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3.3.1 Number of papers published per teacher in the Journals notified on UGC website during the last five years

Sr.no.	Title of paper	Name of the author/s	Name of journal	Year of publication
1	Addressing Gender Gap in Playgrounds: An Exploratory Study",	Mahimkar S. & Gokhale V. A.	AJANTA: An International Multidisciplinary Quarterly Research Journal, VII (I), 100-106 (UGC – CARE list 2018)	2018
2	The Theory of Evolution: Architecture of Avasara Academy, Pune.	Smita Dalvi	The Architectural Review, issue 1458, 26-35, February, 2019. (UGC – CARE list, 2019)	2019
3	Densify and Expand: A Global Analysis of Recent Urban Growth	Suman Kumar	SCOPUS Volume 13, Issue 7	2021

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SSR TABLE 3.3.1

3.3.1 Number of papers published per teacher in the Journals notified on UGC website during the last five years

2018	2019	2020	2021	2022
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Post Graduate Research  
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2018		
Sr.no.	Title of paper	Name of the author/s
1	Addressing Gender Gap in Playgrounds: An Exploratory Study",	Mahimkar S. & Gokhale V. A.
	Front Page	
	1st Page of document	
	UGC CARE LIST	

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Peer Reviewed Referred  
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(Journal No. 40776)

AN INTERNATIONAL  
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QUARTERLY RESEARCH JOURNAL  
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VOLUME - VII, ISSUE - I  
JANUARY - MARCH - 2018  
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2017 - 5.2  
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# AJANTA

ENGLISH PART - I

Ajanta  
Prakashan



## 14. Addressing Gender Gap in Playgrounds: An Exploratory Study

**Dr. Sudnya Mahimkar\***

Principal, B. R. Harné College of Architecture, At Karav, Vangani, Dist-Thane.

**Dr. V. A. Gokhale**

Professor, Dr. B.N. College of Architecture, Karve Nagar, Pune.

### Abstract

*Sport can be an important tool for social empowerment through the skills and values learned, such as teamwork, negotiation, leadership, communication and respect for others.*

*(United Nations, 2007)*

Participation in active sports has remained exceptionally low by women as compared to men and Sports participation data also supports it whereby the major difference lies in terms of outdoor sports. Outdoor sports participation by women in India has been scarcely explored and researched about. This study endeavours to examine the extent of women's participation in outdoor sports particularly in the spatial framework of playgrounds. The research questions include –

1. What are women's perceptions regarding outdoor sports for maintaining their own good health?
2. To what extent women access outdoor sports facility / playground?

The inquiry includes both quantitative as well as qualitative survey methods. Questionnaire survey for the sample size of 576 respondents included both gender to maintain a balance, neutrality and unbiased approach. Qualitative survey included visual research methods conducted at three playgrounds. The area of study was Mumbai Metropolitan Region. The data collected was analyzed with the statistical analysis software SPSS.

The outcomes reveal that there is an extreme gap between men and women users where women hardly perceived themselves using the playground for the purpose of active sports at any time of the day. It has also been found that the age played a major role in the perceptions as well as actual physical activities in the playgrounds. The study concludes and puts forth the serious



### UGC Approved (old) List of Journals

40776	Ajanta	UGC	Arts & Humanities	AJANTA PRAKASHAN,AURANGABAD	22775730	India
40777	The Voice of Sankara	UGC	Arts & Humanities	Jagadguru Shri Sancaracarya of Kanchi Kamakoti Pitha by Adi Sankara Advaita research Centre, Chennai		India
40778	Behavioural Scientist	UGC	Arts & Humanities	Council of Behavioural Scientists Bal Niwas,Taj Bassi, Agra Scientists Bal Niwas,Taj Bassi,Agra-282001(Bi-Annual Research Journal)	09725911	India
40779	Bhaishajya Jyotisha Manjusha	UGC	Arts & Humanities	Shri Lal Bahadur Shastri Rashtriya Sanskrit Vidyapeetham, Katwaria Sarai, New Delhi 110 016	23480890	India
40780	Kruti Rakshana	UGC	Arts & Humanities	Director, National Mission for Manuscripts 11, Mansign Road, New Delhi - 110 001	23195304	India
40781	Bharitya Shiksha Shodh Patrika	UGC	Arts & Humanities	Saraswati Kunj Nirala Nagar Lucknow-226020	09707603	India
40783	Brahmavidya- The Adyar Library Bulletin	UGC	Arts & Humanities	Adyar Library and Research Centre, Adyar, Chennai	09722106	India
40784	cikitusi	UGC	Arts & Humanities	Vidya Shri Nyas, Dawood Pur, Uttar Pradesh	09756876	India
40785	Caturanga	UGC	Arts & Humanities	KOLKATA, WB		India
40786	Dhimahi	UGC	Arts & Humanities	Chinmaya International Foundation Shodha Sansthan, Kerala	09763066	India
40787	Eduvogue	UGC	Arts & Humanities	GNE Journal of Reconstruction in Teacher Education Development Foundation of India,GNC Greater Noida-39A,Knowledge Park III-Gautam Buddha Nagar,UP infor@greaternoidacollege.org.	23201916	India
40788	Emerging Trends in Education	UGC	Arts & Humanities	Association for Innovative Education Varanasi (UP) (Referred & Peer Reviewed Biannual Journal)	09768696	India
40789	Ababhas	UGC	Arts & Humanities	KOLKATA, WB		India
40790	Parisheelan	UGC	Arts & Humanities	Suruchi Kala Samiti B-23 /45, Gha-A-S, Nai Barar, Khojwan, Varanasi	09747222	India
40791	Udbodhan	UGC	Arts & Humanities	RKMISSION, BAGBAZAR		India
40792	Universal Review	UGC	Arts & Humanities	SITBS, KOLKATA	22772723	India



2019		
1	The Theory of Evolution: Architecture of Avasara Academy, Pune.	Smita Dalvi
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# The Architectural Review

## The theory of evolution: Avasara Academy, Pune, India, by Case Design

11 FEBRUARY 2019 | BY SMITA DALVI | SCHOOL



For Case Design it was imperative that Avasara Academy be a product of collaboration and iteration, constantly evolving through a process of trial and error

On the valley slopes on the outskirts of the city of Pune in western India, it is the rejection of completeness and permanence, notions of accommodating imprecision, rejection, even trial and error, that have shaped Case Design's Avasara Academy. Based in Mumbai, architects Samuel Barclay and Anne Geenen 'explored the design process through the act of making', relying on 'small samples rather than intensive drawings' and creating a number of mock-ups 'in a dialogue with civil contractors, allowing the details to emerge' through a process of iteration.

### RELATED STORIES





founders Roopa Purushothaman and Joseph Cubas, of how to address the disparity between women and men in the Indian workforce – a school, whose pedagogy is customised to offer high-end education to girls. Their aim was to provide a ‘sanctuary for learning, a home away from home’ for girls from underprivileged households, which could enable them to become leaders and entrepreneurs with a ‘solid working knowledge of India, its people and history’. It is a school that teaches through experimentation- it is fitting, then, that the building process also centred on learning through experimentation.



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The newly formed firm hit the ground running with this, its first major architectural commission, using an approach that was both collaborative and iterative, seeking expertise in a non-hierarchical manner by ‘breaking barriers through trust’. Barclay acknowledges that ‘the role of the architect here is unconventional, but creating the team framework allowed for the collaborators to have their own space and make decisions and interventions within the context and limitations of the project’.

The architects and their collaborators formed a collegium, putting together collective expertise rather than dictating what should be done. Hemali Sawant, a landscape designer from Mumbai, shared experiences with neighbourhood farmers, leading to an understanding of site water management that resulted in the use of gravity-based irrigation systems. Transsolar’s Pratik Raval, a climate

**Plant in Copenhagen, Denmark, by BIG and SLA**

28 FEBRUARY 2019 | BY TOM WILKINSON

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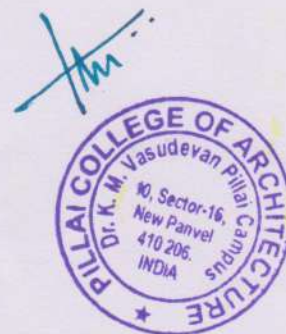
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**Laurie Baker (1917-2007)**

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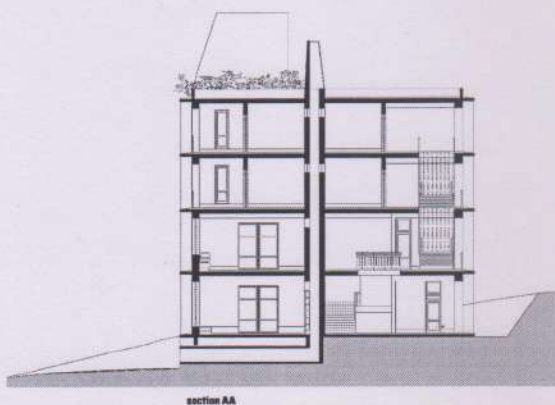
26 NOVEMBER 2019 | BY KAZI KHALEED ASHRAF



providing data that highlighted issues that could be addressed with customised bamboo facades. Coolth tubes, structurally integrated vertical cavities and solar chimneys were designed as induced ventilation systems in each building, lowering interior temperatures by 5-10°C during uncomfortably hot summer months.

## ‘Generous semi-outdoor spaces prevent the building from feeling shut in, while framing excellent views of the surrounding hills’

Working with Malene Bach, an artist from Copenhagen, natural pigments were chosen over industrial paints and coloured the ceilings, leaving all other surfaces *au naturel*, bringing surprise and delight. An aesthetic quality is achieved by retaining the natural colour and textures of the remaining concrete, cement wash, stone, wood and bamboo, all of which harmonise with the surrounding beige-brown hills.



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The six four-storeyed rectangular blocks follow the lie of the undulating hillside, acknowledging contours and seeking the best vistas. Despite being a girls' school, there is no sense of cloistering; quite the reverse, the generous semi-outdoor spaces and verandas prevent the building from feeling shut in, while framing excellent views of the surrounding



inescapable.

Each block is built with the endowment of one donor and, as such, is being built in phases. At the time of my visit, three of the blocks were built and functioning, with the remainder in various stages of completion. The school began its academic functions even as building activity continued.



Source: Case Design

Mock-ups are constructed to trial doorways of marble and timber

Students and classes are everywhere; learning seems to happen even in the atria and on the verandas. Girls of all ages read, talk, work on laptops, sit on stairways and mosaic floors or lounge on the many, work on laptops, sit on stairways and mosaic floors or lounge on the many scattered *charpoy*s - lightweight four-legged Indian bedsteads, woven with colourful chords of recycled cotton sarees wound expertly by traditional craftsmen. In each block, the lower storeys house classrooms, laboratories, a library, administration areas, staff offices and lounges, and kitchen and dining areas; the upper two storeys are reserved for the girls' dormitories. All the buildings are inhabited and lively on the lower two floors during school hours and the upper two afterwards.

Occasional flurries of movement indicate breaks for recess, when everyone seeks out the warmth of the winter sun to eat tiffin before moving on to their next class in subject-dedicated rooms. The students



intimacy with the architecture.

## 'The simple frames allow for both infill and enclosure to emerge as a series of hands-on engagements with the collaborators'

Each block has a simple concrete armature with generous overhangs and a dog-legged staircase that recalls the Domino frame (this is increasingly becoming the de facto vernacular in most parts of developing India). This frame provided malleability and accommodated revisions as the buildings progressed, developing the design as a 'slow process'. There is a refreshing lack of desire to hide electrical or plumbing conduits, or tiny imperfections in the cast concrete, while the simple frames allow for both infill and enclosure to emerge as a series of hands-on engagements with the collaborators, developing architectural elements as prototypes for the school.



Source: Case Design

Design of an open well, on a human palm

These prototypes include variations on bamboo screens for the facade, as well as masonry walls, furniture and light fixtures that evolved in the studio workshop and on site. With a tip of the hat to George Nakashima - whose furniture with signature butterfly joints and unfinished edges adorns the school's communal spaces - the lightly woven screens are placed on the building's



overhangs to provide privacy, reduce glare and give a textural quality to the interior and exterior through a delightful play of shadows, while unifying the architectural scheme. Mock-ups became a means of holding conversations with the contractors and artisans who played a role in evolving the design decisions.

**'If a project is constantly in progress, at what point is it useful to stop and assess it?'**

Recycling and reuse also formed a central theme in the design: the majority of the timber fenestration was recycled from demolished structures that not only reduced costs and extended the life of these elements, but also lent a lived-in feel to a newly constructed building. Each of the differently dimensioned doors and windows were built into the walls individually, requiring a degree of on-site flexibility. The distinctive crazy mosaic paving that appears all over the campus was made with stone pieces sourced from quarry waste from Rajasthan and Gujarat, and inlaid with coloured cement. The laying of the floors is a fast-vanishing technique - not only slow, it is also intuitive and requires a particularly site-sensitive paver.



Barclay acknowledges that lessons learned from the earlier blocks have informed changes to those

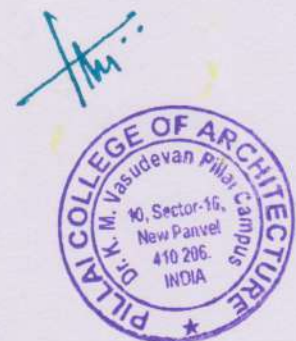
dampness occasionally leads to fungal attacks, so the screens have been modified to withstand this. In future, bamboo may also be cultivated on the grounds itself, providing a ready resource for necessary replacements.

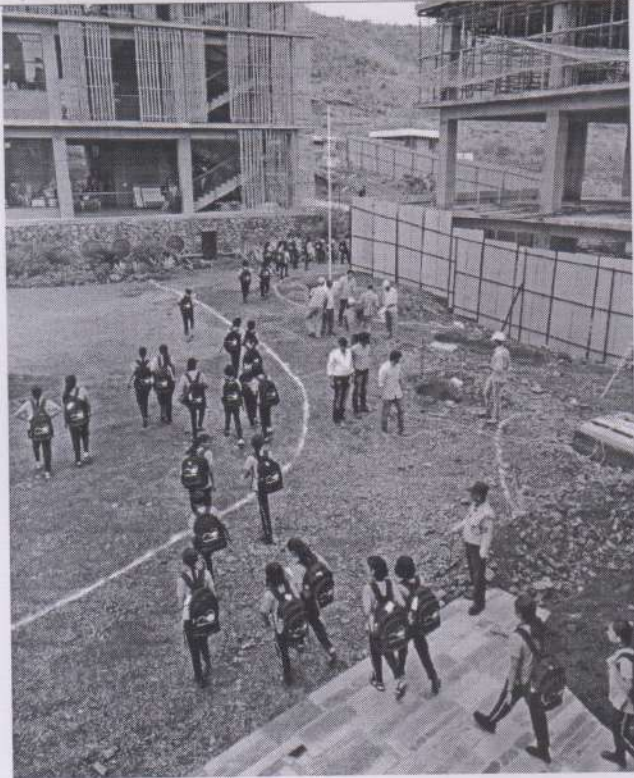


Source: Case Design

**Mosaic paving is formed from waste stone pieces from quarries in Rajasthan and Gujarat**

At Avasara, the architect becomes the orchestrator rather than the sole author, the first among equals in an assemblage of collaborators. As such, this project complicates the assessment of architect as well as architecture: if a project is constantly in progress, at what point is it useful to stop and assess it? This much is certain - while construction is incremental, architects, collaborators, students and faculty are all invested in this transience. As a constant work in progress, the activities of building and landscaping provide invaluable exposure for the students, not only to concepts of sustainability but also to those of acceptance, accommodation and an appreciation of the lived experience.





Source: Case Design

Paving is planned out across the site

Architect: Case Design

Project Team: Samuel Barclay, Anne Geenen, Dhvani Mehta, Shoeb Khan, Ami Mattan, Paul Michelin, Farhaan Bengali, Simone Picano, Chirag Bhagat, Ketaki Raut, Ji Min An, Tofan Rafati

Photographs: Ariel Huber unless otherwise stated

This piece is featured in the AR February 2019 Failure issue - [click here to purchase your copy today](#)

#### DRAWINGS

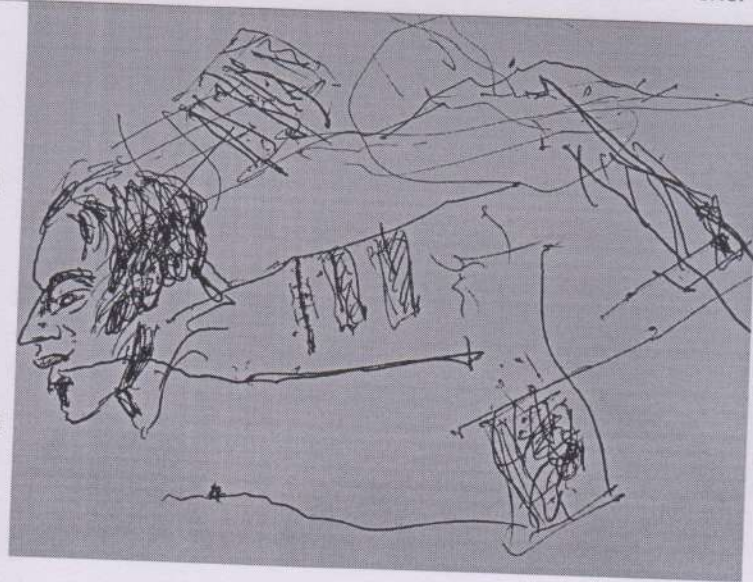
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4	101	3D Research	Springer Science + Business Media		20926731
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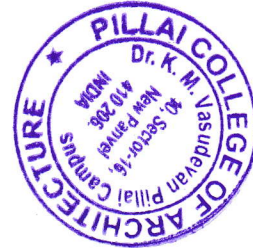


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Article

# Densify and Expand: A Global Analysis of Recent Urban Growth

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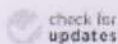
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**Abstract:** Serious concerns with accelerating global warming have been translated into urgent calls for increasing urban densities: higher densities are associated with lower greenhouse gas emissions, especially those related to vehicle kilometers traveled (VKT). In order to densify meaningfully in the coming decades, cities need to make room within their existing footprints to accommodate more people. In the absence of adequate room within their existing footprints, cities create more room through outward expansion, typically resulting in lower overall densities. We introduce a quantitative dimension to this process, focusing on the population added to a global stratified sample of 200 cities between 1990 and 2014. In three-quarters of the cities we studied, the areas built before 1990 gained population and thus densified significantly. On average, however, only one-quarter of the total population added to the 200 cities in the sample in the 1990–2014 period were accommodated within their 1990 urban footprints, while three-quarters were accommodated within their newly built expansion areas. That resulted in an overall decline in average urban densities during the 1990–2014 period despite the near-global, decades-old and rarely questioned consensus that urban expansion must be contained.

**Keywords:** urban density; densification; urban expansion; containment; compact cities; making room



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## 1. Background and Research Questions

Between 1950 and 2020, the world's urban population has grown by a factor of 5.8 [1] (file 3), while income per capita has grown by a factor of 4.4 [2]. Urban economies have thus grown, on average, by a factor of 25 or more during this period. As cities have grown and developed, their residents have needed more room or, more precisely, more floor space. We observe that cities have added floor space in three ways: by building upwards, by infilling the vacant open spaces between buildings, or by expanding outwards, and they typically grew in all three ways together.

We can distinguish between these three ways by referring to building upwards and infill within existing urban footprints as *densification* and to building outwards as *expansion*. To an important extent, densification and expansion are substitutes: typically, when not enough room can be made available to meet the demand for floor space through densification, then room is inevitably made available through expansion. Conversely, when there are barriers to expansion, densification creates more room than it would create in the absence of such barriers. In an ideal real estate market, households and firms can choose whether to locate within existing urban footprints or on the urban periphery, thus contributing to densification or expansion. Indeed, the classical models of the urban land market, e.g., [3–5], posit a market equilibrium where households and firms settle on their preferred combination of land and transport cost, opting for a smaller plot closer to the city center or a larger plot further away.

City planners, environmentalists, and other advocates of the “compact city paradigm,” e.g., [6,7], assert that the tradeoff posited in the standard model leads to “urban sprawl”.



Making room for orderly urban expansion—a subject on which the authors have already elaborated in numerous publications (see, for example, [28,54,61])—requires the public sector to take minimal actions to prepare the rural periphery of growing cities for urban development by taking four actions: (1) estimating the amount of land required for development during the next three decades and identifying potential expansion areas; (2) protecting areas of environmental risk as well as a hierarchy of public open spaces from development; (3) laying out and securing the rights-of-way for a future arterial infrastructure grid that can carry public transport throughout the projected expansion area; and (4) fostering the proper subdivision of lands—to rectangular or near-rectangular plots, where possible—by all suppliers of commercial and residential lands, with special attention given to informal housing developers, so as to prevent rural lands converted to residential use from becoming and remaining “slums”, and facilitating their transformation into regular residential neighborhoods. These four basic actions are the foundation of a comprehensive strategy for making room for urban expansion.

Making room through orderly urban expansion requires the public sector to actively engage with development on the urban periphery, but such engagement is unlikely to take place as long as advocates for the compact city paradigm keep pressing for containment, choosing to look away from disorderly urban expansion—as though waiting for it to magically disappear—instead of seeking to manage urban expansion properly.

In decades past, the pursuit of compactness has led city leaders to largely neglect both aspects of the making room paradigm. The focus on containment typically neglected direct cities to make adequate room for their densification, leaving them no choice but to expand [35]. Worse yet, the disengagement of those favoring containment from the expansion agenda—by refusing to lend a hand to planning them properly—typically resulted in disorderly expansion: the invasion of areas of high environmental risk that should have been kept free of development; contiguous urban development with the absence of a hierarchy of public open spaces; a dearth of arterial roads in expansion areas that can carry public transport and link people to jobs; inadequate land devoted to streets and civic buildings; city blocks that were too large to facilitate walking; and subdivisions that were improperly laid out and difficult to service, making it difficult to transform them into regular urban neighborhoods [62].

The data presented in this paper highlight the fallacy of that approach, provides some initial explanations of why and how densification occurs, presents strategies for how to manage urban growth, and offers a new tool, the making room paradigm, to put the efforts of urban planners and city leaders on a more empirical, sustainable, inclusive, and reality-based footing—one that seeks to welcome all future and current urban residents and to empower city governments to lead the way in shaping their future cities.

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