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A Place of Interaction and Learning at Design College

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Abstract - This research paper investigates the significance and design elements of interactive spaces within educational contexts, with a focus on design colleges. Through a comprehensive exploration of various case studies, including the School of Arts and Sciences at Ahmedabad University and the Centre for Environment Planning & Technology, the paper examines the role of formal and informal interactive spaces in fostering collaboration, creativity, and community engagement. Key factors affecting the success of these spaces, such as compatibility with user needs, achieving balance between social interaction and isolation, transparency, contact with nature, and design elements influencing interactive environments, are analysed. The findings highlight the importance of thoughtful design and planning in creating dynamic learning environments that support diverse modes of interaction and enhance the overall educational experience.

Key Words: Architecture, Design colleges, Formal space, Homebase, Informal space, Interactive spaces

1. INTRODUCTION

The interactive space refers to any location which can be an open, closed or semi-closed space that promotes a large number of people to participate in a social context.

Interactive spaces are vital in all types of structures, serving as focal points where communities gather and connect. These areas facilitate social interaction, relaxation and engagement in various activities, fostering a sense of belonging among individuals. Whether it's unwinding after a long day, engaging in meaningful conversations, pursuing shared interests, or simply observing the surroundings.

In design colleges, interactive spaces refer to environments in which students can engage actively with their surroundings, materials, technologies, and each other to enhance their learning experiences.

Interactive spaces play a crucial role in design education by providing students with the opportunity to experience, collaborate and learn through practical experience. They support a multi-disciplinary approach to design education and encourage students to explore different perspectives and techniques.

2. BACKGROUND

Natural gathering places abound in villages, towns, and cities up until the twentieth century. Life revolved around the marketplace, the temples, the church, the courthouse, the post office, the town hall, the train station, or the town or village center, depending on the historical time and place. People sat on steps and porches or in the street, watching and conversing with their neighbours and passers-by.

The primary way to communicate with others was face-to-face: there had to be a place in the community where citizens could gather, or they wouldn't know what was going on in the community, or they wouldn't be able to buy everything they needed, or they wouldn't be able to find companionship or entertainment.

As was previously mentioned, effective venues for interaction provide individuals with reasons to visit, reasons to stay once they are there, reasons to feel safe and secure, reasons to feel welcomed, and reasons to be accessible to everyone. All of these are, to varying degrees, dependent on design.

All design endeavours are inspiring spaces, but when it comes to design schools, the spaces need to be more so—a haven for creative students, who should imbibe design values from the space surrounding them.

Thus, architecture and design colleges are planned with care, to create an atmosphere than a mere room as future designers of the world are to take a cue from the space, they spent their defining years in.

3. INTERACTIVE SPACES

Interactive spaces in educational contexts encompass environments designed to engage students actively in the learning process, facilitating collaboration, creativity, and exploration.

Fig -1: Interactive Spaces [2]

These spaces can be broadly categorized into formal and informal spaces based on their intended use and design characteristics.

A. Formal interactive spaces

Formal interactive spaces are purposefully designed areas within educational institutions that are structured and organized to support specific learning activities.

Fig -2: Formal Interactive Spaces [3]

They are equipped with amenities such as seating arrangements conducive to lectures or group discussions, presentation tools, and technology infrastructure to facilitate interactive learning experiences.

Formal spaces typically adhere to institutional guidelines and may be reserved for scheduled classes or academic activities. Their design prioritizes functionality and efficiency, aiming to optimize the learning environment for focused instruction and guided learning experiences.

These spaces often include classrooms, lecture halls, and libraries. laboratories, workshops and studios.

B. Informal interactive spaces

Informal interactive spaces are more relaxed and flexible environments within educational institutions that encourage spontaneous collaboration, social interaction, and independent exploration.

Fig -3: Informal Interactive Spaces [4]

Informal spaces are characterized by adaptable furniture arrangements, cosy seating options, and amenities that promote comfort and relaxation. They are designed to foster serendipitous encounters, peer-to-peer learning, and interdisciplinary exchanges. Informal spaces often feature amenities such as whiteboards, interactive displays, and communal work surfaces to support impromptu discussions, brainstorming sessions, and creative endeavours.

Unlike formal spaces, informal spaces are open to all students and faculty members throughout the day, serving as hubs for informal learning, socialization, and community building.

These spaces may include lounges, common areas, outdoor spaces, indoor spaces, recreational halls, walking pathways and collaborative workspaces.

4. HOMEBASE: Place Adjacent to A Specific Building

The home base usually revolves around a student's major department, where the student has most classes, sees an advisor, and participates in departmental events. Two sub-categories were developed to describe various homebase gathering places across campus:

- Front porch and Front yard
- Back door and Back yard

A. Front porch and Front yard

In the base terminology, a building's main entrance is analogous to a front porch. Just as the front porch of a house offers an important physical and psychological transition from the public life of the community to the more private life of the smaller social group, the main entrance of a campus building can offer a similar transition from the campus as a whole to the college or department.

Fig -4: Front Porch and Front Yard [4]

The area can be an important social, study, meeting and eating place. The main entrance to the building has a concentration of outdoor campus use and if they are to best meet student needs, should include places to study and eat comfortably outdoors.

While the front path and front porch of a typical house are hard surfaced, the front yard of a home typically provides a soft, green transition or buffer between private and public space, the same is true for campus buildings.

Some campus buildings have front yards, significantly green spaces where building residents can relax. Here one can go with a friend to talk privately, to sunbath or nap, to eat, to study. A change of environment is important to a person's mental health and stress level.

B. Back door and Back yard

Just as every home has a front yard that is generally open to the view of passersby and is therefore semi-public, most homes also have a back yard that is fully or partially enclosed and used for both private and utilitarian functions.

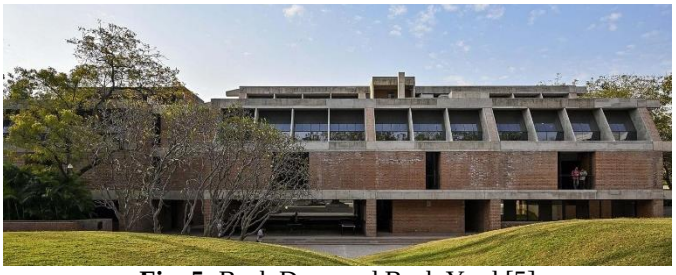

Fig -5: Back Door and Back Yard [5]

Campus buildings too should have backyards that are spaces attached to or partially enclosed by buildings where residents feel a greater sense of territory than in the front yard and where semi-private departmental or college events can be held. A space where can people meet and have lunch etc. Departments such as art drama and literature have a greater opportunity to use this type of space more efficiently.

5. FACTORS AFFECTING THE SUCCESS OF INFORMAL INTERACTIVE SPACES

A. The informal interactive spaces are compatible with the needs of the users

Every student has basic requirements like where they can have food, have good light and ventilation and the space has seating available where students work to raise their creative skills towards learning.

B. Achieving a balance between society and isolation

The learning space needs to achieve between the needs of man and society, so learning takes place everywhere, whether it is in a calm (moments of the student's isolation with himself), or in a live (more social) manner, so it must be learning environment offer a variety of realms that supports individual and group learning.

C. Transparency and visual access

The visual link prepares people to be a part of something larger, and the link between formal and informal learning spaces such as classes in lobbies, halls, or corridors has become part of the learning experience through advocacy in which learning activities.

D. Contact with nature

Nature works on continuous stimulations for students because of the change in elements, so the formation of learning spaces that exist outdoors and indoors is important to provide students with a sense of security and pleasure and simulating nature also achieves student satisfaction.

6. EXPLORING DESIGN ELEMENTS INFULENCING INTERACTIVE ENVIRONMENT

A. Natural light:

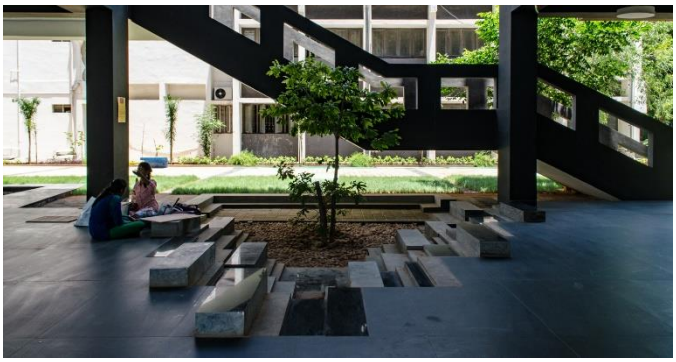

Fig -6: Natural Light in Interactive Space [6]

Light and shadow give different types of soulfulness from different angles. They are used to interpret the geometry and form of the buildings. Shadows in the building help break up a vast amount of space with dynamic appearances as the shadow changes as the sun moves, giving life to space.

B. Access

Design that helps an individual to live or access spaces without any restriction. Creating a good ambience when entering a building.

C. Colour and light

Fig -7: Colour and light [6]

Colour alone can make space look bigger and brighter. Painting walls is an inexpensive redesign. Children's areas should use bright attractive and inviting colours.

D. Have flexible areas

Open spaces like seating areas, multifunctional areas, etc. larger, open areas allow people to rearrange space more easily. Let the community define the space.

E. Views

Incorporating the natural environment into a building can have a positive influence on psychological, physical and social well-being. Trees and outdoor gathering places can enhance the quality of life for building occupants by fostering a deeper connection with nature, promoting relaxation and stress reduction, encouraging physical activity, and facilitating social interaction and community engagement.

F. Landscape

The landscape is an active area, a unifier, a healer. It is where memories are made and life is enjoyed. By leading with the landscape, and by adding people first, we create a better connected, healthier and happier place where lives can easily join.

G. Connectivity and Circulations

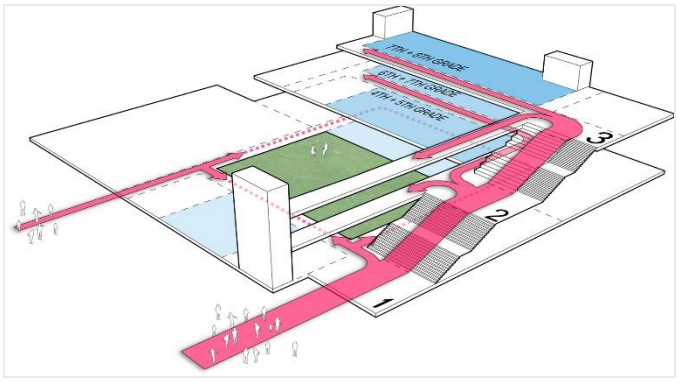

Fig -8: Circulation [8]

The level of connectivity appears through the working of systems like streets, cycle routes and pathways and how simple accessibility is so that users can reach whichever location they want.

H. Spatial Relationship

Spatial relationship is an important component in designing spaces in a building. The connectivity between the spaces and the efficiency of the planning relies on the spatial relationship between the spaces.

Thus, space within a space, spaces linked by a common space, and adjacent spaces are the ways spaces are interrelated with one another.

7. CASE STUDY

A. School of the Art and Sciences, Ahmedabad University

a) Introduction

Fig -9: School of Art and Science [9]

The School of Arts and Science at Ahmedabad University is designed as an institution that fosters interdisciplinary learning- a place where students and faculty work together in an academic setting, bringing with them lived experiences from different cultural perspectives.

b) Form Development

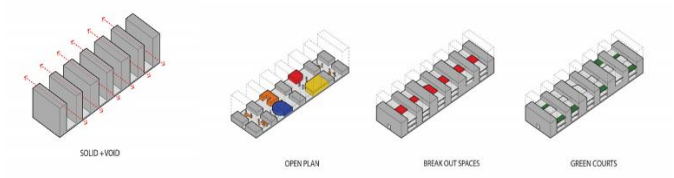

Fig -10: Form Development [9]

An early decision in the design process was thus to make the base or ground floor of the building spatially porous to allow easy access to the historic building. The building is spatially porous to allow multiple entries to the first building on arrival.

To incorporate a wide variety of programs, yet keep the spaces flexible, the building was imagined as an armature. A mixture of solids and voids- the solid houses the services and circulation elements, while the spaces and programs are fitted into divisions. This allows freedom for functions to be added and subtracted with time.

c) Forum

Fig -10: Forum [9]

The forum became a central congregation space on the ground floor, located close to the library and the central staircase. Designed as a public Amphitheatre, this space intends to encourage activities and events of various scales and degrees. The flame-finished red granite further accentuates the space. Overall, the goal is to allow for organic and creative ways of using space while complementing functions.

d) Otlas and Sitting pit

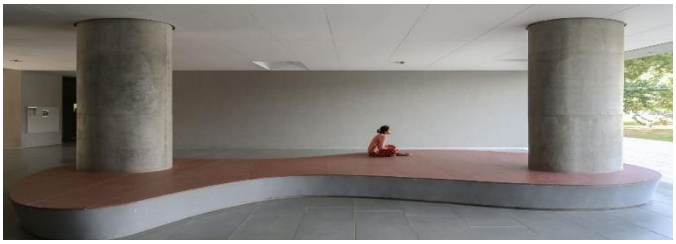

Fig -11: Otlas [9]

Otlas (Raised sittings) and sitting pits of different sizes also became common congregation spaces placed throughout the ground floor. Through the variation in scale, users of the building can choose the level of intimacy they want to engage in. Red granite demarcates these spaces.

Fig -11: Sitting Pit [9]

e) Faculty Lounge

The faculty lounge is a large space that serves as a retreat for the faculty members in the building; prompting rest and recharge. There are two distinct zones; a large area for coffee and lunch breaks, and smaller sitting areas that also serve as workspaces.

f) Second-floor and social staircases

Spaces become more silent and intimate as one traverses them vertically. An angular terrace overlooks the triple-height staircase space, with louvers and diffused light adding character. Internal stairs are designed to provoke social interactions through small platforms on the edges of landings. This encourages moments throughout the building. A cut-out frames the landscape outside.

g) Third floor and the green terrace

Fig -12: Third floor and the green terrace [9]

A sense of rationality and flexibility governs the third floor, with spaces that can be transformed as per usage. Spill-out spaces outside the classroom creates spaces of respite and tranquillity, with hanging green creepers, skylights and cutouts keeping the building well-lit and ventilated. Vines integrated into the structure keep the building cool through evaporative cooling.

h) Fourth floor and skylights

Fig -13: Fourth floor and skylight [9]

The green double-height terrace is visible on the fourth floor, composed of cut-outs and openings. Skylights bring light of different colours into the building, adding an aesthetic and emotional quality to the space as it changes with each passing minute.

i) Conclusion

When people occupy and create associative values within a building space begins to transform beyond the borders of disciplines and physical structure. The holistic approach to the building

B. Centre for Environment Planning & Technology, Ahmedabad

a) Introduction

Fig -13: CEPT Ahmedabad [5]

It was started in 1962 under the Ahmedabad Education Society. The school broke away from the conventional teaching course structure which was prevalent at the time and instead adopted a more open curriculum with many elective courses. The concept changed from architecture as a technical discipline to architecture as a design discipline.

b) Disposition of building

The buildings are placed orthogonally concerning the sides of the site and hence along the cardinal directions. A look at the plan will reveal the predominance of the north-south direction in the general organizational scheme of the site as well as its component buildings.

The placement of the buildings themselves spread out. It is interspersed with loosely held open spaces characterized by terrain features and greenery which creates a set of interconnected, flowing spaces which may be traversed by several combinations of paths taken thus conveying a sense of continuity and openness.

c) Planning

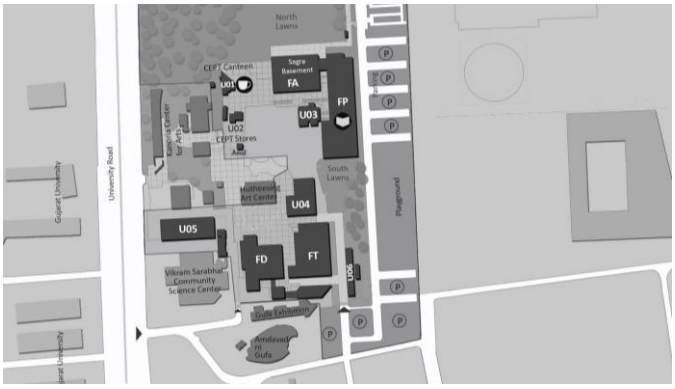

Fig -14: Site plan

The built form starts with a pair of parallel walls. The basic component of the building of CEPT is a derivative of a pair of parallel, load-bearing walls, supporting a flat floor- slab. The repeated occurrence of parallel-walled structures in the buildings of the campus can be observed.

The overall planning has been done around the central court with built masses on sides and green on one side which gives the campus noise protection from traffic.

Architects have inclined uneven contours into the plan transforming a drawback into a delightful experience of space.

d) Entrances

The entry of the complex is through a long axis which ends up facing a blank wall. One is forced to turn, go down a flight of brick-paved steps and turn again to enter the main wide flight of steps rising ever so slowly towards the framed entrances to the library. On the right side is the double-storied studio block perpendicular to the axis of the library.

The main administrative block is approached by an informal and indirect approach thus emphasizing the change in direction and the informal nature of the campus.

The building forms are arranged around a courtyard which can be accessed from all sides with open spaces flowing into each other through well-designed transitional spaces.

e) Basement

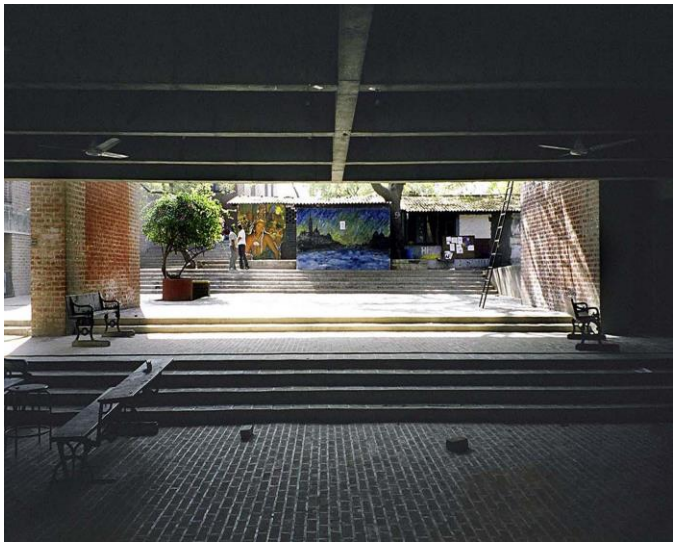

Fig -15: Basement

The basement is a multipurpose space. It is a very active space on the campus. On one side of the basement, rising contours can be seen, and on the other side steps towards the central courtyard.

Thus, the north and south walls have been avoided. numerous activities are performed here like cultural programs, festivals and exhibitions, indoor games etc.

f) Central courtyard

Fig -16: Central Courtyard

The central court is a combination of paved and unpaved areas, shaded by trees in certain areas. All entrances are linked to the courtyard by pedestrian pathways. Hence the courtyard is an area of heavy circulation and interaction.

The courtyard has grown organically with the addition of an informal seating court and has a large unpaved area used for cultural activities, reading, games, meetings etc.

g) Canteen

Fig -17: Canteen

The canteen is on the corner of the axis of the studio block and has external built-in seats that encourage discussion and which over the years have evolved into the most active vibrant part of the entire campus. Both students and faculty sit around this space, chatting. This space is a true reflection of the spirit and culture on the campus with a great atmosphere of interaction, informal discussions and learning.

h) Conclusion

The Centre for Environment Planning & Technology (CEPT) exemplifies an innovative approach to creating interactive spaces within an educational campus. Through its thoughtful planning and architectural design, CEPT fosters a vibrant atmosphere conducive to collaboration, exchange of ideas, and social interaction.

The campus layout, characterized by orthogonal building placement and interconnected open spaces, encourages movement and exploration, enhancing the sense of continuity and openness. Notably, the central courtyard emerges as a focal point for communal activities, serving as a hub for circulation and interaction among students, faculty, and visitors.

Moreover, the strategic placement of facilities such as the canteen, situated at the axis of the studio block, further promotes spontaneous discussions and informal gatherings, reflecting the dynamic spirit and culture of the campus.

8. Analysis

The analysis's overall findings tend to imply that, through interaction in various campus locations, design aspects make the meeting space effective and appealing these spaces are used to sit, chat and relax. The structure or human behaviour is not altered by these interconnected places. Though interactive spaces are public, users need some privacy to feel comfortable, however, at the same time, interactive spaces should be designed adjacent to common or circulation spaces to make the student safer and formally active. Poor planning approach or use of design elements results in negative spaces that promote informal activities of the students. Design considerations should also be focused on these aspects.

9. Conclusion

The research indicates that both the design elements and the layout of spaces influence whether interactions within them are formal or informal. College authorities can regulate interactive spaces, either allowing or prohibiting their use. When an interactive space is intentionally designed, it tends to foster more formal interactions, promoting safety and a healthy environment. Conversely, less carefully planned aspects may inadvertently encourage informal interactions, which can only be mitigated by the proactive intervention of the college campus authority.

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