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Evolution of Residences in Chittoor District, Andhra Pradesh

SP Mahaalakshmi[1] Ar. Anusha Prakash[2]
[1]5th year, B.Arch Student, [2]Assistant Professor, Faculty of PES University PES University, Bangalore 560085, India

Abstract: ***Discovering the transformation of residences in Chittoor District, Andhra Pradesh. This study explores architectural styles, materials, and cultural influences across different periods. Encompassing history, archaeology, urban studies, and spatial evolution. Explains how residences have adapted over time.***
Social and cultural identity, historical understanding, preservation, and architectural heritage play a crucial role in shaping residential architecture. From the ancient period to the contemporary era, various dynasties including the Nayakas, Marathas, the Vijayanagara Empire, Sultanates, the Kingdom of Golconda, British colonial rule, and the post-independence period, have significantly influenced architectural styles of residences. Urbanization and development have introduced technological advancements, altering construction methods, creativity, and spatial organization. Chittoor district is mostly famous for the temples. They used to have mud houses with Thadikelu (bamboo sticks mat) as doors and compound walls which needs to be replaced every 10 -12 years. They had Gajasthala (space for elephants) and Aavusthala (space for cows) in front of their houses. Everything started changing only when Britishers came to India.
This research highlights the cultural impact on residences, showcasing the architectural progression from the 1st century BCE to the present day and discovering the stories and reasons behind evolution of the architecture.
Keywords: Evolution, Cultural Heritage, Architectural style, Material transition, Spatial transformation, Technology advancements, Socioculture advancements

I. INTRODUCTION

Chittoor district in Andhra Pradesh has seen a lot of evolution in residential architecture over the years. This transformation is influenced by the region's historical, cultural, and socio-economic developments. The introduction sets the stage by providing a brief overview of Chittoor's rich cultural heritage and the crucial role architecture plays in reflecting societal changes. It emphasizes the need to know the shift from traditional housing to contemporary designs, considering factors such as urbanization, and technological advancements. The introduction also outlines the research objectives, highlighting the importance of documenting and analysing the architectural evolution for the future planning and preservation efforts.
Vijayanagara Empire, Sultanates and Golconda Kingdom, Nayakas, Marathas, British Colonial Rule, Post-Independence period has an impact on the architecture of chittoor district in many ways.

II. METHODOLOGY

This research provides a qualitative approach to study the evolution of residences in Chittoor district. Primary data is collected through surveys, oral inquiries, and interviews with residents, to understand the how the architecture evolved throughout their life and reasons behind it. A questionnaire-based survey is conducted to gather information on spatial organization, material used for the residences, and socio-cultural influences on residential architecture. Secondary data is gathered through a review of published articles, and research papers to study different timelines of evolution in residential architecture. Comparative analysis of the data collected helps identify key shifts in architectural styles, construction techniques, and urbanization patterns. The collected data is then systematically categorized and analyzed to establish patterns and factors influencing the transformation of residences in the region.

III. STUDY AREA

Chittoor district, located in the southern part of Andhra Pradesh. Residential architecture here has evolvedover years which was influenced by climate, culture, and socio-economic factors.
Traditionally, residences in this region were built using locally available materials such as mud, stone, and featuring courtyard-centric layouts to enhance ventilation and withstand the hot and semi-arid climate.

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Over time, britishers introduced new construction techniques, leading to combine architectural styles incorporating brick and concrete. Post-independence, urbanization and economic growth spurred the development of modern housing, including independent houses, gated communities, and apartments, particularly in urban centers like Tirupati and Chittoor town (About Chittoor, chittooronline.in). Cultural aspects such as Vastu Shastra plays a crucial role in residential design, influencing spatial arrangements and construction practices till date. This research focuses on studying the transformation of residential architecture from traditional to modern styles, knowing the factors like material usage, spatial planning, and cultural influences.

IV. LITERATURE REVIEW

The residential architecture of Chittoor district, Andhra Pradesh, has formed by various historical, cultural, socio-economic, and environmental influences over centuries. Each ruling dynasty left a distinct imprint on residential architecture, contributing to the region's diverse built environment.

1) Vijayanagara Empire (14th-17th Century)

The Vijayanagara Empire significantly influenced Chittoor's architectural traditions. The prominence of courtyard-centric layouts in Vijayanagara temples, inspired similar designs in residences. These courtyards facilitate natural ventilation and lighting, creating comfortable living environments as the climate in this region is pretty hot. Locally available materials like sun-baked bricks and wood, and high ceilings for ventilationwere incorporated in their residences. Wealthier homes incorporated the intricate carvings and ornamental features of temples, such as those found in the Hazara Rama Temple [1].

2) Golconda Sultanate & Islamic Influence (16th-17th Century)

During the Golconda Sultanate, Indo-Islamic elements blended with local styles. Residences featured geometric patterns and floral motifs, reflecting the intricate designs found in prominent Islamic architecture of the region but the courtyardswere retained. The use of arched doorwaysanddomed roofs in homes echoed the sultanate's monumental architecture, symbolizing the integration of Islamic architectural elements into daily life.The Qutb Shahi rulers promoted a syncretic culture, blending Persianate Shia traditions with local customs.This cultural integration influenced residential architecture, leading to a fusion of design elements that catered to both aesthetic preferences and functional needs. Stone became a more prominent material in residences [2].

3) Nayaka Rule (17th Century)

Nayaka temples are celebrated for their expansive pillared halls called Mandapas and this might have led to the incorporation of pillared verandas in homes, providing shaded outdoor spaces and enhancing the architectural appeal. Residential architecture remained functional, with stone structures for elites and traditional materials for commoners. The Nayaka rulers were instrumental in reviving and renovating temples that had been desecrated during previous conflicts, blending various architectural traditions, therefore the influence on the architecture was limited [3].

4) Maratha Influence (17th-19th Century)

Features such as courtyards and ornate woodwork, prevalent in Maratha wadas, have been adapted in few of the residences because Marathas influence is limited in Chittoor district. Wada housesare two or three-storey buildings which are rectangular in shape with a courtyard in the centre and rooms around them. As courtyard houses persisted, elements like thicker walls or watchtowers appeared in wealthier homes, influenced by military architecture [4].

5) British Colonial Era (18th-20th Century)

The British established Chittoor district by reorganizing territories from the North Arcot district of Tamil Nadu and parts of the Kadapa district in 1911.This reorganization led to the development of administrative centers, necessitating the construction of official residences and public buildings. Single-story structures with spacious layouts, surrounded by gardens, and designed for ventilation in bungalow style, Verandas which are expansive, shaded outdoor areas providing relief from the tropical climate and Pitched roofs areDesigned to facilitate rainwater runoff during monsoons. While British materials and techniques were adopted in elite residences, most common people continued using traditional methods and local resources [5].

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6) Post-Independence (1947-Present)

Post-independence, the district underwent further reorganization, notably on April 1, 1960, due to the Pataskar Award, which led to the exchange of territories between Andhra Pradesh and Tamil Nadu. Post-independence, urbanization and modernization led to the adoption of standardized layouts in government housing projects, while vernacular traditions persisted in rural areas. The focus shifted to cost-effective, functional designs with increasing use of concrete and industrial materials [6].

V. COMPARATIVE ANALYSIS AND TABLE

Period	Spatial Organization	Construction Materials	Architectural Elements	Cultural Influence	Symbolism & Aesthetics
Vijayanagara Empire (14th-17th Century)	Courtyard-centric houses, large open spaces	Sun-baked bricks, wood, stone	Pillars, carved doorways, high ceilings	Hindu temple-inspired, religious motifs	Sculptures, murals, temple carvings
Golconda Sultanate & Islamic Influence (16th-17th Century)	Retained courtyards but added geometric layouts	Stone, lime plaster, mortar	Arches, domes, decorative jalis (screens)	Persian, Deccan-Islamic fusion	Floral and geometric patterns, calligraphy
Nayaka Rule (17th Century)	Pillared verandas	Stone for elites, brick and mud for commoners	Pillared verandas, Mandapa-like spaces	Revival of temple architecture	Carvings of deities, mythological figures
Maratha Influence (17th-19th Century)	Wada-style with central courtyards	Brick, wood, clay tiles	Thick walls, wooden balconies	Military and administrative needs influenced design	Minimal ornamentation, emphasis on practicality
British Colonial Era (18th-20th Century)	Bungalow-style, open layouts, gardens	Brick, lime, cement, iron, glass	Large windows, pitched roofs, expansive verandas	European planning, ventilation focus	Classical European motifs, plain facades
Post-Independence (1947-Present)	Standardized layouts, apartments	Concrete, steel, glass, prefabricated materials	Flat roofs, minimal ornamentation	Industrialization, modern lifestyle	Functional, modern aesthetics

VI. DISCUSSION

The evolution of residential architecture in Chittoor District, Andhra Pradesh, reflects a long and interesting journey intertwined with societal changes and advancements in construction practices. Born and raised in this district, Mr. Purushotham offers valuable insights into this transformation, which spans several decades. In the 1970s, the landscaping was donearound the bungalows which was constructed with concrete, featuring painted walls adorned with limestone—a symbol of affluence among the privileged.

Mr. Balaji, who was also born and raised in Chittoor District shared his knowledge and observations throughout his life - The residents had Gajasthala (space for elephants) and Aavusthala (space for cows) in front of their houses which was later demolished by the britishers. They were farming in front of the house before the britishers came in and they do it outskirts of the town, so they can easily store the goods in bulk. Farmers in Palamanerused to make Jaggery (Bellam made with sugarcane) in front of their house by making a space specifically for it, but they started making the jaggery in the factories later because the floor in the house was getting dirty and sticky.

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Everyone strictly followed vastu principles to design a house. Kitchens were strategically positioned at higher contours to prevent water stagnation, while the sacred space of the pooja room or bedroom delineated the living areas from utilitarian zones like the kitchen. Plinth levels were introduced for the water to not enter the house when it rains.Bathrooms were located outside the houses due to hygiene and sanitation.

The single story buildings often had an extra room upstairs on the terrace for the labourers or the temporary guests to stayover. Building materials, predominantly locally sourced, featured clay tiles and cast iron for beams and pillars—testimony to the resourcefulness and durability prized in traditional construction.

In essence, the evolution of residential architecture in Chittoor District eptiomizes a dynamic interplay between tradition and modernity, where cultural heritage converges with aspirations for progress. As residents embrace new trends and global influences, the architectural landscape continues to evolve, reflecting the evolving socio-economic fabric of the region.

VII. CONCLUSION

The evolution of residential architecture in Chittoor District reflects a fascinating journey intertwined with changes in the society and advancements in construction practices. From the ancient period to the present, the district has witnessed a continuous transformation driven by historical influences, cultural shifts, and technological innovations.

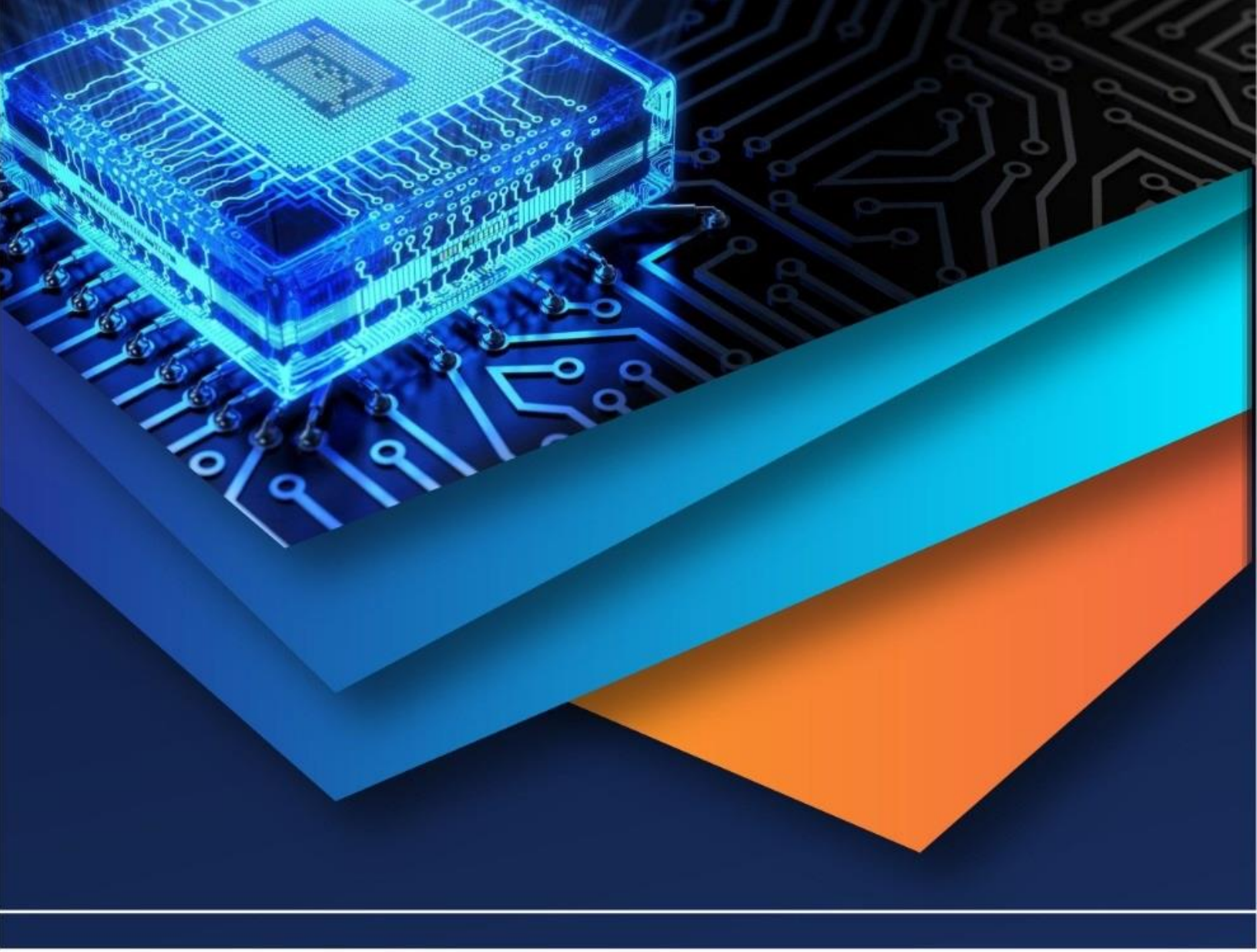
Over time, residences have evolved from traditional courtyard houses with natural materials to modern structures incorporating industrial advancements. The impact of different dynasties, including the Vijayanagara Empire, Sultanates, the Kingdom of Golconda, British colonial rule, and post-independence development, has been instrumental in shaping architectural styles. Each period introduced new building techniques, materials, and spatial arrangements while retaining key aspects of cultural identity.

Traditional elements such as Vastu principles, courtyard layouts, and climate-responsive techniques still influence modern residences, even as globalization brings new materials and design approaches. Urbanization and increased access to resources have altered construction methods, leading to diverse architectural expressions that blend history with innovation.

Studying Chittoor's architectural transformation provides valuable insights into how built environments adapt to socio-economic and technological changes. As the region continues to develop, its architectural legacy remains a testament to the resilience and ingenuity of its people. Preserving historical structures while embracing modern advancements will ensure a sustainable architectural future that respects both tradition and progress.

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