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THE EVOLVING SCHOOL OF THOUGHT

TO UNDERSTAND INSTITUTIONAL BUILDINGS AND THEIR EVOLVING ARCHITECTURE BETTER, *COMMERCIAL DESIGN* LOOKS AT HOW A HOST OF FACTORS INFLUENCE DESIGN IN THIS DOMAIN

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The evolving school of thought

To understand institutional buildings and their evolving architecture better, *Commercial Design* looks at how site conditions, complex programmes, budget limitations, climatic conditions and a host of other factors influence design in this domain

BY CAROL FERRAO

Over the last few years, there has been a rise in architectural competitions that invite practices to design premier institutional projects in the country. From IITs and IIMs to other large scale educational and public projects, this growing demand for international campuses reveals a promising future for the architecture fraternity. It's an opportunity unlike any other, where one can explore new design languages in master planning, spatial design and built forms while navigating the evolving needs of these modern campuses.

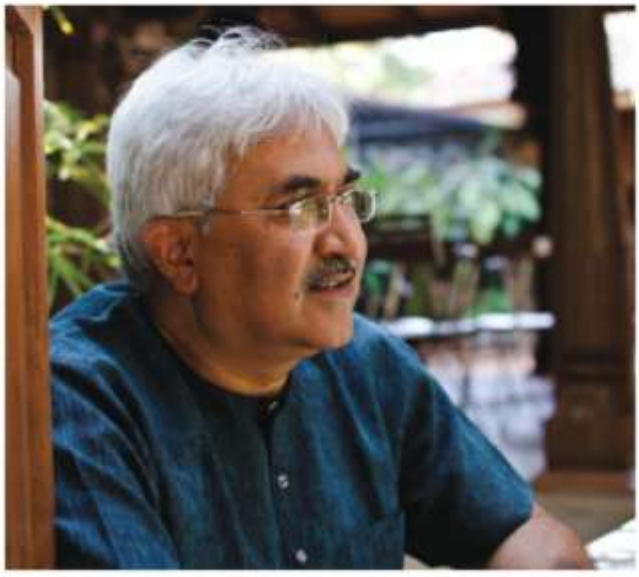
Often these projects are assigned a nondescript land far away from metros. In fact, many institutes and campuses emerge in the outskirts of tier 1 and 2 cities. While these sites may not have the global character of a metropolis, the expansive availability of land is a significant plus in developing an enriching environment that caters to both primary needs like education and accommodations as well as social and community needs. Being separated from the buzz of city life also ensures that the design enjoys the best of both worlds — a global campus with a local, contextual flair. Hence, institutional projects usually employ locally sourced materials, crafts and labour in its build.

One of the most promising trends in this sphere is contextual and sensible architecture. A quick glance at some of the recently unveiled institutional projects showcases the rise in brick and exposed cement facades. For instance, for the Skill Centre building for Symbiosis in Lavale, Pune, the clients asked IMK Architects for "a natural, original, and permanent finish on the building". So, partner and principal architect Rahul Kadri decided to create a textured building using bricks for the facade. Instead of ordinary brick walls, the team created a brick artform tilted on the inside as well as on the outside — a design that went through trial and errors before it could be perfectly executed.

"What could normally have been done easily using concrete was made possible in brick and looks highly impressive. Naturally compressed earthen bricks were used throughout the building and methods like brick-boxing were incorporated. The skin was designed with care and displayed exposed concrete and brickworks that flattered the green hills beyond," elaborates Kadri. Brick as a facade material is ideal for such projects given the natural terrain on which these campuses stand, creating a pattern of continuity as he land evolves to serve a new purpose. But evident from this project, architecture firms are approaching the humble brick form with an experimental bent.

Abin Chaudhari, principal architect, Abin Design Studio.

Besides materiality, the explorative nature of institutional architecture coupled with the climatic conditions of the site have made the need for secondary facades a non-negotiable element in design. Building screens and jaalis have been in use for decades but the way they are conceived and executed has changed drastically over the years. When conceptualising the Sandip Foundation campus, Sanjay Patil, principal architect of Environ Planners, gave equal emphasis on devising a contextually responsive facade design. Playing with light and shade, cement silica fibre board sheets are used as horizontal slats to create an envelope that provides relief from the harsh glare of the sun as well as protection from heavy rains. "This was also used to speed up construction as opposed



Sanjay Patil, principal architect, Environ Planners.

to conventional chajja details. It separates the structure from the skin, generating a recurring pattern that gives an identity to the campus," explains Patil.

Patil believes that architecture trends in such projects stem more from the human aspect than the need for avant garde forms. "A college campus plays an important role in a student's formative phase of life. A sensitively designed one provides comfort, fun, and nurtures many young and fertile minds," he shares.

With his extensive experience in the domain, Abin Chaudhari also emphasises the social element of institutional architecture that transcends fleeting trends. "It must address contextually the economical and sustainable conditions. Institutional designs should first address changing human behaviour and also allow more human interactions," elaborates the Kolkata-based architect. Courtyards, landscape, amphitheatre style outdoor spaces remain crucial aspects. Spaces, inanimate as they are, are designed to be more humane and emotive when it comes to institutional campuses.

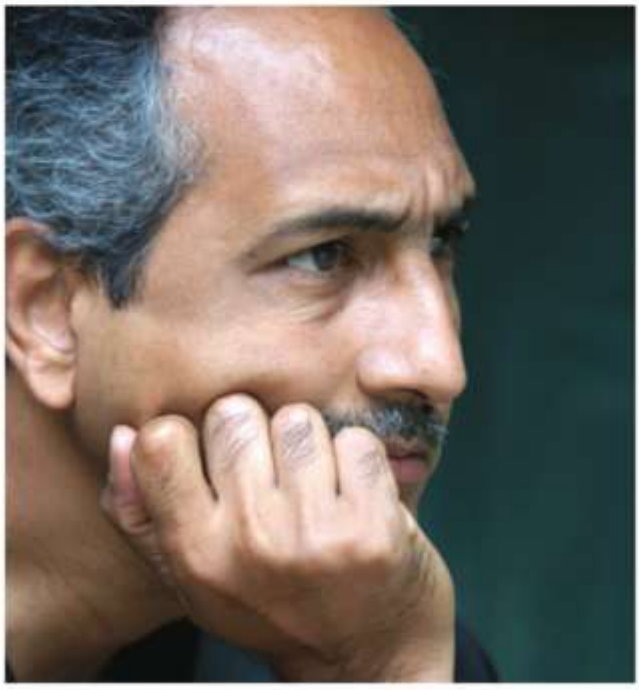
It was the question "can a space teach you how to care?" that transcribed into the design intent for IQ City Nursing College in West Bengal, a project from Abin Design Studio's repertoire. "It is essentially an institution that nurtures young people to be empathetic efficient care givers. Effective communication, cultivated over time through interaction with people from various walks of life, plays a major role in sensitising one on the issues of others. The design focuses primarily on spaces that fosters such interaction and the exchange of ideas through communication," explains Chaudhari. Creating spaces with an interactive angle is the defining trend in modern institutional projects — often achieved through subtle maneuvers in the schematics and planning.

While the visual aspects impress, the role of building physics cannot be ignored. Budget constraints often demand that campuses rely heavily on passive strategies to maintain optimum thermal comfort indoors. Studios like Morphogenesis use their technical know-how both in traditional architecture and modern technology to ensure campuses enjoy the best thermal comfort and require less energy to operate. In the end, more and more structures today are informed by building physics than merely by the need for an "iconic" facade. However, it hasn't prevented architects to envision striking facades for such projects, and provide the campus with an identity of its own.

Manit and Sonali Rastogi, founding partners, Morphogenesis.

"Better value does not mean building cheap campuses, rather it's about creating demonstrative and sustainable environments. It should enhance teacher and pupil wellbeing, and limit future operational and maintenance costs while allowing architects the creative freedom to design spaces that are conducive to learning," summarises Manit Rastogi, founding partner, Morphogenesis.

To understand institutional buildings and their evolving architecture better, we look at four impressive projects by renowned firms in the country. Each project is a case study highlighting how site conditions, complex programmes, budget limitations, climatic conditions and a host of other factors influence the architecture and design.



Rahul Kadri of IM Kadri Architects.

CASE STUDY: YWCA, DELHI

MORPHOGENESIS

For the 75,000sqft YWCA facility in Dwarka, Delhi, Morphogenesis relied on sustainability to inform the design language. The residential facility for working women with an academic section that supports vocational training anchors itself on aspects of community, culture, environment and economics. "The design process was driven by a critical investigation of the building's immediate urban and social context," mentions Manit Rastogi, cofounder, Morphogenesis. Placed around a courtyard is the building, which houses multiple programmes such as offices, classrooms, learning spaces, a library and dormitories.

Since Morphogenesis is known to create contemporary forms from traditional architecture that are compatible with the site's climate, YWCA sports a unique and vibrant facade skin that provides shade within the building and also doubles up as storage units that can be accessed from the inside. The

northeast face is flanked with group housing societies on either side and a narrow green belt on the southeastern edge. Larger volumes are placed on the south side to cut off the sun and provide shade to internal courtyards. Multiple verandahs, courtyards and terraces, allow visual permeability, providing porosity to the built volume, while serving as outdoor learning and social spaces.

Passive cooling strategies are a Morphogenesis trademark feature. From stack effect facilitated by the central courtyard to the basement inspired by traditional stepwells and using terraces and green covers as thermal buffers, the YWCA campus relies less on mechanical cooling. The stepwell design also provides occupants a safe, interactive space for social and recreational activities. "Being a subterranean space, this area is naturally cooler; it employs earth sheltering, thermal banking and evaporative cooling to modulate the high temperatures. This creates a conducive microclimate without the use of air-conditioning, fostering a multitude of student activities and enhancing its public character," explains Rastogi.

What makes YWCA noteworthy is that its contemporary design is actually built to be cost-effective. "YWCA is a charitable institute and so, the architectural response has been cost-effective and impactful, sufficient for the design to support the functionality and fostering a sense of being within the campus," highlights Rastogi, adding that the construction itself is kept simple, while the intuitive building physics ensures operational and maintenance costs are reduced. Aesthetically, the building's palette of orange, yellow and white gives it a distinct identity. Relying more on the clever articulation of the building's function through space optimisation and planning, the YWCA campus stands as an iconic building in the vicinity.