Iterations and Evolution:
New Classroom Cluster at IIM-B

Sanjay Mohe

Sanjay Mohe Mohe is a founder of the nine year old Bengaluru based practice-'Mindspace'. Prior to that Mohe has had a working association of 22 years with Chandravarkar and Thacker Associates (CnT), Bengaluru's well-known firm, besides years spent working with Charles Correa in Mumbai and a work stint in Saudi Arabia. A graduate from Sir JJ College of Architecture, Mumbai, Mohe's work spans a spectrum of projects - Research Laboratories, Knowledge Parks, Campus Designs, Factories, Beach Resorts, Libraries, Corporate Offices, Hospice and Residences. A familiar face adorning many architectural forums and talks, he has a number of awards to his credit. Some of them include, the Golden Architect Award by A+D magazine, Spectrum Foundation Architecture Award -2009, J. K. Cement's Architect of the Year Award - 1991 /1999 /2001 /2004 /2007 /2008/2013, the Award of the Journal of the Indian Institute of Architects in 2002, ar+d International Annual Award of Architectural Review -1999, London and d'line, for JRD Digital Library Bangalore, Gold Medal from ARCASIA (the Asian Forum for Institutes of Architecture-1998). His projects have been featured in many architectural magazines and journals.

In this essay, Sanjay Mohe describes a relatively unknown trajectory of a projected completed last year inside the IIM Bangalore campus. In this re-telling are many lessons for designers about factors that are generally assumed to be external to a project but are in reality quite integral in the way they influence the outcome

✉ mohe@mindspacearchitects.com

New Classroom Cluster at I.I.M. Bangalore

Our office received a prestigious commission to design a cluster of new classrooms at the Indian Institute of Management, Bangalore- the much acclaimed campus designed by a master of modern Indian architecture, Dr. B.V. Doshi. The new addition became functional last year, behind its creation is not just a useful lesson of addressing a context such as this but a story of various turns a project takes due to a variety of reasons before it sees the light of the day.

I.I.M. Bangalore Campus

Ever since I came to Bangalore in 1983, Doshi's IIM campus has been a reference as well as an inspiration for me. The campus was completed in that very year and for young architects like me, the place was an encyclopaedia of spaces to study and learn from. We would go there very often, even during full moon nights, to see how light changed the space. We admired the earnest use of local stone, varying volumes, incredible control over natural light, and nature as an integral part of institute's

character. It was amazing to observe how light and shadows conversed with each other enlivening the spaces.

Underlying all the above was a strong reference to organisation of structure. Everything was brought into unison within a highly 'structured grid'. The rhythmic arrangement of beams, load bearing walls that set off to become circular columns holding stone pergolas interspersed with creepers covering them and framing the landscape beyond has been etched in our memories. We have also seen this building age gracefully over the years. It has been wonderful to watch the trees, creepers and ivy becoming a part of the architectural space, complementing it, and how the grey granite walls, exposed concrete and Kota stone flooring have aged.

B. V. Doshi's IIM Bangalore campus

Extension of the Campus

It came as a great surprise when we were approached to design an extension to the campus we have loved and admired all these years. This was in early 2008, when a need arose to add a number of large classrooms due to an increase in the intake of the institute and we were asked to design this new classroom cluster. There was a mixed feeling, excitement as well as a great sense of responsibility to work next to a master. Dr. Doshi himself had been extremely encouraging towards our role, giving us confidence to proceed without being intimidated by the presence of the existing. Obviously, we knew that the new design must respond to that 'Presence', that we must come up with a suitable response worthy of this unique context.

Several questions emerged when we began to think about an intervention in this iconic campus.

1. How do you modulate your own creative thinking while working in a context- such as this acclaimed masterwork as compared to a situation where the existing was an ordinary, non-descript entity? Do you seek to compliment the iconic or you create a new language?

2. Do the constraints of the existing such as style, materials or structural grid limit your creativity or give you points of references to begin your own response?

3. How important it is to follow the existing language, whether and how it can be challenged? Surely, every new creation should express its own time and technology?
Many a times in architecture, one finds it difficult to make a start when the field is wide open, where anything could be done, where there are no restrictions of any kind. Here we had plenty of those; almost 80% of the campus was already built and our design would be in the form of an insert in the midst of the built. Our primary reaction was to be as low key as possible, to try and complement the existing fabric in a subtle way by continuing the same vocabulary the way we understood it.

The Initial Conceptual Response

Early conceptual response to the existing 'presence'

The earliest sketches show an approach of planting the building beneath the landscape making it a non-building. The rising angular slabs of concrete held up by the walls of grey granite in a rhythmic composition were intended to mirror the rhythmic composition of the parent building. The interplay of the walls, slab and glass was meant to pay respect to the original masterwork as seen in the N. S. Raghavan - Global Internet Ventures incubation centre which is partially underground with landscaped terraces having skylights for natural lighting of spaces below ground. However, this approach could not be continued as the client's requirements of spaces started growing.

Choosing a Site
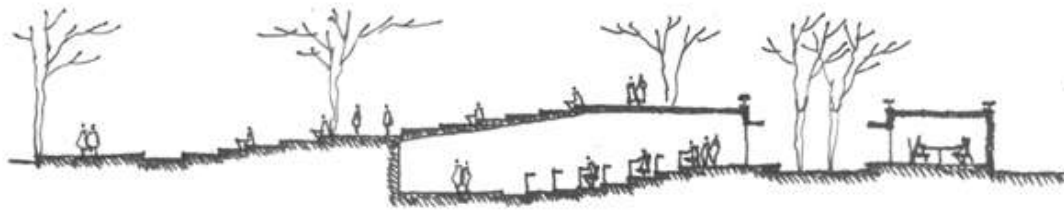
*Original scheme showing classrooms tucked underneath an amphitheatre*

The new cluster of large classrooms had to be closer to the core of the campus, closer to existing classrooms, faculty rooms and library. Now this was a challenging job for us as there was a direct intervention into the heart of the campus and we had to be extra sensitive to that.

A site had to be chosen. In the campus, there was an amphitheatre which was more like a grass mound which was used as a place for congregation. There was a possibility of renovating that mound to afford seating for any event. Keeping in mind our original idea of a non-building, we came up with a suggestion of renovating the amphitheatre while tucking the classrooms underneath the sloped seats.

There would be space enough to accommodate six large classrooms of a hundred students each, creating a perfect non-building. This was a win-win situation of having the benefit of upgraded amphitheatre in the process of building classrooms. We could even accommodate without much difficulty a few

A Partly Buried Structure and a Pavilion
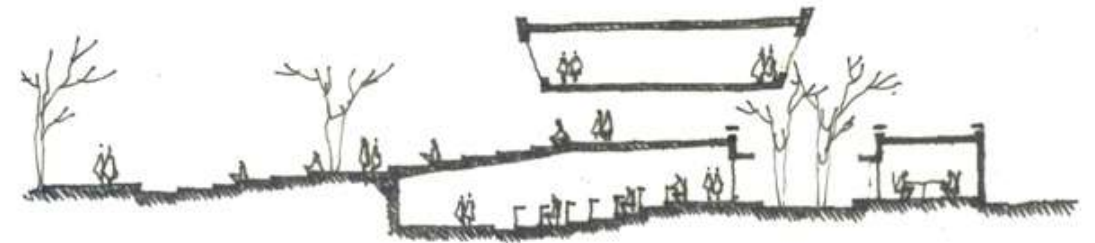
Modified scheme with additional classrooms as a pavilion on top of the amphitheatre

additional break-out rooms that were added to the original requirement.

It seemed that we would achieve our desired non-building with admirable results. However, the requirements of the IIM kept on increasing, as it happens often. There came a requirement of three more classrooms, making it a total of nine large classrooms with break-out spaces. This naturally impacted the original concept. We therefore envisaged a pavilion like structure for classrooms on top of the

amphitheatre and this was the scheme which we presented to the IIM board.

The Pavilion Takes a Sculptural Form

In response to this scheme, the Director of IIM expressed his opinion that it was not vibrant enough to make a definitive statement. He urged us to design something more exciting.

The clients clearly wanted us to not reign in our creativity and we took up the opportunity to do something inspiring. Very next day, I drew these sketches while sitting inside a plane. In the new design, the underground structure remained as it was but the pavilion on top got transformed into a sculptural installation taking advantage of the tiered form of the classrooms. With this idea as a basis, many forms started emerging for the structure on top. As a matter of fact, we had to remind ourselves to keep restraint and not get carried away by form alone.

This makes one wonder whether one needs that external push, someone challenging you, to energise your creative instincts. Why can't we have our own internal mechanism of challenging ourselves? Isn't it necessary to prove a point to yourself first before proving it to someone else? But mostly we wait till that challenge is posed externally, because we fall in love with our ideas too soon and defence mechanism prevents us from exploring new ideas.
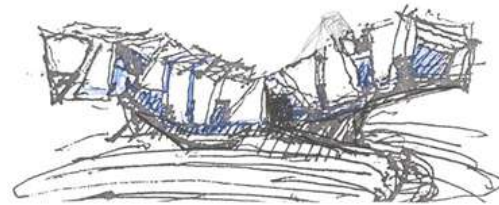
The pavilion on top now takes a sculptural form

In the present case, by challenging the design, the director was clearly encouraging us to take risk and explore a new idea. We knew if he liked the idea, he would defend the design on our behalf which left us reassured. We had to put in our best efforts leaving the rest to fall in place. We went through the first round of presentation with some amount of scepticism and a lot of excitement. There was a sense of relief when the idea was accepted and we were asked to proceed with detailed design. We started developing the classroom plan, appropriate size, shape, interaction between the students and the teacher, lighting, and air-conditioning etc. taking inputs from the professors along the way. The final design, including its form emerged to satisfy a wish-list of everyone.

The Design Emerges

The design is finalised and approved by the clients

Model showing the finalised design including structural resolution

After several refinements the design was finally approved, which was a moment of joy for the team. Next, we geared up for the challenge of resolving the structure of our building which had huge cantilevers and large spans.

This is always an exciting process in the studio-working with an imaginative engineer, exploring different structural ideas about projecting, counter balancing, suspending, anchoring; spending a great amount of time to resolve every structural aspect of the design, all the time making study models in the studio. A final model incorporating the resolved structural design was displayed at the IIM during the tendering process for better understanding of the design on part of the bidders and eventually a contract was awarded.

Expect the Unexpected

There was a palpable excitement that the project was soon going to start on ground when we were given the news that the construction would be kept on hold owing to uncertainty of funds as a result of a global financial crisis in December of 2008. The project was suspended for almost five years.

When the project was revived, the earlier excitement had passed and the IIM decided to explore possibilities of a new location which meant wiping the slate clean and starting all over again. This was not easy because you get emotionally attached with the design on which so much work has been expended, making it difficult to just abandon it. However in our profession, one should have the courage to tear up a sketch and start afresh, look at the setback as a fresh opportunity. I strongly believe that design efforts are never in vain. The knowledge gained stays with you and when the next opportunity comes, you can handle it better because you have already dealt with the problem.

New location for the classroom cluster- an existing basement on the main spine of the campus

New Site and a Fresh Proposal

There was a computer centre next to the library along the main axis where only the basement was completed twenty five years back and the building was left incomplete. After a few deliberations it was decided to build the classroom complex on the top of that existing structure. Structurally, this new location posed several challenges. We had to have much larger spans to accommodate more than a hundred students in a class. The grade of steel and concrete used almost twenty five years ago was quite different than what is available now. A lot of new columns/

foundations had to be inserted in the existing structure puncturing through existing slabs. We were lucky to be able to work with the same structural engineer Mr. Krishna Hegde, who had designed the structure earlier.

The new structure was to finally accommodate eight classrooms of a hundred capacity each. About eight hundred students inside one building is a fairly large number. It had to be easily accessible, easy to evacuate in case of an emergency. There would have to be sufficient break out spaces as on a regular basis a hundred students would pour out every time a class ended.
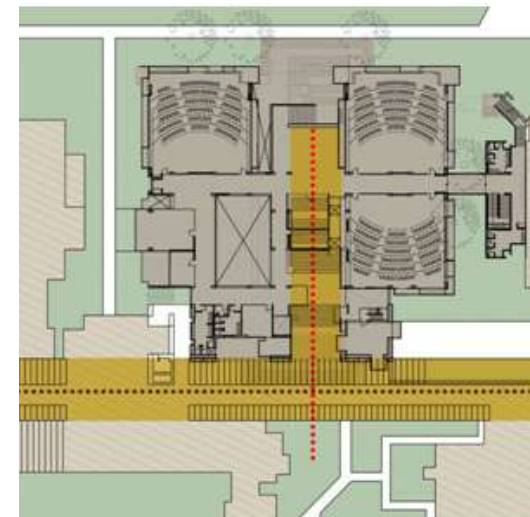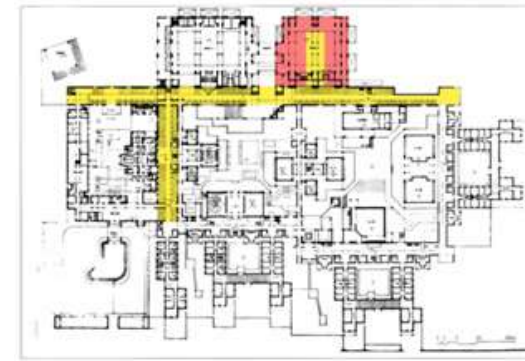

The classroom cluster is designed over an existing basement structure

Creating a Complementary Axis Perpendicular to the Main Spine

Looking at the site contextually, there were two axes, primary one that of pergola which ran across entire width of the existing building and a secondary one, much smaller, connecting a courtyard, which was perpendicular to pergola spine. On the other side, there was a thick growth of beautiful trees, where the hostels are located and lot of students would take that path to approach the building.

IIM wanted this building to be functional round the clock. They wanted a vibrant break out lounge, where students could prepare their reports, take prints, have coffee, snacks, watch sports on a big screen. Importance is given to informal interaction areas which are centred on the belief that these break out spaces give students time to think and reflect continuously.
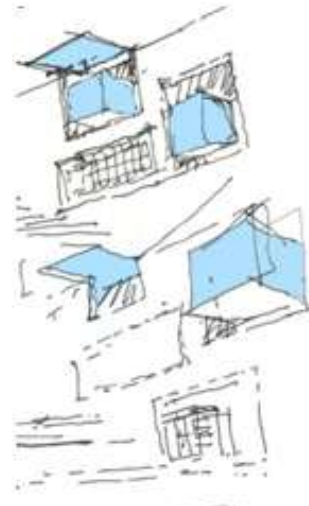
The perpendicular secondary axis becomes a wide flight of steps connecting three levels

Quality of natural light in the secondary axis (right) to complement the main pergola spine (left)

As a response to the main pergola axis, we decided to place a wide flight of steps along the secondary axis connecting all the three floors with classrooms flanking these steps. This is conceived with plants along the rising steps and a reading room as a focal point which is meant to be used through the night. The ground floor is conceived as an extension of common areas of the campus and therefore is kept barrier free. The ground floor columns are clad with stone to unify with the pre-existing language of the campus. The steps and openness in ground floor facilitate easy circulation for a large crowd of over eight hundred students.

Controlling natural light in the central spine was very important for us as we felt this axis must complement the changing light quality of existing pergola. We looked at various options. One idea was to have cubes of glass projecting from the walls into this space as meeting rooms and perforated sheet cubes from ceiling as light source.

The detailing of this extension is carried out with a subtle difference to show that this was conceived almost twenty five years later as compared to the earlier one. We tried to achieve similar perceptual quality but using a new vocabulary.

Also, since the existing structure was adequately loaded, we had to restrict the use of heavy stone wall, this was replaced by exposed concrete walls. Grey colour was used for flooring as a continuation from the existing area.

Classroom Design

A lot of discussions about classroom design took place before horseshoe shaped Harvard style arrangement was finalised. We looked at different possibilities of conducting a class- with projection, without projection, with AC, without AC, and created a set of moving panels giving options to control natural light and air flow. Glazing would be closed only when the AC is in use. Classroom interiors were finalised with interior designers, acoustical and AV consultants.

Approach from the hostel side

Classroom design to modulate light and air in different conditions
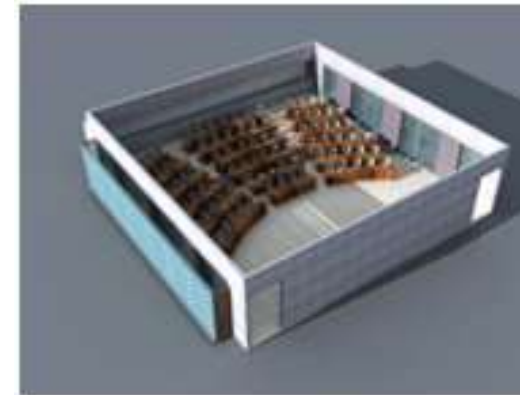

Completed classroom cluster

Evolution through Iterations

Normally any architectural project has a long gestation period but this one took much longer than expected. It went through very drastic changes in its conceptions.

It is useful to look back at the design development process once the project is completed and initial excitement has subsided. Various forces such as economics, technology, client's changing aspirations, some time human conceit etc. play a role in this process and directly or indirectly influence the outcome. However somewhere along the way you fall in love with the idea, start nurturing and protecting it, defending as if your life depends on it.

When it comes to the new classroom cluster design, we ended up creating two sets of design- both the approaches were radically different in accordance with the context. The initial scheme was a result of a progression of thought from a low- key, underground structure to a sculptural pavilion floating over a partly buried structure. The progression was mainly in response to the changing circumstance of client's needs and aspiration. It

was also to express the extension's own time of creation which is twenty five years later. The second scheme was necessitated due to a change in the very location of the project after being stalled for five long years. This scheme came up naturally during the course of design development in response to the challenge posed by the context of the original 'presence' and to create something new and exciting within it.

There is a story behind every architectural creation which is known only to people who are intimately involved in it. This essay is an attempt to record the journey of the new classroom cluster in IIM Bangalore and remember the contribution of all those who were involved- clients, consultants and contractors. Though a great design is extremely important, making of architecture is a team work, it is about incorporating strengths of each team member to get the best, without compromising on the soul of design. This needs consistent passion and is probably the most important aspect of architectural creation. ∎