Implementation Challenges of Concrete Prefabrication Panel Construction Technologies in Building Reconstruction and Development Programme (RDP) Housing Units in South Africa

Authors Names

Faheem Jogiat, Murendeni Liphadzi, and Xolile Mashwama

CITC-14 | SEPTEMBER 2-5, 2024
HOSTED BY FEDERAL UNIVERSITY OF RIO DE JANEIRO
RIO DE JANEIRO, BRAZIL

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Introduction & Background

- Overview of the prefabrication construction method and its relevance in the South African context, particularly in RDP housing.
- Brief discussion on the challenges faced by the South African construction industry in implementing prefabricated construction technologies.

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Aim, Objectives, and Scope

Aim:

- To explore the challenges associated with implementing prefabrication construction technologies in RDP housing units in South Africa.

Objectives:

- Identify the main challenges faced in the implementation of prefabrication technologies.
- Analyse the potential impact of prefabrication on the quality and speed of RDP housing construction.

Scope:

- Focus on challenges related to the South African context, particularly within the framework of government-led RDP housing projects.

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Research Design and Methodology

Methodology:

- Systematic literature review and expert interviews conducted in Gauteng province.

Tools:

- PRISMA methodology for selecting relevant literature and thematic analysis of expert responses.

Data Sources:

- Journals, books, credible online sources, and expert opinions.

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Results (1)

Key findings on the challenges of prefabrication in South Africa:

- Resistance to technological change.
- Procurement-related issues.
- Misinformation and lack of awareness about prefabrication benefits.

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Results (2)

Additional challenges:

- Fear of job loss in traditional construction sectors.
- Poor implementation of existing prefabrication initiatives.
- Limited availability of prefabricated materials.

Discussions, Conclusions & Recommendations (1)

Summary of the challenges identified.

- Recommendations for increasing awareness and improving implementation of prefabrication technologies:
  - Government and industry-led initiatives to promote prefabrication.
  - Education and training programs to address skill gaps and resistance to change.

Discussions, Conclusions & Recommendations (2)

- Conclusion: Prefabrication offers significant potential to improve the quality and speed of RDP housing construction in South Africa, but challenges remain.

- Future Research: Suggested focus on the impact of prefabrication on construction timelines compared to traditional methods.