (topography, landscape, materials, mild and climate) or possibly through the lifestyle of the neighbourhood residents (their dwellings, city scale, ideals and expert skills)." (shadar, 2010) also, whilst discussing works of the archetypal fashions of the theory, curtis and frampton have regularly overlooked or distorted the architecture's number one content material or person to suit it into the important regionalist paradigm. Regardless of the theory's incompetence with these questions, it still seeks answers to the question of how to become modern and continue the tradition, while trying to revive an old dormant civilization as a part of universal civilization (ricoeur, 1965).

At pearl academy the response to essential regionalism can be defined with inside the climatic worries and cultural context through manner of method of the proper use of traditional building elements like courtyards, kund and jali for the current sensible desires of the users. The assignment takes a way of thinking to climatic response to the vicinity through manner of method of using the syntax micro climate responsive elements, material and techniques from the nearby shape. As the idea stated earlier, it does now not get nostalgic to the traditional expressions but it as a substitute sympathetic with inside the path of the phenomenon’s, using current material and expressions. However, the academy responds very mildly to the interiority of the building. The use of rich strategies of ground application and crafts can be seen as a not noted opportunity to go back returned entire circle with the nearby response. Nonetheless, it portrays a fine balance some of the current and nearby shape at the centre of critical regionalism. The academy deploys the courtyard for the usage of better natural lighting, air glide and thermal consolation. Along with this, it moreover creates multipurpose location for social gatherings, as a cultural derivative from the traditional structure. While the traditional jaali must serve the features of mild, air glide and privacy at the same time. The contemporary-day materials like glass fail to do so. Jaali can efficiently replace glass for a apparent view and however appear useful than glass with the useful resource of the usage of controlling glare and heat and moreover allowing movement of air.

This shows the incompetence of the contemporary-day material over the traditional element and jaali can accumulate the equal with better aesthetics similarly to better climate response standard overall performance with added privacy and security. Also, with in the present day times, looking at the upsurge in name for the incidental technique of vastu shashtra in designing houses and their interiors, the inclination in the direction of resurfacing the traditional seems especially evident. This genuinely indicates the potential of the anciental indian techniques to soak up affects from the world, on the equal time as keeping their very very own identity having analysed all the unique skills of the the ones traditional however bendy elements it could be seen that the elements and techniques can be effects infused with our modern built forms. It can be interpreted from the two case studies that with the change in technology, the form and expression had changed, however the ethos, gather of region making and elemental establishments had remained intact in every times with a severa degree of reaction.

This indicates how regardless of the reality that with change in time and technology, fabric usage may additionally change but the ethos or spatial gather of close by shape may additionally stay relevant for plenty extra centuries. The close by spatial elements and techniques can be reconfigured in infinite variations and employed with current expressions to gather subtle modifications with in the highfirst-rate of moderate and air that can seemingly change the complete surroundings of the area. The accidental humans invented building strategies which along their comfort moreover harmonize with nature. But in this century building strategies invented are in keeping with comfort of the human beings but now not to nature as it is rightly said with the resource of the usage of mahatma gandhi the earth gives enough to satisfy every man's needs, but now not every man's greed".

VI. CONCLUSIONS

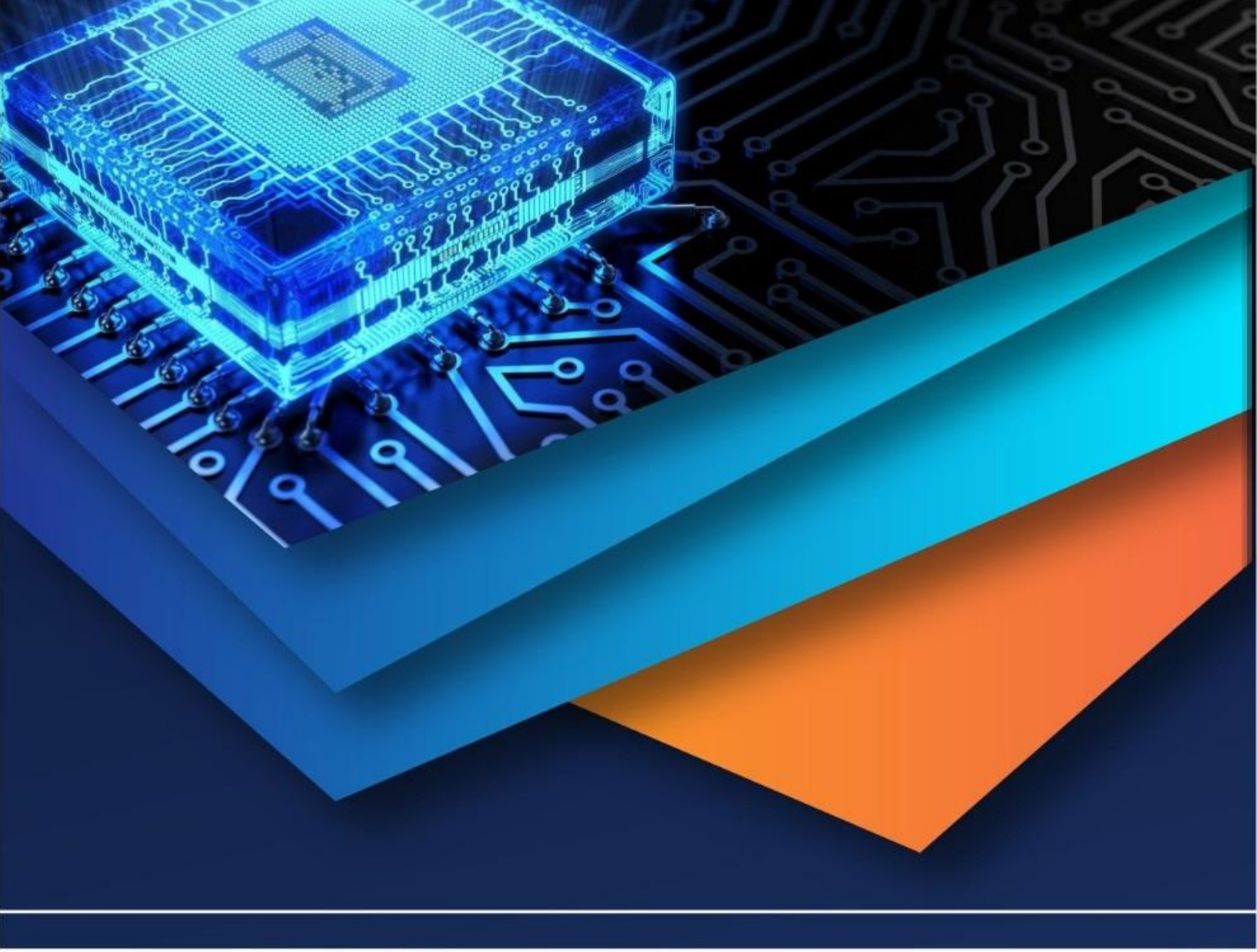
The new strategies that i am advocating, will examine new structure among the modernist beliefs and the imperfect neighbourhood contexts. It shows that nobody attitude will suffice for interpretation with inside the current constructed environments. So designers will must don't forget numerous views which will formulate suitable techniques for area making. For this new critical regionalism 2.zero desires to be visible as a bit extra than the other and it is presence is handiest stated with inside the competition to the architectural mainstream.

VII. ACKNOWLEDGMENT

I wish to express the deepest gratitude to my guide, prof. Divya panday, who consistently encouraged and supported me. Without her guidance, the goals of this research would have not been realized. I am most grateful to my principal vandana sehgal mam for motivating me and give me the direction to achieve my goal with this study in their valuable time and constructive criticism towards improving my work and providing a broader perspective towards the report. I would like to recognize the invaluable patience and assistance provided to me by jury members and my batch mates for moral support in the journey. Finally, i want to acknowledge the love, care, support and sacrifices of my family, my parents, and brother for believing in me and standing by me at every step. They kept me going even through the most difficult times and this report would not have been possible without them.

REFERENCES

[1] Vibha upadhyay.(may 2015) esearchgate.net/publication/307936041_traditional_walled_cities_of_rajasthan_india_a_sustainable_planning_concept
[2] Kurush feroze dalal.early historical settlements of southern rajasthan (mewar) with special reference to the site of balathal: an artefactual approach
[3] Kenneth frampton (1993).prospects for a critical regionalism
[4] Maha bani (nov2015).critical regionalism and architectural identity in khartoum – sudan
[5] Armelia dafrina, nova purnama lisa, deassy siska and nurhaiza(2017).regionalism of aceh's traditional architecture at bujang salim mosque at krueng geeukeuh
[6] Zain zulfiqar(dec 2008).tracing the origin of jharokha window used in indian subcontinen
[7] Https://architexturez.net/doc/az-cf-123687
[8] Https://portfolio.cept.ac.in/archive/historic-city-centers-jodhpur
[9] Http://jodhpurmc.org/presentation/topmenu/jodhpur_city.aspx
[10] Https://www.google.com/search?Q=pearl+academy+jali+role&tbm=isch&hl=en&sa=x&ved=2ahukewjfu_3n5_1ahvgxaachuttbheqbxoecaeqnw&biw=1079&bih=500#imgrc=bndnlba7bwu5wm
[11] Wireless lan medium access control (mac) and physical layer (phy) specification, ieee std. 802.11, 1997.



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)