

Adoptability of Augmented Reality as a Supplementary Tool in Architecture, Engineering and Construction (AEC) Education in Ghana

Gabriel Nani and Emmanuel Wiribare (Ghana)

Key words: Capacity building; Curricula; Education; Low cost technology; Augmented Reality (AR), Education, Architecture, Engineering, and Construction

SUMMARY

Aim/Purpose-This study examines the adoptability of augmented reality as a supplementary tool in Architecture, Engineering and Construction (AEC) education in Ghana. The research investigates the potential of augmented reality (AR) technology in enhancing AEC education and explores its adoptability within the Ghanaian context. The significance of the study is highlighted, emphasizing the importance of integrating technology in AEC education to bridge the gap between theory and practice.

Methodology- The study used a quantitative research approach. A structured questionnaire for the study was designed from the literature review and administered to students and lecturers in AEC education at Knust. Both purposive and snowball sampling methods were used in this study to obtain a valid and effective overall sample size. The questionnaire was disseminated through Google Forms. Fifty were retrieved and used for the analysis of the study. The statistical tools used for analysis are frequency,

Adoptability of Augmented Reality as a Supplementary Tool in Architecture, Engineering and Construction (AEC) Education in Ghana (12620)
Gabriel Nani and Emmanuel Wiribare (Ghana)

FIG Working Week 2024

Your World, Our World: Resilient Environment and Sustainable Resource Management for all
Accra, Ghana, 19–24 May 2024

percentages,

and mean scores.

Results-The study identifies gaps in the current AEC education system, including limited technology integration, hands-on learning opportunities, lack of awareness among faculty, and the Interdisciplinary Training. The benefits of augmented reality in AEC education are explored, highlighting improved visualization, student engagement, knowledge retention, and critical thinking skills. Implementation challenges, such as cost, technical support, and content availability, are also identified. The conclusion highlights the potential of augmented reality in enhancing AEC education and emphasizes the need for its integration into the curriculum.

Value-The findings of this research contribute to the understanding of augmented reality's adoptability in AEC education in Ghana. By embracing augmented reality technology, educational institutions can enhance the learning experience, bridge the gap between theory and practice, and prepare students for successful careers in the construction industry

Adoptability of Augmented Reality as a Supplementary Tool in Architecture, Engineering and Construction (AEC) Education in Ghana (12620)
Gabriel Nani and Emmanuel Wiribare (Ghana)

FIG Working Week 2024

Your World, Our World: Resilient Environment and Sustainable Resource Management for all
Accra, Ghana, 19–24 May 2024