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**PADMASHREE DR. D Y PATIL COLLEGE OF ARCHITECTURE**  
Sector No. 29, B/h. Akurdi Railway Station, Nigdi Pradhikaran, Akurdi, Pune - 411044

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## **CRITERIA 3**

### **3.3 - Research Publication and Awards**

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**DVV**

**3.3.2.1**

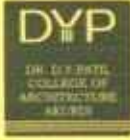


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## **FINDING OF DVV**

<b>1</b>	<b>Detailed reports for extension and outreach program with specific mention of the numbers of students participated and a collaborating agencies.</b>
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## **CRITERIA 3**

*Research, Innovations and Extension*

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*Key Indicator 3.3- Research Publication  
and Awards*

### **3.3.2**

## **Criteria 3 - Research, Innovations and Extension**

### **Key Indicator 3.3- Research Publication and Awards**

**3.3.2 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years**

Sr. No.	Contents	
	Title	Name of Author
<b>(A)</b>	<b>2021-22</b>	
1.	Socio-Economic Profile Of The Residents Of Swantwadi, Maharashtra: 1865 To 1920	Ar. Chaya Tirvir
2.	Heritage walk at Chichwad- A Walk through the essence of the Past	Ar. Sneha Sharma
3.	Pedagogy and practice ' heritage Walk ' in Architecture Pedagogy: "A Step towards Conservation Practice in Architectural Profession"	Ar. Sneha Sharma, Ar. Chaya Tirvir, Ar. Raksha Bongirwar
4.	Bloom's Taxonomy: Influential Learning Parameter to Architectural Pedagogy	Ar. Raksha Gaurshettiwar
5.	Divergent Thinking Abilities ( A Part of Creative Thinking and Behaviour)	Ar. Raksha Bongirwar
6.	A Theoretical Framework for Assessing Landscape Services of Urban Open Spaces	Ar Nupur Chichkhede
7.	A Holistic End of Life Care For Cancer Patients:Hospice Cancer Care Center	Chaya Tirvir
8.	Phaltan Aitihasic Vastukalecha Varsa	Ar. Sneha Sharma
9.	Identification and Management of Various Risks Involved in Residential Construction Projects – A Case Study of Pune	Ar. Madhavi Karangale
<b>(B)</b>	<b>2020-21</b>	
1.	Architecture Education Enhancement : Teaching Approach To Edify History Of Architecture In Architecture Education	Ar. Raksha Bongirwar, Ar. Anita Meskar
2.	RE-Connect with Nature, the first step of Sustainable living	Ar. Avanti Gole
3.	Earned Value Analysis Of Residential Building For Project Tracking	Ar. Aparna Panganti
<b>(C)</b>	<b>2019-20</b>	
1.	Realization of Designing inclusive environment of cremation space : The unseen Sacred Land in Indian Setting	Prof. Chaya Chavan- Tirvir

2.	Implementation of Six Sigma Methodology in Construction Industry For Quality Process Improvement	Ar. Bhagyashree Kadiwal
3.	Implementation of Six Sigma Methodology in Construction Industry For Quality Process Improvement	Ar. Bhagyashree Kadiwal
<b>(D) 2018-19</b>		
1.	Traditional form interpreted by new technique	Ar. Chaya Tirvir, Ar. Raksha Bongirwar
<b>(E) 2017-18</b>		
1.	Public Architecture and Role of Local Contractors in Late Nineteenth Century Case of Poona	Dr. Vaidahi Lavand
2.	Analytical Study of Parameters Influencing Extinction of Vernacular Traditional Architecture in Vidharbha Region	Ar. Mihir Vakharia
3.	Impact of Urban Development on Climate Change	Ar. Nikhil Mehare
4.	Potential of Mixed Mode Buildings in Hot-Dry Climate, Ahmedabad	Ar. Mehak Mathur, Ar. Mihir Vakharia
5.	Immediate impact of Rera on Construction Industry	Ar. Aparna Panganti
6.	Ferro cement as a cost effective alternative to RCC	Ar. Laxmi Salgia, Ar. Aparna Panganti
7.	Art in rehabilitation center	Ar. Chaya Tirvir
8.	Indoor and Outdoor Design : An Ecotel in Auroville	Ar. Chaya Tirvir
9.	Automobile Mall - Need of Future India	Ar. Chaya Tirvir
10.	Precast Element Erection and Installation at Site - A Case Study	Ar. Aparna Panganti
11.	Understanding Heritage Potential of Sasvad," A Historic Medieval Town of Deccan	Dr. Vaidahi Lavand
12.	Restructuring Transport Network in Urban context- A Case of Pune	Ar. Abhijit Marwar, Ar. Nikhil Mehare, Ar. Mihir Vakharia
13.	Challenges Faced by Human Resource Management in Construction Firms	Ar. Aparna Panganti

Sr. No.	Contents	
<b>(A)</b>	<b>Title of the Book</b>	<b>Name of Author</b>
1.	Green Energy and Sustainable Environment (2023) Alpha International Publication	Ar. Abhinav Srivastav & Ar. Madhavi Karangale



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### **Key Indicator 3.3- Research Publication and Awards**

**3.2.2.1 : Total number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings year wise during last five years**

<b>Year</b>	<b>2021-22</b>	<b>2020-21</b>	<b>2019-20</b>	<b>2018-19</b>	<b>2017-18</b>
<b>Number</b>	09	03	02	01	13



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**ACADEMIC YEAR**

**2021-22**

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**SOCIO-ECONOMIC PROFILE OF THE RESIDENTS OF SWANTWADI,  
MAHARASHTRA : 1865 TO 1920**

**Prof. Chaya Chavan - Tirvir**

saisanskrutichaya@gmail.com

**Abstract:** Socio-economic status can be defined as a measure of combining the economic with social status and tends to be positively associated with better development of the society. Socio-economic profile focuses on three common measures of socio-economic status namely education, income, and occupation. Socio-economic profile is generally thought to influence the society through following avenues: Socio-economic profile influences the society through the ability to pursue the education and using the other resources available. The opportunities available in the town in terms of economic generation also affect the socio-economic profile of the area. Less opportunities tend towards the working population to opt for migration, the whole cycle of socio-economic development changes. In research, it is not only important but also equally essential to explain the socio-economic profile of the residents. Socio-economic profile of the residents will affect the change in life style of residents, change in house level spaces, community level spaces and town level spaces. In this research study, A set of personal characteristics namely, age, sex, education, occupation, income etc. of the residents of Sawantwadi, Maharashtra have been reviewed with the help of available data, reports and surveys and presented.

The main objective of the study was to understand the socio-economic profile of the residents of Swantwadi, Maharashtra India and its effect on various changes like residential unit level changes, community level changes and town level changes, since 1865 to 1920. In 1865 to 1920 time span Sawantwadi state was undergone with various measure events, and as a result the socio-economic profile of the residents have drastically changed and its impact was reflected in house level spaces, community level spaces & town level spaces. Research approaches/ methodologies of this study are to review the available data, reports and surveys of the Sawantwadi and reached to the conclusions. The socio-economic status serves to understand the way people survive and making a living in Sawantwadi.

**Keywords:** Socio-economic, Profile, Occupations, Status, Income.

**ROLE OF AN ARCHITECT AS A CREATOR OF 'THE SPACE' THAT CAN CONNECT OR  
SEPARATE ITS OCCUPANTS (WITH THE FOCUS ON RESIDENTIAL TYPOLOGY)**

**Ar. Shubhashri Deependu Upasani**

sdupasani10@gmail.com

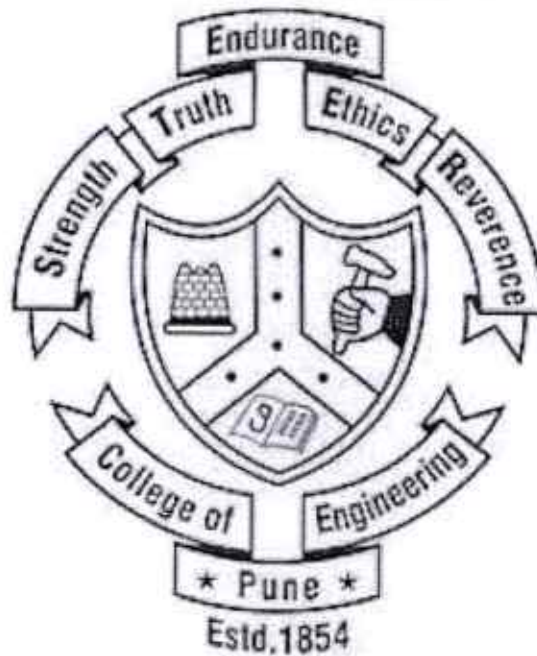
**Abstract :** Society as a living entity is composed of many factors like environment, landscape, transportation of which two main are – the occupants and the built-unbuilt spaces around them. Development of the society can be

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## Heritage walk at Chinchwad-

### A walk through the essence of the past

**Anagha Namasevi**

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**Prof. Ar.Sneha Sharma**

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#### **ABSTRACT :**

*Cities and towns over the years have developed and grown rapidly causing urbanisation. This situation has not only caused a threat to the environment but has also overlooked and affected the local culture, context and traditional aspects. Pune being the cultural capital of Maharashtra is one such culture based settlement. Chinchwad, an urban settlement with rich historic background, is now on the verge of altering the historic fabric under development pressure. This situation calls for an urgent need of a sustainable solution which will not only uplift the socio-cultural importance of the city but also boost the economic development and employment opportunities. The paper aims to propose "Heritage walk" as a suitable solution which will not only educate the younger generation and the tourists about the past and culture but will also act as a sustainable development solution to preserve and nurture the local heritage.*

**Keywords:** Heritage walk, Local context, Conservation, Sustainable development

#### **1. Introduction**

Over the years, urbanization has taken speed and cities have now significantly grown into economy centric development zones. The rapid growth and urbanization is now causing a critical threat to the future with the growing population. The development from the rural to urban life and the journey to an urban civilization has left the city's culture and history being overlooked having an adverse impacts on social, cultural and environmental aspects. Such rapid growth has left a very small window for even highlighting and uplifting places that hold historic and cultural importance, ultimately creating an identity of the city.

The cultural heritage of India lies solely in its old cities, towns and ancient settlements. Pune being the cultural capital of Maharashtra is one such culture based settlement. Chinchwad, an urban settlement with rich historic background, is now on the verge of altering the historic fabric under development pressure. This situation calls for an urgent need of a sustainable solution which will not only uplift the socio-cultural

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Volume 5, Issue 1, January-March 2017, Pages 68-71, Page Count - 4



### Pedagogy and Practice `Heritage Walk` in Architecture Pedagogy: ``A Step towards Conservation Practice in Architectural Profession``

Sneha Sharma <sup>(1)</sup> Chhaya Tirvir <sup>(2)</sup> Raksha Bongirwar <sup>(3)</sup>

<sup>(1)</sup> Assistant Professor, DR. D Y PATIL COLLEGE OF ARCHITECTURE, Akurdi, Pune, India.

<sup>(2)</sup> Assistant Professors, DR. D Y PATIL COLLEGE OF ARCHITECTURE, Akurdi, Pune, India.

<sup>(3)</sup> DR. D Y PATIL COLLEGE OF ARCHITECTURE, Akurdi, Pune, India.

#### Abstract

*Our Heritage is a legacy from our past. It is something we live with today and, hopefully, something that we can pass on to future generations. In every country, cultural heritage is both a record of life and history and also an irreplaceable source of creativity and inspiration. Our cultural heritage, like our DNA, determines who we are, giving us both identity and the values that will guide our lives in a changing world. Protecting the built heritage and conserving the local traditional and cultural values of communities for future generations present a real challenge for developers, architects, and professional education programs which are responsible for preparing the courses focused on heritage conservation aspects, learning respectful aware design with cultural context, and qualified graduates in planning, design, and implementation of conservation projects. Education in an institution starts from books and classrooms but for over- all development of students it is very important to teach even beyond the classrooms and textbooks. In architectural education it is very necessary to teach students their social responsibility as an Architect towards society. A socially responsible Architectural Practice can contribute into better city environment which can include restoration and conservation of city's Heritage Buildings. Thus, creating awareness amongst the students about city's Heritage buildings is one of the most important tools of teaching-learning process in Architectural pedagogy. The paper aims to propose an educational methodology for dealing with heritage walk and how we can adopt our heritage design in city's uncontrolled development and Industrialization. This is possible when teachers can connect Architecture Education with Architectural Practice. Considering this, Dr. D. Y. Patil College of Architecture, Akurdi, Pune, organized a heritage walk for first year students for an introduction to the students about city's Heritage Character which can encourage the students to participate into Conservation Practice in future.*

#### Author Keywords

Architectural Education, Traditions, Heritage Conservation, Conservation Teaching, Educational Methodology

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### Bloom`s Taxonomy: Influential Learning Parameter to Architectural Pedagogy

Vishal Patil <sup>(1)</sup> Raksha Gaursbettiwar <sup>(2)</sup>

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<sup>(2)</sup> DR. D Y PATIL COLLEGE OF ARCHITECTURE, Akurdi, Pune, India.

#### Abstract

The domains of the Bloom's Taxonomy - though having its origin and roots way back in 1956 by Benjamin Bloom is existing in our daily life and in all forms of education. A goal of Bloom's Taxonomy is to motivate educators to focus on all three domains, creating a more holistic form of education which is exactly the seed of architectural education. With the study of humanities, physical and social sciences, technology and the creative arts we have a truly holistic form of education in architecture travelling from the cognitive to the affective and finally the psychomotor domains Bloom's Taxonomy is continuously evolving, through the work of academics following in the footsteps of Bloom's early associates, as a fundamental concept for the development of formalized education across the world. As with so many of the classical models involving the development of people and organizations, you actually have a choice as to how to use Bloom's Taxonomy. It's a tool - or more aptly - a toolbox. Tools are most useful when the user controls them; not vice-versa. Use Bloom's Taxonomy in the ways that you find helpful for your own situation.

#### Author Keywords

Blooms Taxonomy, Cognitive, Affective, Psychomotor, Relevancewith Architecture Education

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### Divergent Thinking Abilities (A Part of Creative Thinking and Behaviour)

Raksha Bongirwar <sup>(1)</sup>

<sup>(1)</sup> DR. D Y PATIL COLLEGE OF ARCHITECTURE, Akurdi, Pune, India.

#### Abstract

Divergent thinking usually includes the ability to elaborate, and think of diverse and original ideas with fluency and speed. Ideating and brainstorming are premiere examples of exercises using this type of thinking. What if . . . ? How about . . . ? Could we try this or that idea . . . ? Are types of questions that can lead to divergent thought patterns? Metaphorically, whether we live in areas with snow, most of us have seen movies or cartoons where a small snowball rolls down a hill picking up more snow and getting larger and larger. This is like divergent thinking. The primary object of this form of cognition is to think of possibilities, to connect the dots, to find solutions, to generate new and different ideas. Through this theory of creative thinking students learn how to gain creative skills and produce innovative and creative solution and this would be considered as the real value of design studios education. The creative thinking and behaviour education helps students to use their creative problem solving approach and skills during the professional practice to develop creative design outcomes. This research paper focus on divergent thinking abilities and its implication in architecture education.

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SCHOOL OF ARCHITECTURE

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Dr. P. Y. Patil  
Principal, SMEF's Brick School of Architecture,  
Undri, Pune

International conference  
on  
**Blurred boundaries:**  
In search of an identity

**Conference Proceedings**



Dr. D.Y. Pail Professor's  
Padmashree Dr. D.Y. Pail College of Architecture,  
Akundi Pune



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## D. Identity and Sustainability

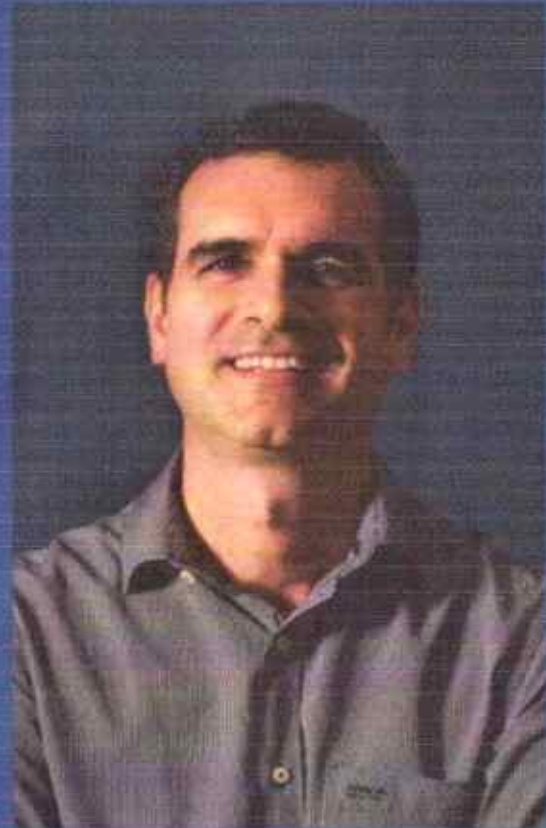


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# A Theoretical Framework for Assessing Landscape Services of Urban Open Spaces

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## Abstract

The review of literature brought forth the impact of urbanization on biodiversity loss, degradation of ecosystem services, and human health. The research studies also indicate the role of open spaces in terms of improvising mental and physical health, psychological benefits, and social interactions. Cultural services ask the nonmaterial outputs that folks obtain from contact with ecosystems. The landscape Services approach broadens the concept of sustainability. It assumes the contributions of both natural and cultural, spatial patterns to the standard of life and situates economic, ecological, and socio-cultural dimensions, based upon the literature a theoretical framework for assessment of landscape services in Urban Open Spaces is developed.

Keywords: Landscape Services, Open Space Characteristics, Benefits.

## 1. Introduction

Rapid urbanization also puts pressure on urban green spaces like parks and green areas, which give space for social interaction and important ecosystem services. (Living Planet Report, 2020). About 4.2 billion people, quite half the world's population (55.3 percent), live in urban areas today. According to an estimate by WHR2020, because of rapid urbanization in 2016, 90 percents of city dwellers are breathing unsafe air, leading to 4.2 million deaths because of ambient pollution. Cities account for about two-thirds of the world's energy consumption and over 70 percent of worldwide greenhouse emissions. Urban areas and inefficient land use contribute to biodiversity loss.

Urban areas consist of the built environment and the open spaces. Considering the minor differences in the description of green spaces in the literature review, Open space is often described as any piece of land that is undeveloped and has no building structure on it. But since it is believed that, open spaces like plazas, playing fields and urban squares are contributing to improving public health and environmental quality of the neighborhood, (Olsson, 2012). It suggested that there must be a thought on incorporating all significant outdoor spaces which fall within the influence of the urban area (Stiles, 2011).

Landscape, Considered as holistic, spatial, and mental dynamic entity, which is that the results of people-place interactions (Maria Vallès-Planells, 2014). A overall view implies the hierarchical organization of landscape, and therefore the context and the relationship between the landscape elements; Its dual dimension, material and immaterial, implies that landscape isn't just a geographical entity composed of abiotic, biotic, and human-made elements, but it's also our perceived environment. Humans aren't just seen as factors whose actions have a positive or negative impact on nature; they're seen as an integral part of the landscape. (Naveh and Lieberman 1994, Naveh 2000).

The concept of 'landscape services' would be more appropriate than 'ecosystem services' to incorporate both natural and cultural aspects, suggested by Termorshuizen and Opdam (2009). The consideration of spatial patterns of the landscape and therefore the involvement of stakeholders, especially within the context of local collaborative landscape planning would be easier to scale the landscape services. According to de Groot 2006, the landscape wasn't considered a synonym for ecosystem or not considered to be a bunch of ecosystems, but landscapes were seen as spatial human-ecological systems, which delivered a good range of functions valued by humans for economic, socio-cultural, and ecological reasons. As per the Landscape Convention (Council of Europe 2000), the landscape consists of all kinds of areas like natural, rural, urban, and peri-urban. this suggests that cultural landscapes or urbanized areas can also contribute to well-being, not just greenery. There's an effort to correct the imbalance between the material and immaterial benefits reflected in classifications. Thus, cultural services aren't simply considered as amenities associated with enjoyment (Haines-Young and Potschin 2010), they're considered services that contribute to the elemental needs associated with social well-being, health, and private realization. Landscape helps to regulate both ecological and perceptual processes. Thus, horizontal relations between ecosystems, alongside the vertical relations within ecosystems, are considered liable for the supply of landscape services. (Maria Vallès-Planells, 2014).





## International Conference on Blurred Boundaries: In Search of an Identity

24th-26th September

### Participation Certificate

This is to certify that **Ar. Nupur Chichkhede** has participated as an **Author for Paper:**  
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organized by SMEF's Brick School of Architecture Pune in September 2021.

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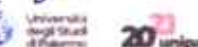
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# A Holistic End of Life Care For Cancer Patients; Hospice Cancer Care Center

Supriya Desale<sup>1</sup>, Chaya - Tirvir<sup>2</sup>

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## Abstract :

In India, the statistics show the mortality rate has gotten up to 40% in the cancer suffering population. While facing these debilitating diseases, patients have to suffer pain which can relieve through chemotherapy and medication. Still, the psychological impact that these patients suffer is, even more, decreasing their limited lifespan. In this phase, the patient and the caregiver suffer a lot, whether mentally, financially, or physically. Today, the hospitals that are reachable to the poor do not provide these palliative care facilities. Hospitals in India do not engage in the wellness of the patients; instead, they focus on patient's physical pain, which is treating half of the problem. The burden of cancer and the unavoidable fight can weigh heavy on one's psyche, leading to sadness and depression. Provision of palliative care and introduction to the mental and emotional active games can enhance the engagement of the patients in the activity and divert them from the physical pain they are suffering. At the end of life care, the patient's thoughts are compassionate; attending to these thoughts and managing the thoughts in a positive direction is what hospice care gives. Because cancer is a very enfeebling illness, the quality of the environment and space we can provide as an architect has the potential to improve the physical and mental condition of cancer patients. The dissertation aims to study the relationship between the built and natural environment affecting the patient's psychology in a positive way. This aim can be achieved via conducting interviews of the stakeholders, studying the literature and case studies. This paper is limited to amalgamating built environmental elements and the natural environment. What has been investigated is the unpredictable elements of the built environment.

**Keywords :** Hospice, Palliative, Cancer, Built, Nature

## 1. Introduction

Cancer patients can be of two types, mainly terminal and non-terminal stages of cancer. Unpleasant symptoms are common in patients diagnosed with cancer, particularly advanced and metastatic cancer. Up to 61% of patients experience more than one unpleasant symptom, and 30% experienced more than 5. Younger adulthood reports more symptoms of distress than older adults. So, both more and worse symptoms are proportionately associated with worst functionality and QOL. Fear of pain and other symptoms is a significant source of distress and may impair physical functioning. While historically associated with the end of life care, palliative care has shown significant benefits to QOL and symptoms control when integrated earlier into the care of patients with metastatic or high-risk cancer. Multiple studies have demonstrated less severe symptoms with early hospice and oncology care than with standard oncology care. A wide breadth of symptoms has shown improvement in the palliative care environment. Caregiver mood has also been enlightened by moving palliative care in the treatment trajectory.

राज्यस्तरीय वास्तुकला मराठी परिषद

२७ फेब्रुवारी २०२२'

मराठी  
राजभाषा  
दिन

शोधनिबंध पुस्तिका

आयोजक



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पुणे



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तंत्रशिक्षण विभागीय कार्यालय, पुणे व भारतीय कला प्रसारिणी सभेचे वास्तुविद्या महाविद्यालय पुणे आयोजित,  
'राज्य स्तरीय वास्तुकला मराठी परिषद', २७/२/२०२२

## फलटण ऐतिहासिक वास्तुकलेचा वारसा

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### गोषवारा :

संबंधित फलटणच्या वास्तुकलेच्या इतिहासाची आणि वैशिष्ट्यांची छायाचित्रण, रेखाकृती व मजकूर स्वरूपात मुद्देसूद मांडणी केलेली आहे. वास्तुकलेचा व स्थानिक वास्तुकलेचा अभ्यासास हा प्रत्यक्षरित्या वास्तुना भेट देऊन केलेला आहे. फलटणचे नाईक - निबाळकर राजघराणे व नाईक - निबाळकर चॅरेटेबल देवस्थान ट्रस्ट यांच्याशी प्रत्यक्ष मुलाखत घेवून फलटण शहराचे व वास्तुकलेचे ऐतिहासिक महत्व जाणून घेण्याचा प्रयत्न केला आहे. तरी फलटण शहराच्या ऐतिहासिक वास्तुकला क्षेत्रात प्रकाशित व्हावे हाच या लेखामागील मुख्य उद्देश आहे.

### मुख्य शब्दावली :

ब्रिटीश आणि मराठा वास्तुकला, स्थानिक वास्तुकला, युरोपीयन आर्ट डेको, सर्वेक्षण

### प्रस्तावना :

छत्रपती शिवाजी महाराजांची सासूरवाडी, थोरल्या महाराणी साहेब सईबाई यांचे माहेर, छत्रपती संभाजी महाराजांचे आजोळ तसेच बडोदा नरेश प्रतापसिंह महाराज यांचे आजोळ अशा ऐतिहासिक आठवणींनी साक्ष देणारे फलटण शहर महाराष्ट्राच्यातील सातारा जिल्हयामध्ये स्थित आहे. फलटणचे नाईक- निबाळकर घराणे हे सर्वात जुने मराठे राजघराणे मानले जाते. जवळजवळ 13 व्या शतकापासूनचा इतिहास फलटण संस्थानाला लाभला आहे. शहराची कार्यपणाली शैक्षणिक, सांस्कृतिक, सामाजिक व राजकीय क्षेत्रामध्ये अद्येसर आहे. महानुभव पंथांची दक्षिण काशी असे देखिल फलटणला ओळखले जाते.

उत्कृष्ट वास्तुकलेचा नमुना असलेला नेत्रदिपक असा मुघांची मनमोहन राजवाडा येथील पर्यटनाचे मुख्य आर्कषण आहे. जगभरातून कारागीर बोलावून या राजवाड्याचे बांधकाम करण्यात आले या वास्तुचा काही भाग हा 145 वर्षे जुना तरी काही भाग हा 110 वर्षे जुना असून आजतागायत

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# IDENTIFICATION AND MANAGEMENT OF VARIOUS RISKS INVOLVED IN RESIDENTIAL CONSTRUCTION PROJECTS – A CASE STUDY OF PUNE

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## ABSTRACT

*Risk is defined as an unpredictable event that has the ability to positively or negatively affect a project. It has an impact on a variety of project objectives, including safety, quality, and overall project cost, as well as the environment. Developing Residential projects has a history of being blamed for project failures. This is due to the numerous risks involved in the process. This study aims to identify major risk factors which impacts negatively on the delivery of completion of residential projects. From Literature review, Research Papers and Interviews of experts, 20 risk were identified and rated accordingly score collected by questionnaire.*

**Keywords - Risk Management, Construction Projects, Risk Identification, Risk Response**

### 1. INTRODUCTION –

In recent years, Construction projects are initiated in complex and dynamic environments. Each construction project is unique and comes with its own set of challenges and opportunities. All construction projects carry certain level of risk.

The PMBOK describes risk as an uncertain event or condition, that if it occurs, has a positive or negative effect on a project's objective. The key element of this definition is that it is uncertain.

Ar. SHWETA RASKAR, Prof. MADHAVI KARANGALE, Prof. MAHESH BANGAD

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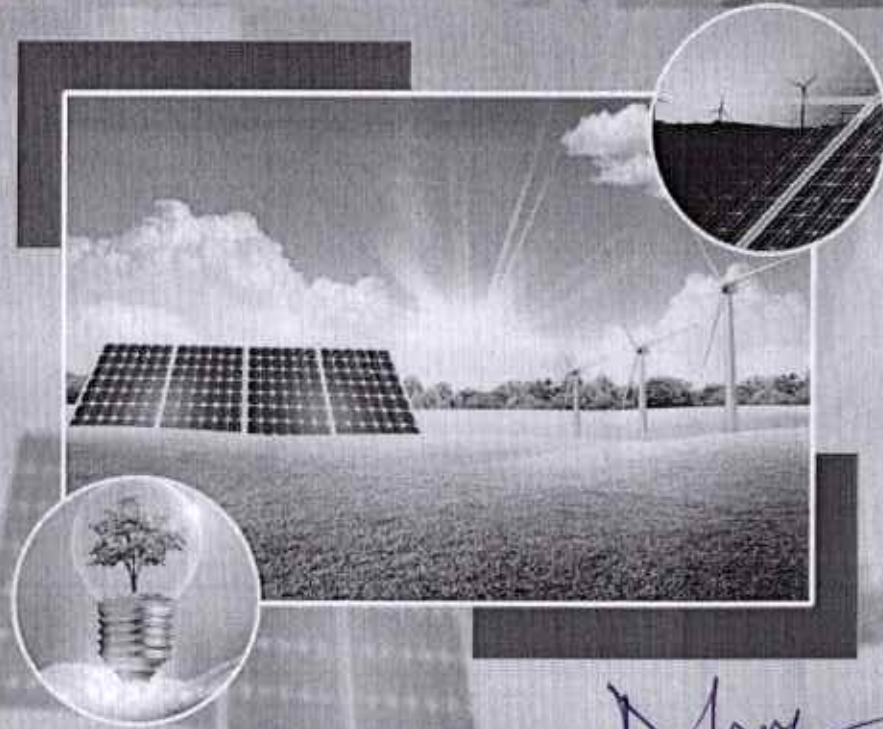
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# GREEN ENERGY AND SUSTAINABLE ENVIRONMENT

Green Energy and Sustainable Environment



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# SKILLS AND ARCHITECTURAL EDUCATION A NEW PARADIGM



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## 23. ARCHITECTURE EDUCATION ENHANCEMENT : TEACHING APPROACH TO EDIFY HISTORY OF ARCHITECTURE IN ARCHITECTURE EDUCATION

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### ABSTRACT

*Teaching History in fields such as architecture which is closely linked to practice represents a major challenge to architecture teachers and instructors. They are usually caught in the struggle of having to use creativity and imagination to explore the past as well as drawing inspiration in foreseeing the role that history classes can play in students future profession in ways to bridge 'learning' and 'applying'. A major challenge of permeating creative teaching into history courses comes from transforming established traditions of how to teach history and what exercises to employ in the process into ones to resonate with youth whose diversity has reached unprecedented levels and for whom technological gadgets are almost second nature. Therefore, going beyond traditional methodologies and discourses around the teaching of history is a must for nowadays educators by employing a diverse set of techniques such as educational games and modeling.*

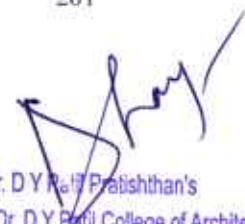
*As a 'history of architecture' educator, our research aims at helping to set a trajectory for both creatively teaching history of architecture courses and sparking students' interest by proposing new teaching strategies and sharing techniques, assignments, and pedagogies. Teaching approaches such as Model making has resulted in developing patience and being perceptive about detailing among students; immersing through visual media fosters the skill of ascertaining architectural details in backdrops; game based learning enroots a competitive skill & teamwork amongst peers; personalizing the past design exercise establishes use of architectural elements on a varied scale for a specific function and informal walks through Heritage help students to not only better understand History as a subject but also refine their exploratory attributes. Our research through these small activities concludes that students acquire and enhance skills while undertaking such assignments which help them become efficient, skillful, better qualified and employable.*

**Keywords:** History of Architecture, Architecture Education, Creative exercise, skill based creative exercise

### INTRODUCTION

*The dream begins with a teacher who believes in you, who tugs and pushes and leads you to the next plateau, sometimes poking you with a sharp stick called "truth." –Dan Rather*

Teaching – learning process has occupied an important place in the field of education. Teaching and learning are two closely related terms and happen to be the two fundamental aspects of the educational process. The most important objective of teaching is to facilitate learning. Thus the



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## RE-CONNECT WITH NATURE

The first step for sustainable living.

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### ABSTRACT

Our cause for concern today are the many environmental impacts we are facing, like temperature rise, climate change, floods etc, which are a direct result of the ever increasing population and their way of living. When we analyse this situation, from grass root level, we find a severe disconnect between Man and Nature. If we browse through our history, we understand man's evolution from caves, i.e prehistoric times, to highrise dwellings, in current times. In simpler terms, his journey where he lived in and amidst nature to his moving up and away from nature.

Different measures are required to be taken, on different scales, to mitigate these environmental concerns. 'Sustainability' means the ability to sustain for the longest, is the key to manage, mitigate and prevent these environmental concerns. This can happen when the inter dependency of Man and Nature is in balance with each other. To achieve this balance, the connection between them has to be reinstated, for Man to understand ways in which he can adapt a new lifestyle, wherein Nature plays an equally important part.

This research primarily focuses on the hypothesis that "As we have started living in high rise buildings, the more disconnected we are with the nature."

In response to catering the needs of this growing population, we provide housing units, which are high rise. This is unavoidable. But can we also give these units some of their deserving share of nature, for them to reconnect with nature again.

This study focuses on sustainable landscape interventions to make this re-connection happen again, from a single dwelling unit scale to a residential colony scale.

**KEYWORDS :** Sustainability, Terrace Gardens, Kitchen Gardens, Balcony Gardens, open spaces.

### INTRODUCTION:

1. Today we are facing many environmental issues like, Global warming, Climate change, Floods, Droughts etc., the gravity of which is very strongly felt today as the aftermath of these issues causes a lot of pain to us. Everyone today wants that peaceful balance restored between Man and Nature. But, to regain that balance, we have to change, change our lifestyle, change our habits and manners, change the way we look and treat Nature.
2. If we look at any village scenario, the connection between Man and Nature is very strong. A house made up of locally available material, which opens up into a frontyard and a backyard. Front yard, the main gathering space, is coated with cow dung, enabling small insects to survive within them, which in turn allows birds to come and feed on them. A house with a live fence, i.e. fence made up of shrubs, which allows small animals to pass through it, keeping their corridors intact. The backyard is mostly used for growing vegetables or as a Kitchen garden. The dung of domesticated animals is used as a manure to grow these vegetables. There is a very thin line between indoors and outdoors. This inter-dependency on each other for sustenance makes it a stronger sustainable module. This module is somewhat absent in cities. We have houses in a building. Buildings which are multi storied to high rise. As we move up from ground level, our association with it starts reducing. Our front yards are converted to terraces, with a definite space. Backyards are converted into balconies. The experience of Nature as a 'whole' starts getting fragmented. It is the call of the current times to inculcate this sustenance module in a city life, to secure our future, to restore that peaceful balance between Man and Nature.

### AIM :

3. The aim of this study is to identify sustainable landscape interventions to make the connection between Man and Nature happen again, from a single dwelling unit scale to a residential colony scale.

### CONTENT:

4. To address our aim, this study is undertaken in two parts,
  - a) **Hypothesis:** This part deals with the hypothesis, "As we have started living in high rise buildings, the more disconnected we are with the nature." Surveys were taken to prove this hypothesis correct and also identify issues associated with it.
  - b) **Solution:** This part deals with addressing those issues by identifying landscape intervention areas and giving guidelines to achieve a better sustainable module in a city life.

### HYPOTHESIS:

5. It was important to study and analyse the present scenario, to understand this disconnect with Nature. For the same, we took a survey of people, of varied age groups. Most game changer questions, which led us to get the most clear picture of present scenario, were the following,
  - a. What is your age?
  - b. What floor of building do you stay?
  - c. Do you have your own Garden? If no, what is your reason?
  - d. Have you ever plucked flowers / fruits directly from a tree?
  - e. When was the last time you planted a plant?
  - f. Do you go to your terrace/ balcony / window to see trees, birds, sunrise, sunset or any scenic view?
  - g. How often do you do that?
  - h. Do you see Birds in your vicinity? Which birds?
  - i. How often you visit public parks?
  - j. Memories from childhood with your association with Nature?
6. The Analysis of the answers to these questions, led to very interesting findings.



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## EARNED VALUE ANALYSIS OF RESIDENTIAL BUILDING FOR PROJECT TRACKING

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### Abstract:

Earned Value Management helps to analyze the project's performance and predict the forecast. It shows the current status of the project, tracks actual progress with the planned progress, answers various performance related queries such as whether projects are under budget or over budget or whether you are ahead of schedule or behind schedule, etc. The technique helps in comparison of budgeted cost of work to actual cost. EVA is a powerful tool to plan project and analyse cost performance. EVA provides an integrated schedule (time), progress, and cost management, related to scope and procurement, quality, and risks.

The present study deals with the scheduling and project monitoring process along with it also discuss main parameters involves in the calculation of Earned Value Analysis in cost management of construction projects. MSP 2016 software is used for EVM calculations of project. The main objective of project to track the existing project and perform analysis for effective scheduling and cost benefit analysis. In this project use of Earned Value Analysis has proven to be useful for cost management and rescheduling of the work. Also it is used for better project tracking.

**Key words** – Earned Value Management, Actual Cost, Project Monitoring, Cost Analysis

### INTRODUCTION

Construction industry is one of the important sectors in India and is facing challenges day by day. The industry contributes to the growth of our economy to a large extent. One of the main problems that the industry faces is project delay. This can be caused due to various reasons like deviation from the

initial plan, scarcity of resources, poor planning, poor execution, natural calamities etc. This causes the project to go over the expected budget and fails to complete within the scheduled time. The construction itself becomes costlier.

Hence it is important that there is a systematic and scientific approach to project management to ensure that the project is completed within the constraints of time and resources. EV analysis is an important tool to measure the performance of a project. It is a program management technique that uses "work in progress" to indicate what will happen to the work in future. It compares the actual work performed against a baseline plan. In this way, the analysis helps in setting a standard for performance evaluation and controls the time and cost constraints. It also helps in identifying the critical activities which maybe noted down and taken care of during further progress of the project. It acts as an early warning to the project manager to spot and control potential problems that may arise so as to maximise profits and minimize delays.

**AIM** - Application of Earned Value Analysis for small scale residential building in Pune for better project tracking using MSP.

### OBEJTIVES –

- 1) To study earned value analysis and its implementation in Residential project.
- 2) To identify different causes for cost overrun through literature survey and case study.
- 3) To perform earned value analysis using MSP for residential building.



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# Realization of Designing Inclusive Environment of Cremation Space- The Unseen Sacred Land in Indian Setting

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**Abstract**—Death is an inevitable part of every living creature on this earth, and each corpse has to be cremated in specific manner. Crematoriums are the spaces where the body is cremated, hence consequently crematorium becomes a space which one visits in his lifetime, may be dead or alive. Still it's a place which is not thought of and considered inauspicious and unimportant. These spaces, however, have a potential to become sites where an interesting intersection of mortality and architecture can happen. Which may have the power to communicate man's time-based, weak and fragile existence on earth. This issue can be solved out by researching from the basics of cremation process- the rituals which will sequentially help final design process. According to Hindu religion life is based upon four entities i.e. Dharma, Artha, Kama and Moksha. Moksha means the final liberation. And for liberation of soul its important to carry out cremation based on the 'rituals'. These rituals revolve around the concept of emerging from and dissolving in the nature's base five elements i.e. Panchamahabhutas. But as the Cremation grounds are been neglected, so are the actual beliefs and the harm caused by the carried-out rituals. An approach should be made to satisfy both the verges i.e. the rituals carried out should not damage the environment, nor do the actions to safeguard environment change the actual belief behind the rituals, as it would be meaningless in either of the conditions. Hence an intermediate mode should be figured out to which will safeguard both, the ritualistic belief and the environment. This paper focuses on that intermediate mode to be fixed using research process to link between theory and practice. The methodology of understanding research design process of crematorium space by understanding the traditional Hindu rituals in this research paper is review of literature, interviews with people, and case studies. It explains the need of research to be carried out before the pre design phase to relate and understand the main issues to reach the precise design solution.

## 1. INTRODUCTION

*"Birth and Death, the inseparable poles of life on earth, should not be secret to man."*

—Sri Vamanrao Pui.

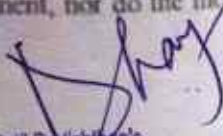
Death is the only one certainty in lifetime, from best our knowledge we know the fact that all living things on this earth must one day expire. Thus, death is and has debatably been a

critical part of mankind's existence. Death is an inevitable part of every living creature on this earth, and each corpse must be cremated in specific manner. Crematoriums are the spaces where the body is cremated, hence consequently crematorium becomes a space which one visits in his lifetime, may be dead or alive. Still it's a place which is not thought of and considered inauspicious and unimportant.

Given the current condition of cremation lands (debatably a sacred space) resultant from snowballing into social taboo and the dishonor involved to demise in our fast updating the social order, these cremation spaces have become isolated and lifeless spaces in the urban setting. These spaces though, have a potential to be developed into sites where a stimulating connection of mortality and architecture can occur, which may have the influence to interconnect man's progressive, feeble and subtle existence on this planet. More prominently it is vital to discover what role these spaces play in defining our social individuality as a civilization.

According to Hindu religion life is based upon four pillars i.e. Dharma, Artha, Kama and Moksha. Moksha means the final liberation of the soul. Hence there is certain way final rites are carried out. The central idea revolves around the life and the death cycle, it is believed that a body originates from the universe (here universe means the Panchamahabhutas) and eventually dissolves back into the same. To know in elaboration about the Panchamahabhutas, the whole universe is perceived to be made up of five gross elements which are the essentials for life on this planet – earth, fire, water, air and space. Hence, accordingly, the Hindus cremate the corpse in fire so that it integrates into the five elements of the universe the Panchamahabhutas.

But as the Cremation grounds are been neglected, so are the actual beliefs and the harm caused by the carried-out rituals should be thought of from both the sides, the rituals carried out should not harm the environment, nor do the measures

  
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# Implementation of Six Sigma Methodology in Construction Industry For Quality Process Improvement

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**Abstract** - Although Six Sigma has been implemented in the manufacturing and other services industries. This study described the Six Sigma concept as a quality initiative that may be applied in the building industry. The principles, methodology, and metrics of Six Sigma are first discussed. The application of Six Sigma for improving the quality of internal finishes during construction is also explained. For that a case of residential complex consisting of 100 flats is done to find out the defects in plastering. These defects are then evaluated by applying DMAIC methodology of six sigma. Before applying DMAIC, the sigma level is calculated by defects per million opportunities (DPMO). In case study it is found that the defects observed in finishing work (plastering) of residential complex are cracks on plastered surface, improper vertical edges of column, window and door, horizontal edges of column, window and door, air gap in plastered surface, uneven plastered surface, and plastered surface damaged during carrying out other activities. Further these defects are evaluated using DMAIC methodology.

**Key Words:** Construction Industry, Six Sigma, Quality Improvement, Customer Satisfaction.

## 1. INTRODUCTION

Construction industry plays a major role in economic growth of any nation. Construction industry is the most booming industry in the whole world. Construction sector is viewed as a service industry which generates substantial employment and provide growth impetus to other manufacturing sectors. Also, construction management and technology are the two key factors influencing the development of the construction sector. Now a days the critical objective of construction industry is to complete the project in time and within the scheduled costs and budget. Along with this need for improving quality and customer satisfaction has received considerable attention in recent years, so the one approach which can fulfil all the requirements of construction industry is using six sigma concepts in construction industry. The six sigma is a quality improvement technique of products in order to ensure customer satisfaction. The result of six sigma will be an increased efficiency, improvement in performance and the control of performance problems thus minimizing defects, risks and deviation.

Six sigma is a quality improvement technique based on statistics was firstly used by Motorola in 1980s by Bill Smith of Motorola to decrease cost, increase quality by improving process and reduce production time. It received little publicity until late 1990s. Six Sigma results the application of a new form of management technique to construction. Essential features of Six Sigma include a clear set of objectives for the delivery process, aimed at maximizing performance for the customer at the project level, concurrent design, construction and the application of project control throughout the life cycle of the project from design to delivery. Six sigma is a quantitative approach for improvement with the goal of limiting defects from any process, specially a numerical goal of 3.4 defects per million opportunities (DPMO). Six sigma is reportedly easier to apply than many other quality management programs because it provides information about the change needed and the programs to execute the change. DMAIC is a data driven technique of six sigma used to improve processes. It brings structure to the improvement process and help teams explore potential solutions, decides a course of action and implement process control. DMAIC is an acronym for Define, Measure, Analyze, Improve and Control. In brief, these 5 steps are as follows.

- **Define (D):** Identify the problem and issues causing decreased customer satisfaction.
- **Measure (M):** Collect data from the process
- **Analyze (A):** Evaluate the current process identify the root causes of the problem
- **Improve (I):** Act on the data to change the process for improvement.
- **Control (C):** Monitor the process to sustain the gain.

### 1.1 Aim of Study

To study the implementation of six sigma methodology as a quality process improvement in finishing work (plastering work) of residential buildings for better customer satisfaction.





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**ACADEMIC YEAR**

**2018-19**



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# NCBWT-2019 **B**uilding With Time

National Conference on

This Certificate is presented to,  
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For presenting and publishing a paper titled

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at the National Conference NCBWT-2019 Organized by D. Y. Patil  
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# Traditional Form Interpreted By New Technique

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## ABSTRACT

Forms of a building play a very significant role, since it speaks itself about the structure, its history and also about the various stages of development of mankind. Since "to learn something new, refer history" is a very correct notion which gives an idea to create something new, moreover, historical monuments are such forms which when incorporated with new techniques, itself increases the complete value of a structure representing it as a "landmark" and also adding it to the emotional values of respective tradition and culture.

Hence, adopting traditional forms with new technical world helps keep the history alive for the next generations to come, as "history can never be explained completely in script form." This paper focus on Traditional form and their interpretation by new technology.

**Keywords:** Forms, Traditional forms, Evolution of New technologies, implication of new form in modern era.

## 1. INTRODUCTION:

The word **tradition** comes from the Latin word "*traditio*" which means "to hand down" or "to hand over". A tradition is a story or a custom that is memorized and passed down from generation to generation, originally without the need for a writing system.

### FORM...WHAT IS FORM???

It is the shape given to the architectural feature in the building. There are various forms such as Square, rectangle, triangle, circular which have definite proportion. Forms are much pleasing to human eyes because of proportion like **EQUILATERAL TRIANGLE** is a form of good proportion.

According to the structural appearance, the human perceptions to various forms are like...

- Pyramidal, rectangular, square forms represent stability, firmness and power.
- Curved forms represent more of softness, delicacy and elegance.

A skillful combination of these forms gives a definite shape and character to a structure.

### What Are Traditional Forms???

Traditional forms are thus those forms created by mankind at an early stage of development of dwellings, therefore, beginning with the most primitive for the rock-cut caves. Hence, this led to the **THE**

### BEGINNING OF ARCHITECTURE....

#### HISTORY OF ARCHITECTURE

If we peep into history, mankind came across three ages, among which the most primitive was the

- Stone age (featuring on stone as the basic material)
- The Egyptian style (most primitive one),
- The West-Asiatic style,
- The Greek style ,
- The roman style and so on...

Architecture may be best understood in terms of two basic aspects: basis of "organization of spaces" and "forms."

### FEATURES AND FORMS OF THE PAST...



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**ACADEMIC YEAR**

**2017-18**

# Public Architecture and Role of Local Contractors in Late Nineteenth Century Case of Poona

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**Abstract:** Role of local engineers is largely neglected in the context of late nineteenth century due to lack of archival resources and primary sources. Though the Royal engineers were key persons worked in several parts of India they implemented their western ideas in collaboration with local engineers and masons at grass root level in the process of establishing British rule in India. Diverse projects from basic architectural interventions, railway, bridges, basic infrastructure, and services they coordinated in India. They worked on European models in local context with successful and unsuccessful efforts. [1] Till early nineteenth century simple and function based structures were built for residential and religious purposes. Engineers were experimenting and modifying European models considering local climatic conditions. From mid nineteenth century building construction activity received more attention as vocabulary of Raj. Which kept on changing adapting local climate, material and incorporation of local traditional art forms in architecture. Vasudev Bapuji Kanitkar worked with Charles Mant, Chishom [2], Trubshaw [3] and Walter Ducat in towns like Baroda, Bombay, and Poona as Indian local contractor. He was nominated as Rao Bahadur by British government for his important role in construction activity in Deccan. [4] Laxmi vilas Palace in Baroda, Secretariat Building, High court in Bombay and Reay or Phule market Poona are some of his major contributions in architectural development under Bombay Presidency as an Indian local contractor. His self executed projects in Poona left his mark as significant designer and engineer in late nineteenth century. Educational, official, Public, and domestic buildings show his advancement from local contractor to designer with his intricacy of work. His influences originated from the earlier work experiences of varied projects amalgamated with local traditional workmanship lead into the development of style could be named as local Indo-Saracenic architecture or in few cases local Indo-Neo Gothic architecture. This could be perceived in his own designs executed in Poona such as Fergusson College, Anandashram [5], Sangamashram [6] and Pune Nagar Vachan Mandir or Poona Native Library [7] and so on. His contribution as a local contractor and designer working in collaboration with Royal Engineers and local social reformists like Bhandarkar [8] and Apte [9] is underlined in the further discourse. Main focus is on his role in the development of architectural vocabulary in late nineteenth century Poona which is quite neglected in the pages of architectural history of Poona.

**Keywords:** Local contractors, Nineteenth Century Architecture, Royal Engineers, Vasudev Kanitkar, Anandashram, Sangamashram, Reay Market

## 1. Introduction

It is important to know what was the background of engineering and architectural education in Indian context. How the western knowledge perpetuated in Indian soil and reached to royal engineers and local contractors. The image and vision of British officers had in their mind tried to manifest in a real sense could be termed as "Indian colonial Public landscapes". There are several evaluations about the works shaped by royal engineers during British reign in India. Perhaps the criticism was quite negative from the point of view of architects and artists like J.L. Kipling during late nineteenth century. Indeed these royal engineers right from establishment of East India Company have helped to build British India. They were the key persons to handle local engineers, labor and several local communities in the process of building British sovereign. Sandes call these royal engineers, as "Excellent products of Addiscombe" [10] though this sounds a superfluous glorification of the ruling agent to some extent probably was quite a datum from ruler's point of view. Right from presidency towns, important trading towns, princely states, harbors to smaller towns the traces of their works could be seen at various levels in numerous types of tangibles in 19<sup>th</sup> century. Their intervention could be observed at various levels such as roads, bridges and railways to connecting towns for vigorous transportation and command on regions, services such as drainage, water supply, and government structures such as offices, hospitals, GPOs, mint, Railway stations, markets around us as a important architectural layer in 19<sup>th</sup> century.

Western and eastern scholars while writing about this specific period consider it as early modern period in Indian context. Many western concepts reached Indian subcontinent via these agents.

Standardization in the colonial educational patterns tried to inculcate in various ways in local engineers. They followed western patterns in larger context in all parts of India supported colonial construction activities. Numerous articles published in *Professional Papers on Indian Engineering* by Indian local contractors such as Teekaram who worked majorly in Lucknow, Babu Shumbhoo Dass works could be seen in Bahawalpur Pakistan, Rai Bahadur Kunhya Lal's and Sir Ganga Ram's [11] legendary projects in Lahore Pakistan, Muncherjee Beyzunjee at Hyderabad under Nizam reign are great resources indicating their contribution in architectural vocabulary in this period. Researchers such as Preeti Chopra states extraordinary works of Murzbaan in Mumbai in her book. On the other hand local engineers such as Narso Ramchandra, Vasudev Kanitkar from Poona and some other towns in Deccan were never got recognized and documented extensively for their contributions in the development of architectural character. These are important unexplored figures in the context of Poona. Their names and associations transiently appear in the history of Poona. This paper seeks to review account of who built Poona in colonial context on ground. Further discourse tries to detail out development of Vasudev Bapuji Kanitkar as an engineer and designer. Perhaps lack of resources and primary sources related to his own opinions for his projects he executed may

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# Analytical Study of Parameters Influencing Extinction of Vernacular Traditional Architecture in Vidharbha Region

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## ABSTRACT

*The term "Vernacular Architecture" stands for the art of constructing building and shelters which is spontaneous, environment – oriented, community- based; it acknowledges no architect or treaty and reflects the technology and culture of the indigenous society and environment [1]. This paper is chronicle of observation of typologies prevalent in traditional vernacular houses in a small village of Lonsawali, which lies in Vidharbha region of Maharashtra state, India. The settlement has different types of house forms. There are around 135 numbers of dwellings in this village, 40 percent of which need repairing, renovation and maintenance. The objective of the study is to find the reasons for variation in house typologies and different maintenance issues faced by the residents. Photographic documentation, surveying, mapping and measured drawings are used to analyze the settlement pattern. This analysis is also supported by various interviews that were done with the villagers.*

*In this study, an investigation of Social, Cultural, physical and economic background of the village has also been done and settlement is analyzed on various parameters of vernacular architecture. The result focuses on strength, weaknesses, opportunities and threats of the village. This study concludes by putting forward the measures related to construction techniques which the residents can inculcate easily and revitalizing recommendations to establish the conservation and continuity of village.*

**Keywords:** Conservation, Revitalizing, Vernacular Architecture, Vidharbha Region, Wada Typology.

## I. INTRODUCTION

Lonsawali was selected as case study having traditional Wada type of houses. It lies in Wardha district, Maharashtra. is the Local Language here. It has a population of 1850 – 2000. The village is said to be 400 – 500 years old. The inhabitants in Lonsawali provide their living by agricultural and cattle dealing. While selling the products, growing on the yield lands, they use some portion of it for their basic needs. At the entrance of the village, the settlement density is low, whereas while approaching to the center of the village, the density increases. The attached houses provide a nice perspective inside the village by the help of the organic and irregular urban street structure, which create a flowing dynamic exterior space. The streets and roads in the settlement are narrow. Roads were never straight as the growth of the settlement was organic. Although one can make out that the major development of the village has took place along the main spine of the village.

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Impact of Urban Development on Climate Change  
in NCETA 2018 held at MIT School Of Architecture,  
Rajbaug, Loni Kalbhor, Pune on 11<sup>th</sup> & 12<sup>th</sup> January 2018.

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## Impact of Urban Development on Climate Change

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**Abstract:** *Climate change has severe impacts worldwide both on rural areas and on urban centers. Extreme weather conditions threaten human health and productivity, and natural disasters such as flooding, wildfires and cyclones increase. While on other hand cities have tremendous capacity to contribute in world economy by urbanization and development. The cities are adapting new concepts as green and sustainable buildings, sector specific policy and sustainable planning approach to make city more resilience and energy efficiency. In this paper there is brief introduction of urban development and their impact on climate. The relationship between city development and climate change .Why it has become area of concern and what should be adaptive and meditative measure to be taken at various level.*

Keywords

Climate Change, Urban Development, Green House Gas etc

### 1.0 Introduction

#### 1.1 About Climate Change & Urban Development

Our planet is surrounded by a blanket of gases which keeps the surface of the earth warm and able to sustain life. This blanket is getting thicker, trapping in heat as we release greenhouse gases by burning fossil fuels for energy. By trapping more of the sun's heat the earth's temperature is starting to rise. This phenomenon is known as Global Warming. Scientific research indicates that, because of climate change, we may experience more intense and more frequent extreme weather events. The gradual increase in temperature has major implications for ecosystems, growing seasons, animals and their delicate habitat. In just 200 years, the amount of carbon dioxide in the atmosphere – the major gas that causes climate change – has increased by 30 per cent. Concentrations of greenhouse gases are now higher than at any point in the past 800,000 years with an average near-surface global temperatures rise of 0.7°C over the past 100 years. The Intergovernmental Panel on Climate Change indicated that, if we could get greenhouse gas emissions to peak and then decline within the next 10–20 years, the risk of seeing temperature changes higher than 2° C would be greatly reduced. Urban Development is the expansion into natural areas such as deserts, forests and swamps.

The population growth and there need for housing causes urban development. As the demand of housing increases, cities begin to expand into new areas. The world population is estimated to be near 6 billion. As populations continue to grow the demand for more housing and new development will

continue. The countries which our site are looking at are very different from each other.

As populations continue to grow the demand for more housing will continue and we will see new developments. The countries which our site are looking at are very different from each other.

#### 1.2 Relationship between Urban Development and Climate Change

Development and its environmental impacts are complexly bonded and evolved simultaneously. As per UNHABITA higher the population density impact will be higher in urban area. The rate of urbanization in world today is unmatched with near quintupling urban population in future. As the half of the world's population will be living in urban areas. The pace of urbanization in the world today is unprecedented, with a near quintupling of the urban population between 1950 and 2011.

In second phase, the rapid urbanization and development took place first by developing countries and followed by developing countries.

In third phase, reduction in the population at some area while increasing in number of large cities and size resulting the number of cities in the world with populations greater than 1 million increased from 75 in 1950 to 447 in 2011; while during the same period, the average size of the world's 100 largest cities increased from 2.0 to 7.6 million. By 2020, it is projected that there will be 527 cities with a population of more than 1 million, while the average size of the world's 100 largest cities will have reached 8.5 million. While institutionally weaker areas will find it difficult to promote effective mitigation and adaptation actions. On other hand area bigger institute redirected in the way to reduce their emission levels to a desired level (e.g. through the promotion of mono-centric urban structures based on the use of public transportation), and their resilience and ability to cope with climate hazards and other stresses enhanced.

Forth phase, the urban enterprises, vehicles and population who are main sources of GHGs, requires understanding the dynamic of the force and system that drive the urban generation of GHGs. Which will help the policy makers, enterprises and consumers target the readily available options to reduce those emission at same time that urban resilience to the impacts of climate change.

In fifth phase, innovative mechanization derived from cities to reducing or mitigating emissions, adapting to climate change, and enhancing sustainability and resilience. The economies and mechanisms process should be evolved to clean and cheap

## Potential of Mixed Mode Buildings in Hot-Dry Climate, Ahmedabad

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**Abstract:** *The Mixed-Mode buildings are designed to make maximum use of natural ventilation but incorporate supplementary mechanical cooling systems for use in the most extreme conditions. Energy can be potentially minimized by adopting this method while maintaining satisfactory comfort. Considerable amount of research has been carried by International Energy Agency IEA-Annex 35 and University of California, Berkeley but this has been limited to temperate climate of Europe. There is a lack of information about the application of Mixed-Mode buildings in India specifically for hot and dry climate. The investigation is carried out by analyzing the climate of Ahmedabad on basis of providing comfortable hours in which natural ventilation can be used. The Psychrometric and bioclimatic chart are analysed. The research prime focus is to find out the potential of Mixed-Mode office buildings in hot and dry climate, Ahmedabad.*

### Key Words

Energy Efficiency, Mixed-Mode, Thermal Comfort, Sustainable Strategies

### Introduction:

The hot and dry regions do not receive great attention in low energy office building research due to the severity of climate (Ezzeldin, Sherif; Rees, Simon and Cook, Malcolm.). The effective cooling of office buildings in hot and dry climate requires designer's particular attention. The research done by Brager and Dear demonstrates that the occupants of buildings with centralized HVAC become finely adapted to very narrow range of indoor temperatures due to the current HVAC practice. The same study also mentions that, "occupants of such buildings develop high expectation for homogeneity and cool temperatures, and soon become critical if thermal conditions do not match these expectations" (De Dear, Richard and Gail S.

Brager). These buildings in most cases, ensure comfort conditions can be maintained but at the expense of relatively high carbon emissions. In contrast, occupants of naturally ventilated buildings appear tolerant to a wider range of temperatures, which may extend beyond the comfort zones described by standards and more closely reflect the local patterns of outdoor climate change (Demirbilek, Nur, and Depczynski, Fabrice.).

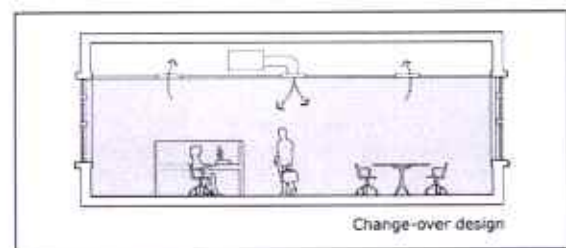
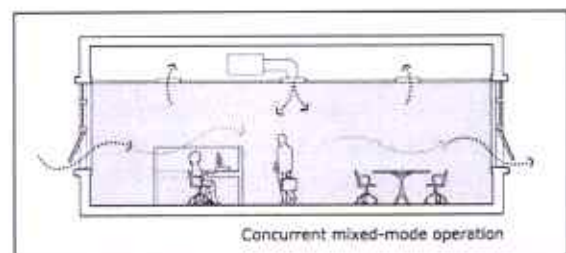
Efforts towards decreasing the dependency of buildings on HVAC systems without compromising on thermal comfort, has shifted the focus of researchers and designers towards Mixed-Mode Buildings. Due to their operational flexibility

that combines operable windows with mechanical cooling; the Mixed-Mode Buildings often get high marks from occupants on satisfaction with their thermal environment (Brager, Gail, and Baker, Lindsay.). However, due to the lack of information and no standard protocol available the designers of Mixed-Mode buildings face challenges. Thus, this has resulted in fewer examples of Mixed-Mode buildings in practice. This study is concerned with examining the performance of Mixed-Mode Office Building and their potential to reduce energy consumption in hot and dry climate, Ahmedabad.

### Mixed-Mode Buildings

The basic concept of Mixed-Mode buildings is that, whenever the outside climatic conditions are conducive no mechanical processes are used, but when the conditions are non-conducive, mechanical processes are used to achieve thermal comfort for the users. Hence, Mixed-Mode buildings maximize the use of natural energy sources and use a supplementary mechanical process only when strictly required.

Mixed-Mode buildings are classified in terms of their operation strategies, which describe whether the natural ventilation and mechanical cooling are operating in the same or different spaces, or at the same or different times. As per CBE Berkeley, classifications done on the basis of operation strategies are-(Fig. 1)




## Immediate Impact of RERA on Construction Industry

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**Abstract :** *The Real Estate (Regulation and Development) Act, 2016 is an Act of the Parliament of India which seeks to protect home-buyers as well as help boost investments in the real estate industry. The bill was passed by the Rajya Sabha and the Lok Sabha in March 2016. The Act came into force from 1 May 2016. Remaining provisions came into force from 1 May 2017. The objectives of this act are to Ensure Transparency & Efficiency in real estate sector in regards to sale of plot, apartment, building or real estate project; Protecting the interest of consumers in real estate sector; Establishing adjudicating mechanism for speedy dispute redressal and Establishing Appellate Tribunal to hear appeals from the decisions, directions or orders of the Real Estate Regulatory Authority. Prior to RERA, there was no clarity on carpet area, was sort of monopoly of Builders regarding loading, rates, modes of payments. There were Frauds, no clear picture of project, possession, sanctions. An attempt has been made to find out the immediate impact of this act on the Builders, and the customer. The scope of study is limited to Pune area region.*

*The objective of this paper is*

- i. Study of act and understanding the provisions given in the ACT
- ii. How this ACT affected the ongoing and about to start projects?
- iii. How does construction companies look at it?
- iv. What were the provisions they did to overcome the uncertainty even before the enforcement of Rule?

**Keywords:**

**RERA (Registration of Real Estate Project and Registration of Real Estate Agents), promoters, Allottee, Real estate project**

### I. INTRODUCTION

The Real Estate (Regulation and Development) Act, 2016 is an Act of the Parliament of India which seeks to protect home-buyers as well as help boost investments in the real estate industry. The bill was passed by both the Rajya Sabha and the Lok Sabha on March 2016. The Act came into force from 1 May 2016. Remaining provisions came into force from 1 May 2017.

#### Before RERA:

- There was no clarity on the carpet and loadings on the built-up area. Every builder had their own calculations.
- There was a sort of monopoly of builders regarding the areas, rates, modes of payments.

- There was no clear picture of project, possession, sanctions; legality and rates which lead to frauds and confusions to clients.

### II. STUDY OF RERA ACT

No promoter is allowed to advertise, market, book, sell or offer for sale, or invite persons to purchase in any manner any plot, apartment or building in any real estate project or part of it, in any planning area, without registering the project with the RERA. The advertisement or prospectus issued or published by the promoter shall mention prominently the website address of the Authority and the registration number obtained from the Authority.

Where any Allottee sustains any loss or damage by reason of any incorrect, false statement included therein, he shall be compensated by the promoter in the manner as provided under this Act. The entire investment along with interest and compensation shall be returned to allottee if he intends to withdraw from project.

The promoter shall make an application to the Authority for registration of the project within a period of three months from the date of commencement of this Act for ongoing projects and whose completion certificate is not issued.

No registration of the real estate project required where;

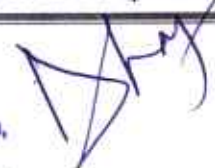
- a. The area of land proposed to be developed does not exceed 500 square meters or the number of apartments proposed does not exceed eight inclusive of all phases.
- b. The promoter has received completion certificate for a real estate project prior to commencement of this Act;
- c. For the purpose of renovation or repair or re-development which does not involve marketing, advertising selling or new allotment of any apartment, plot or building, under the real estate project. Act specifies the list of documents and drawings which the promoter has to submit for Registration.

The promoter shall create his web page on the RERA website and enter all details of the proposed project in all the fields as provided, for public viewing, including—

1. details of the registration granted by the Authority
2. quarterly up-to-date the list of number and types of apartments or plots booked, garages booked, approvals taken and pending subsequent to commencement certificate and status of the project;
3. such other information and documents as may be specified.

It is the right of Allottee to get all the above information from time to time.

He is responsible for all obligations, responsibilities and functions till the conveyance of all the apartments, plots or





## Ferro Cement as a Cost Effective Alternative to RCC

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**Abstract:** Concrete and steel are the basic construction materials, which are being used with different concepts for construction such as RCC, Pre stressed and Ferro cement. Ferro cement is an innovative technology and has several advantages. This paper is an attempt to promote extensive use of Ferro cement components as an alternative to conventional concrete components for application in low-rise housing by doing a comparative study of cost analysis of Ferro cement and RCC.

### OBJECTIVE

- Studying the properties of Ferro cement
- Design methods and Fabrication
- Its advantages and limitations
- Comparative analysis of cost of construction including material and labor

### I. INTRODUCTION

Ferrocement is a form of reinforced concrete that consists of closely spaced, multiple layers of mesh or fine rods completely embedded in cement mortar. It is a composite material that can be formed into thin panels, less than 1 in. (25 mm) thick, with only a thin mortar cover over the outermost layers of reinforcement.

### II. APPLICATION OF FERROCEMENT COMPONENTS

- a. Small capacity water tank
- b. Roof, walls and staircase elements
- c. Toilet component
- d. Benches, Furniture, book store units etc.
- e. Boats and water troughs
- f. Soil retaining structures

### III. PROPERTIES OF FERROCEMENT

- Has increased bond strength
- Can undergo large deformations before collapse
- High surface area imparts ductility
- Ferro cement more homogenous and improves the properties of tension, flexure, impact resistance and crack resistance.

- Closely spaced wires act as crack arrestors
- Equal strength in both directions

### IV. CONSTITUENTS OF FERROCEMENT

#### 1. Cement

The cement is fresh, uniform consistency and free from lumps and foreign matter. Generally Portland cement of 43 or 53 grade is used.

#### 2. Aggregate

Well graded and washed river sand passing 2.36mm IS sieve. Size of aggregate depends on size of mesh and spacing between mesh. For 13 mm mesh opening max size of

aggregate 3.25mm, 1/4<sup>th</sup> its opening size. The fine aggregate should be clean, free from organic matter

#### 3. Clean water

In Ferro cement, the water used should be fresh, clean and fit for construction purposes; pH equal or greater than 7 and free from organic matter

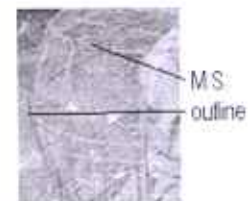
#### 4. Steel

Three basic types of meshes are Weld mesh, Fine wire mesh in form of woven square mesh and interlocked hexagonal wire mesh, expanded metal and Crimped wire mesh

The steps in making a Ferro cement structure are

a. Planning the work

b. Fabricating Skeleton of the Structure



c. Tying the weld mesh and wire mesh to bars

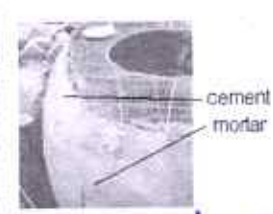


d. A chicken wire mesh layer is attached to this outline.



e. Mortaring the meshes

The mortar is to be applied under pressure into the layers of mesh in such a way as to impregnate and encase them completely.





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## Art in Rehabilitation Centre

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**Abstract:** A rehabilitation inner and outer space that provides them with the means of understanding what went wrong and how to work-through the group- towards building their own strength to surpass physical and psychological obstacles on the road to recovery and active inclusion. Such therapeutic community buildings must not be designed to remind long term absence from life, but a temporary home away from home, a pathway back to individual stability and societal development. And this short term abode must be enriched with approaches to healing that bring about changes from the inside out. One of them is expression through the arts. A Rehab Centre here could be the one where in the people voluntarily come to get treated. *The Relation between Human Activities and Landscape Architecture: The first impression of designing constructions and places in the field of landscape architecture seems to create a particular space where people can display their activities efficiently. This creating job is not only to influence on human activities as performing our daily lives, but also to impact on society, politics, economy, and culture as a whole, which are associated with the track of human civilization. Thus, the significance of landscape architecture should be focused on how to fulfill needs of human and society as well as to maintain the beauty of nature.*

*Our surrounding environments can be moulded to best suit the needs of a patient. Stress, anxiety, natural connections to nature, healing gardens, our body's social and psychological needs, and the overall healing process were the main focused.*

*Traveling, Leisure and Innovation come together to create an environment that will attract people and families to the new recreation hub of Liberec, with compelling leisure program and events offerings onsite. On the other hand, this chapter concerns the relationships between the physical form of the urban environment and leisure activities. It examines how architectural space morphology - i.e. spatial patterns and formal patterns - may have an impact on tourists' attraction and preferences in the contemporary cultural context of urban tourism. and bringing this tourism in rehab context would be the most challenging part of the project...*

*'Art...can feed the soul, motivate an individual to want to recover and in certain Circumstances, cause physiological changes in the body'*

Keywords

Society, Awareness, Rehab Space, Vibrant Space, Healing Emotionally.

### Introduction

*"...Buildings, spaces between them...make different lives, influence how we think, feel, behave-how we are".*

Many specialists of various fields, including sociologists, therapists and architects have repeatedly argued about how place and the design of its spaces communicate with the human psyche, affect the way in which people react to their lives and how they develop. And this might be important to any individual who requires long term constant care or needs to recover from a period of physical, social and emotional instability by drug addiction.

Architecture is not a treatment, but can become part of the healing process through the creation of spaces that provide meaning to those activities to achieve rehabilitation through a therapeutic environment.

As even the little things in the design of a building can play their part in the psychology of the healing. It is a setting which readies for social inclusion and does not bunch up people as a group of patients who simply need to take their medication or stay indoors for a prolonged period of time but as active recipients of change and individuality. Not merely a number behind a 'health facility' door.

Architectural design can provide the corner stone of this individuality, with spaces built as an interactive process as opposed to 'holding a disorder within'. Even the little things in the design of a building can play their part in the psychology of the healing equation; such as the way windows reflect the sunlight in a therapeutic community residence.

### Drug Addiction

Addiction is a term defined a chronic relapsing disorder for people abusing substances like Smoking, alcohol, rave drugs, medical drugs. It is a tendency to make one feel euphoric (wellbeing), there are several drugs which are available in the market which are used for abuse. Drug addiction is a brain disease because the abuse of drugs leads to changes in the structure and function of the brain. Although it is true that for most people the initial decision to take drugs is voluntary, over time the changes in the brain caused by repeated drug abuse can affect a person's self-control and ability to make sound decisions, and at the same time create an intense impulse to take drugs.

It is because of these changes in the brain that it is so challenging for a person who is addicted to stop abusing drugs. Fortunately, there are treatments that help people to counteract addiction's powerful disruptive effects and regain control.

Addiction is a chronic, often relapsing brain disease that causes compulsive drug seeking and use, despite harmful consequences to the addicted individual and to those around him or her. Although the initial decision to take drugs is voluntary for most



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## Theme: Indoor & Outdoor Design: An Ecotel in Auroville

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**Abstract:** The hospitality industry is growing enormously due to the increase in tourism worldwide, as there has been a lot of development in the last decades of the 21<sup>st</sup> century. The most important aspect of the hospitality industry is the Hotel industry. Hence, designing a hotel considering all the factors that the structure will affect and also the factors that the structure would be affected with is very essential. A Hotel can be defined as an establishment that provides paid lodging, usually on a short-term basis. Hotels are independently assessed in traditional systems and these rely heavily on the facilities provided. As these facilities provided do have an impact on the environment a new concept of Ecotels i.e. green hotels, that claims to work for environmental protection and preservation is trending. This paper includes the study of difference between a hotel and an Ecotel. This paper also includes all the vital information about Ecotel hotel right from its functioning to its contribution towards the environment. It gives information about the hotels and the 5 globes the Ecotel hotel acquires. Ecotels that are trending are just regular hotels that are converted to an Ecotel by minimizing the waste and replacing materials, also by making changes in the interior. Although it reduces its impact on the environment, other damages caused to the nature during the constructional process of the hotel should not be ignored. Hence a paper discuss the idea of redefining an Ecotel. Rather than converting a hotel in to an Ecotel it will discuss about the factors that are important when you envision the structure to be an Ecotel. Dealing with ecological factors like climate responsive design, sustainably managing the water resources and managing the storm water, reducing hardscapes, using eco-friendly construction materials, solid waste water management, managing ground and surface water, natural regeneration of vegetation are very important to design an Ecotel

Keywords: Hospitality, Eco-Friendly, Environment, climate responsive design, ecologically sensitive.

### I INTRODUCTION

#### I.I. What is an Ecotel?

Ecotel hotels are defined as "a hotel or accommodation that has made important environmental improvements to its structure in order to minimize its impact on the environment". Traditionally these hotels were mostly presented as Eco Lodges because of their location, often in jungles, and their design inspired by the traditional building methods applied by skilled local craftsmen in areas such as Costa Rica and Indonesia. Today the term has developed to include properties in less "natural" locations that have invested in improving their "green" credentials. Definition of an Eco Hotel is a property that fills a majority of the following Criteria:

- i. Dependence on the natural environment
- ii. Ecological sustainability
- iii. Proven contribution to conservation
- iv. Provision of environmental training programs
- v. Incorporation of cultural considerations
- vi. Provision of an economic return to the local community



#### I.II. Ecotel rating and certifying

Today, various types of environmental initiatives exist. However, there are no common standards for hotels, so these initiatives are being carried out by the hotels themselves, NGOs, International Organizations and government agencies. Such initiatives have been in the form of publications, certification, awards, eco-labels and codes of conduct.

#### I.III. Ecotel

The hallmark of environmentally sensitive hotels



The ECOTEL Collection is an exclusive group of International inns, hotels and resorts that define the concept of environmental responsibility in the hospitality industry. All Ecotel certified hotels must pass a detailed inspection and satisfy stringent criteria set by environmental experts. The Collection began in 1994 when the New York Vista Hotel re-opened as the world's first Ecotel certified hotel after the bombing of the World Trade Center. Since then over 1100 hotels, resorts and inns have applied (but not qualified) for the



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## Automobile Mall- Need of Future India

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**Abstract:** *The Indian automobile industry seems to come a long way since the first car that was manufactured in Mumbai in 1898. The automobile sector today is one of the key sectors of the country contributing majorly to the economy of India. The Indian automobile industry has a well-established name globally being the second largest two wheeler market in the world, seventh largest commercial vehicle market in the world, and eleventh largest passenger car market in the world and expected to become the third largest automobile market in the world only behind USA and China. Therefore India needs a global platform to showcase their automobile activities to people in the form of Automobile Mall, which will bring all the car manufacturing companies under one roof to showcase their products and to provide facilities like test drive track, car launching event, brand stores, offices, and virtual car driving experience. It will even help to create spaces for display for merchandisers for rapid developing automobile industries. Car showroom only focuses on one brand and doesn't help customer for differentiating in other brand car segment.*

*This paper will focus on how Automobile mall will help customer in differentiating all brands of car thus creating customer satisfaction. Most important the revolution due to Automobile mall will help to create a better sustainable alternative to car showroom.*

Keywords:

Automobile, Industry, Market, Automobile Mall, Car showroom, Brand

### I. Introduction:

The automobile market is changing rapidly all over the globe. All the companies are bringing in new models every alternate month. As of now the situation is that companies are starting their own showrooms in various parts of the city to capture the consumer. The company does the survey and finds out the area which is economically viable and has that potential for sales; then the company starts the showroom. The showroom could be a company owned or else the company floats a tender and the interested businessman can start a showroom. Due to this the consumer in India at the time of purchasing has to visit all different showrooms in various parts of the city which results in waste of time, energy and money. Hence the proposal of a mega dealership encompassing 7 or more brands

that function independently but as a whole create fluid consumer oriented place. A place where the consumer can get to see the cars of various companies and also get all the related information, get to test drive the car, and then filter down to the car which consumer finally wants to buy. In addition to this the consumer can get to see the new technology coming up in the automobile sector, virtual driving experience, exhibition space where various products launches and media conference can happen.

### II. Automobile market in India as compared to world:

The automobile industry produced a total of 23,960,940 vehicles in April-March 2015 as against 23,358,047 in April-March 2014, registering a growth of 2.58% over the same period last year. The country is also currently the 6th largest market in the world for automobiles and is expected to become the world's third-biggest car market by the year 2026. As per the Automotive Components Manufacturers Association of India (ACMA), the world standings for the Indian automobile sector are as follows:

- i) Largest tractor manufacturer
- ii) 2nd largest two wheeler manufacturer
- iii) 2<sup>nd</sup> largest bus manufacturer
- iv) 5<sup>th</sup> largest heavy truck manufacturer
- v) 6<sup>th</sup> largest car manufacturer
- vi) 8<sup>th</sup> largest commercial vehicle manufacturer

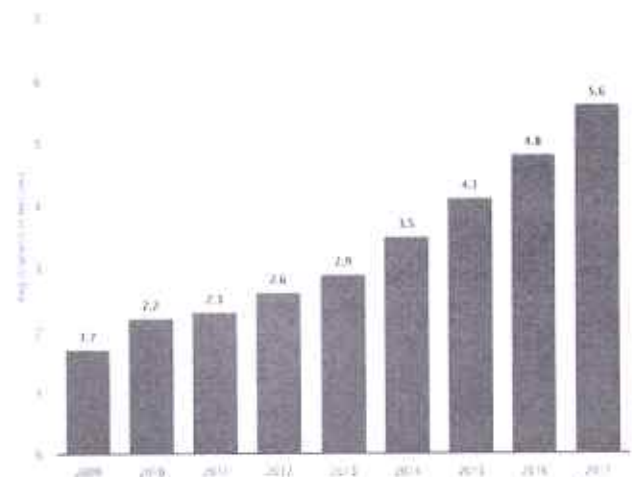


Table. II. 1. Registration of vehicles in India

## Precast Element's Erection & Installation at Site – A Case Study

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**ABSTRACT:** *The prefabricated building technology is a dry construction process that provides a fast, safer and greener way to build. The aim of this research work is to study joints primarily considering precast concrete elements which are used in buildings which may be referred to for handling, jointing and erection where appropriate that can allow year round construction, could lead to less wastage of materials than in site construction. It can also ensure higher worker safety and comfort level in site built construction.*

*A live case study for HIG & MIG residential project by Shirke Group for MAHADA pimple wagrae. The data collected based on jointing, quality management and erection was obtained through questionnaire and check list prepared as per my literature studies and book case studies and individual site visit and interaction with PMC engineer. Based on the data collection conclusion were drawn.*

*There is a great need to study the joint details by Architects along with precast engineers as it will make them understand the designing of the elements well before they produce the elements. The study will also help in easy installation of these elements and casting / grouting / splicing the joints in order to fulfil the design criteria and in overall make the building functional as designed.*

Keywords

Precast Construction, less wastage of materials, high rise mass housing, the correct supporting systems, lifting arrangements, personnel safety measures and meticulous planning.

### 1. INTRODUCTION

The purpose of this practice is to provide practical guidance and set minimum standards for the safe handling, erection and jointing of precast concrete elements. This paper applies to all places of work at which an employee has to handle, erect and jointing of precast concrete components in housing developments with repeated housing units.

The terms used here in these paper are brace, **anchor**, **tower crane** , **Leveling shim**, **Lifting beam** and **Prop** for jointing its erection and installation.

### 1.1 Area of study

This study is conducted in Pimpri Chinchwad Municipal area, **HIG & MIG** residential project by **Shirke Group** for **MAHADA** pimple wagrae.

### 1.2 Aim

- To speed up construction with use of materials which possess their innate characteristics like light weight, easy workability, thermal insulation and combustibility etc.
- To allow the year round construction, to allow less wastage of materials than in site- built construction.
- To ensure higher worker safety and comfort level than in site- built construction.
- To study the joint details.
- Need for studying handling, erection and jointing of precast elements is that a Well detailed and constructed joint plays a vital part in maintaining the integrity of the external envelope of the building, ensuring it weatherproof.
- Meeting other requirements such as fire- resistance and acoustic performance.
- The right locations, correct levels and alignments with necessary grouting at all intersection of the precast members play the key role to fulfil the function of the building desired by the Architect.

### 1.3 Categories of precast joints

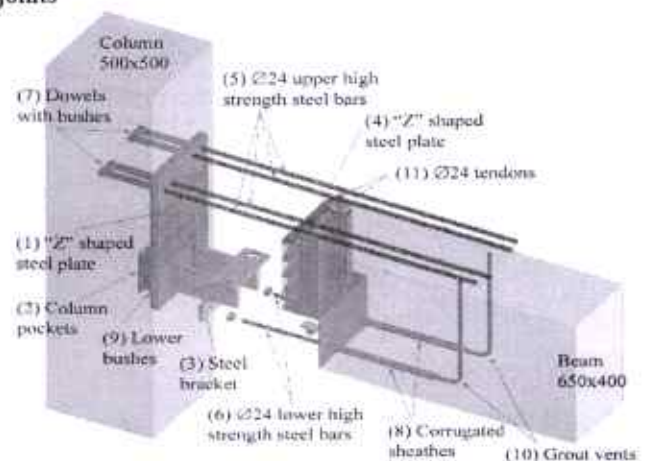


Fig: 1.3 Typical precast beam-column dry joint



# Understanding Heritage potential of Saswad, “A HISTORIC Medieval Town of Deccan”

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**Abstract :** Further discourse attempts to identify heritage potential of town, along with that it investigates how this character could be protected in the context of changing time. First part of the research paper will cover the origin and development of a historic town of Saswad. In second part methodology developed to rediscover the Cultural Significance of Saswad in terms of its built heritage. Further discourse, unfolds various historical factors involved in the development processes and understand the town as a cultural resource. Concluding part will examine issues concerning heritage at risk in Town and brief guidelines to formulate a Comprehensive Conservation Policy for Saswad. Study is carried out with observation and visual analysis methods instantaneously mapping, drawings, and inventories supported the arguments developed in the process of analysis. Interview of historians, architects and local people helped in understanding the forms and meanings of various historic elements and a town as a whole.

Keywords :

Medieval town, Historic Town, Heritage, Cultural heritage, Conservation policy, Historic settlement, Cultural significance

## 1. Introduction

Historic town of Saswad well known medieval town in Deccan<sup>1</sup> flourished in later Maratha period under local philanthropist Sardar<sup>2</sup> Purandare marks its presence in various ways. Numerous tangible and intangible historic elements define distinctive character of Saswad. Its unique character in terms of its setting in the landscape, the shape of the settlement and the nature of its edifices emerged over the period of time, are the assets and qualities that are most valued by its inhabitants and visitors. Its scenic location at the confluence of two rivers Chambali and Karha relates association of settlement, with the important natural element “water” manifested in the built form of Sangameshwar Temple located right at the convergence. Apart from this, Saswad is important base town to Purandar fort

geographically important in the historic events. Saswad is located north side of river Karha and 40 KM away from Pune

<sup>1</sup> Deccan plateau is the largest region located in southern part of India situated between western and Eastern Ghats or mountains

<sup>2</sup> Word *Sardar* denotes nobleman or commander from Maratha army

city on its southeast side. The Sangameshwar temple is adorned with exclusive Yadav era sculptures depicting various stories related to *Purankatha*<sup>3</sup>. Other important nearby places, such as Jejuri, Pandeshwar, Morgaon, Bhuleshwar, and the forts of Vajragad, Rajgad and Torana establishes the socio-historic and cultural context of Saswad.

Historic town of Saswad is well known for its special architectural character. Various architectural typologies such as Residential, Religious, commercial, and mixed use are still unharmed to a larger extent which needs extra protection from conservation point of view.

Meandering road pattern segregating several communities such as *Shimpi Ali*, *Borate Ali*, *Jagtap Ali*, *Brahmin Ali* and so on according to their professions and years they established developed in town. Alignment and locations of these houses their character tells the story of town and fits feudal setup of characteristically developed in medieval period. Main axis of town connects both the important parts of town those are open market space at one end whereas riverside on the other. Royal mansion of town Purandare Wada Grade II structure in the context located on this axis articulates story of the period and its importance in Deccan region. This mansion was the model used to build Shaniwar Wada in Pune under Bajirao Peshwa.<sup>4</sup> Maratha town planning system emerged was outcome of political will of various Maratha Ministers till early nineteenth century. They followed pattern of Organic planning and probably similar architectural character followed in various typologies such as evolution of Wada Architecture with cortile planning.

The Shaniwar Wada was the most magnificent and stately mansion that was ever built in Poona by the Peshwas in the 18th

<sup>3</sup> *Purankatha* are glorifying stories from ancient scriptures related to various deities

<sup>4</sup> Sowani Avinash, Maratha Town and City planning with reference to the systems of Village development during 17th and 18th centuries, (Unpublished thesis work submitted to Tilak Maharashtra Vidyapeeth, Poona 2011), 48. Original contribution in the Maratha town planning systems in Deccan region explained with several examples of administrative and economic systems developed over the period of time. This includes sketch maps of Towns such as Baramati, Kolhapur, Poona and other small towns around Poona.



## SAP MM

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### ABSTRACT

SAP ERP is enterprise resource planning software developed by the German company SAP SE. SAP integrates all business functions. This paper focuses on SAP MM Module which is a part of supply chain management.

## INDIA 2020: ROLE OF SUPPLY CHAIN

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### ABSTRACT

It is well known that supply chain management is an integral part of most businesses and is essential to company success and customer satisfaction. This paper focuses on global supply chain scenario. The role of key components of supply chain for fulfillment of India's Vision 2020 that are warehousing, inventory management, transportation and RFID.

## RESTRUCTURING TRANSPORT NETWORK IN URBAN CONTEXT A CASE OF PUNE

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### ABSTRACT

The cities and towns of India have emerged as a prominent economic growth center in fast changing scenario of growth pattern of developing countries. This growth has led to multidirectional sprawl of the cities and development of satellite towns on the outskirts of existing city boundaries. To facilitate such rapid development; infrastructural facilities including seamless transportation systems are the need of the hour. Because of the cheaper cost of journey, a large number of people in Pune are using the state owned transport service as a primary mode; but these services have very poor service delivery, very less level of inter-modal integration with other transport services. In order to establish 'Efficient - Effective - Economical' transportation system; in this research paper authors have made an attempt to develop a methodology which can be adopted by various Indian cities to restructure their regional transport network in the context of urban area through interventions like network restructuring based on commuter demand and growth pattern, integration with other modes of public transport, Route rationalization based on duplication services.

**KEYWORDS:** modal integration, urban transport, network restructuring, travel behavior, fringe development

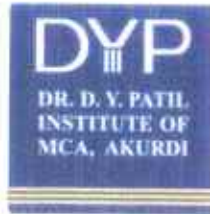
## USE OF SOCIAL MEDIA NETWORKING IN ACADEMIC LIBRARIES AND SERVICES IN MODERN AGE

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### ABSTRACT

The present conceptual based paper examine the important of social media networking academic libraries in the present days libraries can leverage on social networking and Social Media skills to provide dynamic library services. Information communication and technology (ICT) play a vital role in every walk of the life not exception the libraries also. The unprecedented technological advancement of the 21<sup>st</sup> century, no doubt has impacted on library services globally. The Social Media hype has gradually crept into the library profession with social sites such as Blog, Facebook, MySpace, Flickr, YouTube, Library Thing. These channel can help libraries for to reach the user's growing requirements in short life span. This paper is therefore, an attempt to examine the present scenario in library services delivery with these new and emerging technologies. Challenges faced by libraries in the use of these Social Media are investigated and possible solutions proffered.

INTERNATIONAL CONFERENCE ON ADVANCES IN  
COMPUTER TECHNOLOGY AND MANAGEMENT-2018  
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Savitribai Phule Pune University

# Certificate

This is to certify that Dr./ Prof./ Mr./ Ms. Nikhil Mehare  
has participated / presented in person / presented in absentia paper titled  
Restructuring Transport Network In Urban Context  
A case OF Pune  
in the INTERNATIONAL CONFERENCE  
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*Parker*

Dr. Shalaka Parker  
Convener

*K. Nirmala*

Dr. K. Nirmala  
Program Convener

*[Signature]* *[Signature]*

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## CHALLENGES FACED BY HUMAN RESOURCE MANAGEMENT IN CONSTRUCTION FIRMS

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### ABSTRACT

Today the construction industry is the second largest employer of people after agriculture. It contributes about 8% to the GDP of the country. There are numerous problems faced by construction industry. Thus it is necessary to find the challenges faced by human resource management in construction firms, in India.

In this study, a qualitative survey - an interview based method was adopted with the construction firms/Builders in Pune region. The interviews focus on the challenges faced by these construction organisations.

**KEYWORDS** -construction firms, Human Resource Management, and qualitative survey.

- i.
- ii.
- iii.
- iv.
- v.
- vi.
- vii.

**Planning** - establishing goals, standards and developing plans for the future.

**Organizing** - giving each person a specified task, establishing various departments, co-ordinating the work and having proper communication with the authorities etc.

**Staffing** - recruitment of selected candidates for the projects, hiring people, training the employees, evaluating the performance etc.

**Directing** - getting people to do the job, motivating other subordinates etc.

**Controlling** - monitoring the performance of the job done.

**Co-ordination** - achieving harmony within the organization with proper human efforts and to achieve the company goals & Objectives.

### INTRODUCTION

There is growth in India's infrastructure over the past years, and the Gross Domestic product has increased considerably if compared to the last decade since the construction sector is the biggest employment sector and it is the second employer to agriculture.

In any organisation people who are given jobs to achieve company goals and vision are managed by the human resource department. This department holds the 6 main functions of planning, staffing, organising, directing controlling and co-ordination. The construction industry is unorganised sector/ unstructured and labour intensive. Construction work is dangerous; and a lot of hard work is involved. Thus proper organisation of staff, their recruitment and retention and their safety are the major criteria that are involved in the construction industry.

### LITERATURE REVIEW

#### ROLE OF HUMAN RESOURCE IN THE CONSTRUCTION FIRMS

Human resource management is about theory, techniques methods and various tools used for adjusting people to each other, the organization, the work and relations to meet the organizations objectives/ goals.

The activities that include under HRM are -

### HUMAN RESOURCE DEPARTMENT

Many a times it is observed that construction small firms do not have the Human resource department. The challenges that are faced by Human resource department with medium and large scale construction firms who have more than 50 employees and various construction projects are being carried out.

### RESEARCH METHODOLOGY

Data was analysed from several construction firms of builders / developers through questionnaire and surveys conducted with the HR managers.

The questionnaire was related to the strategies adopted in the construction firms and what are the problems that the HR managers faced in retention of the employees.

Almost 5 construction firms were contacted and data was collected from their HR managers.

From the survey, 3 major factors are analysed, which are challenging for the Human Resource Management in the construction industry.

1. Recruitment of employees
2. Retention of the employees &
3. Training for skill development

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