



Reimagining School Architecture: A Workshop Approach To Transition Spaces In Primary School Design

Bridging Theory and Practice Through Collaborative Workshop

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Abstract: This paper discusses the implementation of transition spaces in primary school architecture, emphasizing their functional, psychological, and social implications. It explores design strategies, case studies, and future planning for successful implementations. The study highlights the knowledge gained from students' design studios and emphasizes the importance of micro-level concepts in developing a robust architectural nomenclature.

I. INTRODUCTION

Primary schools, as the foundation of formal education, need to be thoughtfully designed to cater to the developmental needs of young learners. Transition space areas such as hallways, stairwells, and entry points that connect different classrooms and multifunctional areas are essential components of this architecture. They impact how children navigate their environment, interact with peers, and engage with their learning. Transition spaces serve as conduits for movement, helping to manage flow within a school.

II. DESIGN STUDIO WORKSHOP DETAILS

The design studio workshop aimed to explore the concept of transition spaces, develop technical nomenclature by providing group assignment and collecting the collaboration and feedback.

2.1 Explore the Concept of Transition Spaces

Workshop on the topic 'transition space' was conducted for third semester students to encourage considering the significance of these spaces in fostering an engaging learning environment. Introducing transition space with presentations with detailed explanation, typology and examples.

2.2 Develop Technical Nomenclature

Analysing availability and design of transition space in literature study as group activity provided students with enhanced nomenclature to discover and understand.

2.3 Group Assignment

As group activity .Students began with a series of case studies on existing school designs that successfully integrated transition spaces. students submitted assignments indicating the availability of transition spaces using colour schemes in their literature study. Explanations oriented to the transition spaces were written along with it. They identified key features and characteristics that contributed to a positive educational atmosphere.

2.4 Collaboration and Feedback

Peer reviews and group discussions provided an opportunity for students to receive constructive feedback on their designs to encourage collaboration and feedback for all individual planning. Guided by their understanding, students created initial design proposals. Emphasis was placed on figuring out multiple types of transition spaces and considering their functions within the overall design layout.

III. RESEARCH METHODOLOGY

This study employed qualitative methods through the analysis of student projects from an architecture design studio focused on primary school design. Students engaged with the concept of transition spaces through a series of workshops, critiques, and collaborative discussions. Their design processes, sketches, and final presentations were documented and analysed to evaluate how their understanding evolved.

The transition workshop is an engaging and interactive learning experience that brings together students and encourages teamwork and collaboration. In this workshop, the students are divided into four teams, each consisting of five members. Each team is carefully curated to include a diverse range of skills and abilities, such as a top student, an artist, a problem solver, and two other members.

Theoretical framework

To begin the workshop, each team selects one literature study on international schools as their foundation for analysis and discussion. The teams then closely examine the school's design plan, focusing specifically on the transition spaces. These transition spaces are identified and marked on the plan, with various colour indications used to denote their location and purpose.

The teams then analyse each transition space and write an explanation detailing its purpose and significance in the overall school design. These explanations are meant to provide insight into the role of transition spaces in facilitating a smooth flow of movement and activity throughout the school.

To deepen their understanding and knowledge, the students participate in an open discussion with a design advisor. During this conversation, the teams share their findings and insights, allowing for a valuable exchange of ideas and perspectives. The conclusions drawn from this discussion are then used to inform the design of primary school buildings, ensuring that the needs and requirements of transition spaces are taken into account. In conclusion, the transition workshop is an engaging and educational opportunity for students to learn about the importance of transition spaces and their impact on the overall design and functionality of a school.

Through collaboration, discussion, and analysis, the students gain a deeper understanding of the role of design in creating a positive and productive learning environment.

Group	Literature Study School	Analysis	Understanding	Floor Plan	Identification
A	Sangam School, India	Prioritize Flexibility: Design transition spaces that can serve multiple purposes, adapting to the evolving need of the school community.	Way finding, Psychological Aspects		 Inner Outer
B	Ehrman Crest School, United States	Ensure Safety and Accessibility: Incorporate design features that enhance safety and accessibility, including wide walkways and	Reduce Anxiety Safety Accessibility		 Inner Outer

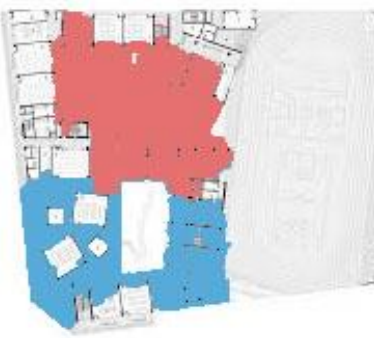
		sensory-friendly elements			
C	Xinsha Primary School, China	Integrate Community Input: Engage with educator, students, and parents during the design process to create spaces that reflect the community's needs and values.	Support Social Interaction Support Educator Interactions		■ Inner ■ Outer
D	Akshar Arbul International School, India	Promote Environmental Sustainability: Utilize sustainable materials and designs that create healthy, eco-friendly environments for students.	Facilitate Community Building, Encourage Exploration		■ Inner

Table 3.1: Descriptive Statics

IV. DISCUSSION ON DESIGN STRATEGIES FOR EFFECTIVE TRANSITION SPACES

4.1 Clear Layout and Visibility

Creating a transition space in school design that allows for easy navigation is essential. Students should ensure that transition spaces are visible and intuitive, minimizing confusion about where to go next.

4.2 Clear Layout and Visibility

Designing multifunctional transition spaces that can adapt to various needs—from waiting areas to informal learning hubs—provides versatility. Spaces can be outfitted with seating, interactive displays, or even gardens, encouraging students to use the area creatively.

4.3 Engaging Aesthetics

Transition spaces should engage children's senses and curiosity. Vibrant colours, art displays, and natural elements and use of natural light can enhance visibility can transform these areas into stimulating environments conducive to learning and interaction.

4.4 Connection to Nature

Integrating outdoor transition spaces, like courtyards or gardens, enriches the environment and promotes outdoor learning. Such connections to nature have been shown to enhance cognitive function and emotional well-being.

V. RESULTS OF DESCRIPTIVE STUDY

Transition space is an in between state, in architecture, it is defined as a link or a connection between two spaces. Temporary and traffic spaces such as corridor, atrium and stairway are necessary in creating transition spaces. Their functionality also varies accordingly to the appropriate requirement of the building or the user's expectations. Transition spaces can be open and confined spaces. It aims to create impact in student learning

and teaching patterns. Physical environment like transition spaces improve activeness among students. Built transition spaces can accommodate open and flexible approaches in school building practices.

Three groups are implemented in the design studio

1. Transition between two spaces (interior-interior, outer-outer)
2. Outer and inner,
3. Natural constructed environment

Transition spaces are critical components of primary school architecture, influencing students' navigation, social interaction, and overall educational experience. By understanding the functional, psychological, and social roles of these spaces, architects and educators can design environments that foster optimal learning experiences. Future school designs should prioritize flexibility, accessibility, and engagement to create enriching, supportive environments for young learners.

VI. TRANSITION SPACE IMPLEMENTATION IN ADVANCED SPACE DESIGN STUDIO

The research highlights 05 students design evolution of primary school design with implementation of transition spaces. It emphasizes on the significance of transition spaces in primary school design architecture and proposes a framework for creating effective learning environments. As education continues to evolve, the built environment must adapt to meet the needs of future generations of students.

6.1 APPROACH OF TRANSITION SPACES THROUGH PEDAGOGICAL, PSYCHOSOCIAL, TECHNICAL ASPECT

STUDENT 1

LOCATION

The particular transition space in the primary school design is located in mid of connecting two academic building blocks through a spiral staircase. On one block it is G+2 whereas the other block is in stilt floor.

6.1.1 CONCEPT

The effectiveness of these spaces in easing transition is heavily influenced by psychosocial factors, which involve the interplay of psychological and social aspects.

6.1.1.1 Naturalness

When a space feels natural, individuals are more likely to feel comfortable, safe, and at ease. This lowers anxiety and resistance to the change or process the space supports. It encourages exploration and reduces the feeling of being 'out of place'.

6.1.1.2 Individualization

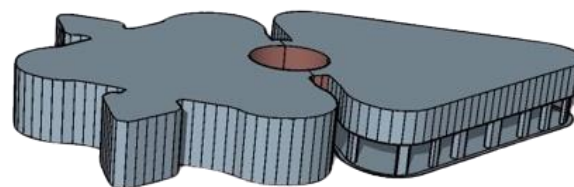
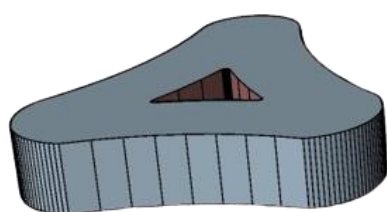
Individualized spaces foster a sense of autonomy, control, and respect. This can lead to increased engagement, a greater sense of ownership, and more successful transitions.

6.1.1.3 Simulation

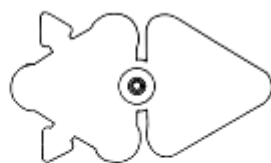
Simulation allows individuals to build confidence, develop skills, and reduce fear related to the impending transition. It creates a 'safe-to-fail' environment where mistakes are learning opportunities.

6.1.1.4 Complexity

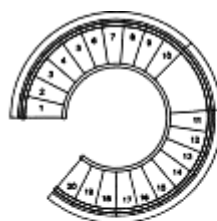
A balanced level of complexity encourages active participation, critical thinking, and problem-solving. It promotes cognitive development and allows individuals to grow and adapt.



the form creates an central zone(3d in sketch up)



the original form is splited so that a transition space well defined(3d in sketchup)



the space occupies a spiral staircase, providing a normal staircase would make it a circulation space



so an slide added along the spiral staircases so that the amenity in the space initiations a active zone ,making it a successful transition space for children.

FUNCTION

Leisure space is provided in the ground level and in the window sill levels for children as seating space. This transition space will be ideal to apply modern learning methods in modern spaces and make the school an integral part of life appeared only in the later era of reform pedagogy. There are spaces which are ideal for acquiring material knowledge, developing the personality and the group identity, and there are other spaces which are ideal for developing social competences.

RESULT

Innovative transition spaces would enhance learning spaces which always lay out to incorporate innovative pedagogies that aim to induce better learning outcomes and more competent students. Teachers of younger students adapted to spend additional time with students than teachers at a senior level so creating a transition space which will improve more openness and flexible learning environment. Students can take a short break in the hallways or find a relatively quiet place for the task at hand. Conclusion is to be maintaining a direct relationship with nature is of great importance for positive influence.

6.2 .INTERACTIVE TRANSITION SPACES (STUDENT-TEACHER)

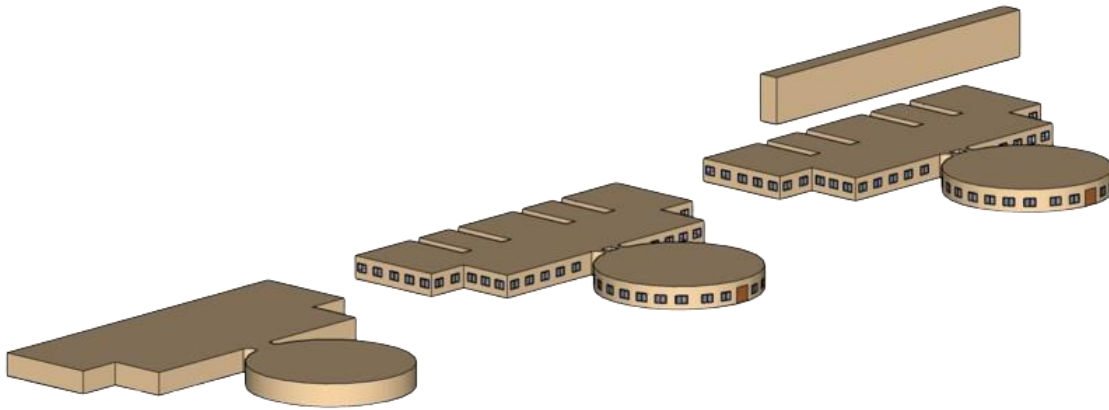
STUDENT 2

LOCATION

First changes by the broadening of the hallways and touches upon the appearance of a social core due to the expanded hallways, the principle of “school in the school”, applying a spatial structure broken down into smaller groups, typically age groups.

6.2.1 CONCEPT

Providing green corridors and narrow green corridors connecting the blocks intend to integrate nature into building.teacher relationships. The design embrace new processes with accountability system to access interactive reading spaces. Physical changes in school buildings such a transition space like these affect educational practices as a positive influence.



FUNCTION

Created with conscious planning, these spaces are capable of individual self development in co-relation between architecture and nature. Operating with complex classroom unit, the open-space school which is separated by its furniture implementation. Transition spaces act as a social learning studio in the campus. Rich versatility appears in transition spaces both functionally and spatially accepting everybody and acceptable to everybody through interaction. This works best for the students (primary), teaching (secondary) and non teaching assistants (tertiary)

RESULT

Significance of coherence and interdependency among their different components.

Integration of spatial afford and pedagogy in common transition spaces calls for purposeful interaction between teachers and students for working together. With an emphasis on outdoor learning, this school's transition spaces incorporate gardens and play areas. Natural materials and ecological elements create a calming atmosphere that encourages exploration. Teaching assistants overlooking the playground, playground stretching out on all sides surrounding all the building blocks.

6.3 UNCONVENTIONAL TRANSITION SPACES

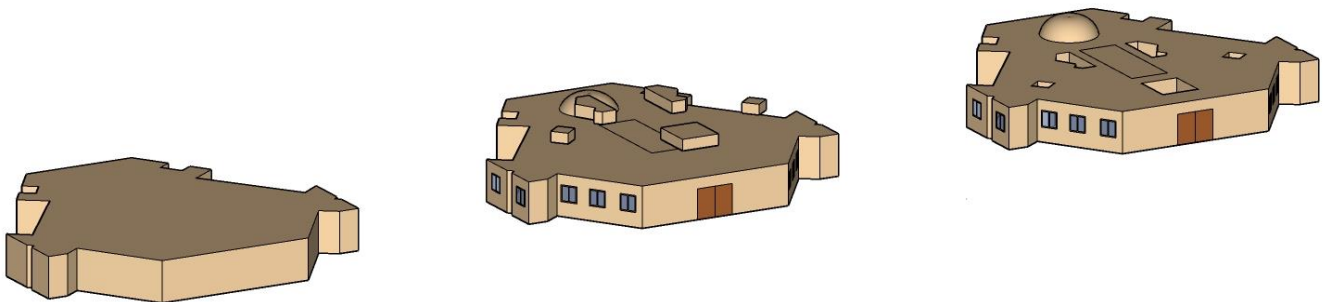
STUDENT 3

LOCATION

The transition spaces are aligned with other built components for improving educational efforts. The transition spaces are located in the mid of the building in the form of corridor with landscape designing.

6.3.1 CONCEPT

Pupil can come to school which is an integral part of urban life and not only for their classes and extra curricular activities but also expose them to non-realistic abstraction of learning which has become generally accepted in global standards becoming general with everyday life. Such modern design tools, structures and approaches implemented in the transition spaces makes the designs to affect these human senses in an artificial manner. Flexible transition spaces acting as gathering space in hallways improve teamwork, collaboration and communal spirit.



FUNCTION

It helped to navigate how to understand the importance to study new models of support intended pedagogical approaches. Acts as a flexible addition to the facilities provided in the school design. It will be fixed or temporary structure acting multifunctional. Inviting environment applied with abundant seating options and workstations for multiple uses. Creates a open learning environment different from their usual spot by being open, diverse and flexible learning spaces. Provides brightness, spaciousness, density, flexibility and functionality.

RESULT

Creates a open learning environment different from their usual spot by being open, diverse and flexible learning spaces. These transition spaces enhance the students to be active physically and mentally.

6.4 COMMUNAL SPIRIT THROUGH TRANSITION SPACES

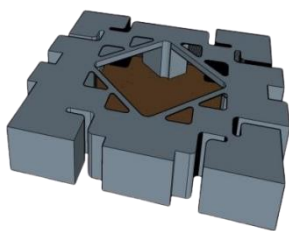
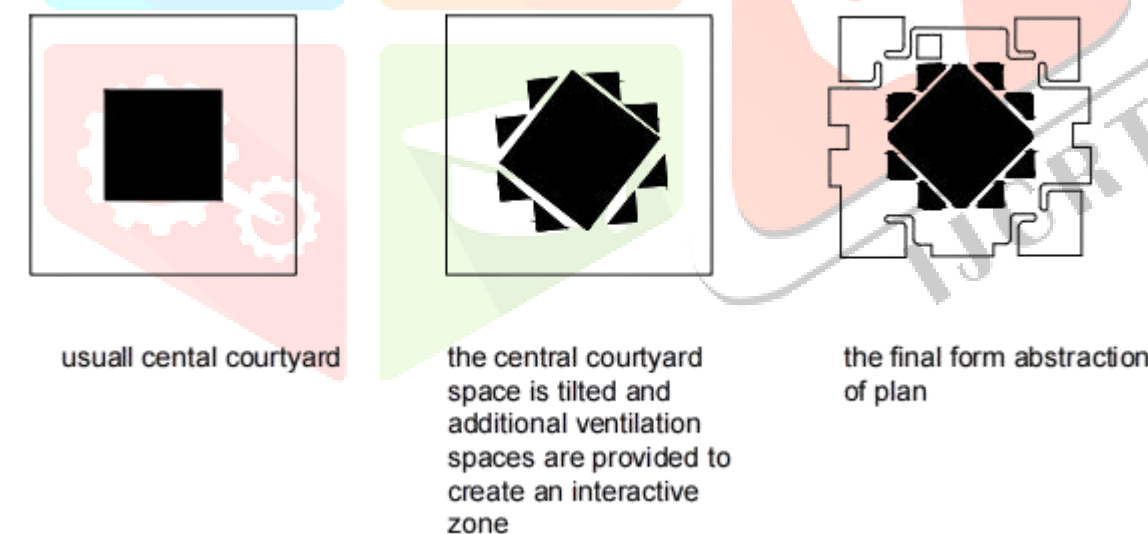
STUDENT 4

LOCATION

Transition space connects the classrooms, corridor with the inner atrium structure in the centre of the primary school design. Landscape areas are provided in diagonal spaces for better ventilation.

6.4.1 CONCEPT

The particular transition space creates a physical learning environment of a school to succeed through being interactive for children. Implementation of these spaces increasingly focused on student-centred approach in primary school design. Implementation of the transition space enhance designing planter box benches at all corners of the auditorium to other spaces, Water body in the circulation of administration, classroom and laboratories Long-time impact of these transition spaces will enhance fellowship, stronger sense of community, greater mutual trust and helpfulness.



FUNCTION

It provides with interesting view through extensive classroom windows and natural environment outside the building. The more inspiring children will find it and the harder it is to meet the conditions for a silent, focused and typically frontal education. Hence it also acts as a place to exercise, have a chat with friends or learn without too many people around and noise disturbances.

RESULT

Identifying transition space as a sense of safety, and either its convertibility or the diversity of space used for teaching outside the wall of it might ensure the necessary complexity. These designs will find a way to solve the problem of restricting in an enclosed space through architecture and landscape design tools that individual feel more mentally environment aware.

6.5 DYNAMIC TRANSITION SPACES

LOCATION

The transition spaces are implemented with facilities in the exterior to connect various blocks in the primary school. This design is intended to improve the quality of spaces with incorporation of current trends in school design. Designed with open, interconnected spaces, the school encourages flow between classrooms.

6.5.1 CONCEPT

Transition spaces are designed with conscious consideration of planning the surrounding physical environment by mutually shaping so that a harmonious environment can be created for young minds. Possibilities for changes can be achieved as the structure will be temporary. Two typology are provided such as inner-outer, outer-outer and approaches based on everyday practice, dynamic environment and learning opportunities.



FUNCTION

Common gathering spaces are created in aspect of being multifunctional with drinking water facility, seating spaces to enjoy with a small group or friends in the outdoor improving communication skills. Temporary storage cabinets with seating, drinking water facility and washable ink in walls for improving communication to the respective age group.

RESULT

Provision of spaces like such have higher possibilities for change to upgrade in near future. The inspiration of these revival transition space are derived from global social motivation. Transition areas include vibrant murals and kinetic installations, stimulating creativity and engagement as students move throughout the school. Functional, social, symbolic and visuals are some of the impact of transition space. Success in supporting teamwork and flexible teaching practices affect subject matter of learning. Dynamic flow and spacious design had been inter-wined to create a better transition space among various blocks. Bright and spacious design along with innovative learning spaces improve the consideration of usage of transition space frequently which helps physical health of children.

VII. DISCUSSION

Evolution of Understanding Transition Spaces

Through the design studio, students demonstrated a growing awareness of the role that transition spaces play in enhancing educational environments. Many projects incorporated varied transition spaces that encouraged movement and interaction, showcasing an understanding of their potential to facilitate informal learning and socialization.

Reintroduction of Micro-Level Concepts

The design exercises emphasized the importance of micro-level elements in shaping student experiences. Students explored the tactile qualities of materials, the implications of scale, and the flexibility of spaces. Their designs reflected thoughtful considerations of how these details could foster engagement and comfort for primary school children.

Improvement of Technical Nomenclature

The design studio experience led to significant advancements in the students' architectural vocabulary. As they communicated their ideas through presentations and critiques, they became more adept at using technical terms related to spatial organization, circulation patterns, and materiality. This development empowered students to articulate their design intentions more clearly and effectively.

VIII. CONCLUSION

The 'transition space' workshop in architecture design studio has proven to be an effective platform for engaging students with the complexities of designing primary schools. By emphasizing the role of transition spaces, reintroducing micro-level concepts, and enhancing technical nomenclature, students gained valuable insights that will shape their future architectural practices. As education continues to evolve, so too must the spaces we design for learning, and future architects must be equipped with the knowledge and skills to lead this transformation.

The findings suggest that integrating transition spaces into primary school design not only enhances the educational environment but also provides architecture students with a comprehensive understanding of spatial dynamics. By focusing on micro-level elements, students learn to appreciate the significance of detail in architectural design. Moreover, nomenclature improved through the workshop which is essential for effective communication and collaboration within the architectural field.

IX. ACKNOWLEDGMENT

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