The Design Process Framework in Interior Design Education: An ACT-R Approach

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Abstract:

Many studies have explored interior design pedagogy and developed teaching methods in interior design and interior design pedagogy. However, this study describes the appropriate way to use the conceptual framework of the design process by Yanksari (2020) in teaching interior design. The main research question is: how the design process's conceptual framework affects interior design's educational process in the adaptive control of thought-rational theory. This study aimed to explore the impact of the Yanksari 2020 conceptual framework on the educational process of interior design, utilizing Anderson's Adaptive Control of Thought-Rational (ACT-R) theory. A quantitative, one-shot case study approach was used. The author explained the conceptual framework to the 60 senior interior design students. After the final presentation, a survey was conducted to answer the research question. The results showed that the conceptual framework of the design process significantly enhances procedural knowledge. This positive influence is notably strong during the autonomous stage, followed by the associative and cognitive stages, with students expressing strong agreement on its benefits in the interior design educational process. A conceptual framework has been developed for further investigation and educational purposes.

References:

1- Anderson, J. R. (1995). Cognitive psychology and its implication. New York, NY: Freeman.
2- Asojo, A. (2012). An instructional design for building information modeling (BIM) and Revit in interior design curriculum. Art, Design & Communication in Higher Education, 11(2), 143–154. https://doi.org/10.1386/adch.11.2.143
3- Asojo, A., & Vo, H. (2021). Pedagogy+ Reflection: A Problem-Based Learning Case in
4- Bachelor's in Interior Design program (2024) Capstone Project Description. College of Design and Applied Arts. Taif University.
5- Council for Interior Design Accreditation. (2018). Professional Standards 2018, (January), Michigan: Council for Interior Design Accreditation. 1–30. Retrieved from https://accredit-id.org/wp-content/uploads/2018/01/Professional-Standards-2018_Final.pdf
6- Frankfort-Nachmias, C., Nachmias, D., & DeWaard, J. (2015). Research methods in the social sciences (8th ed.). Worth Publishers.
7- Hassan Awad Hassan El Gendy. (2014). Statistics and Computers: Applications of IBM SPSS Statistics V21. Anglo Egyptian Library
8- Interior Design. International Journal of Designs for Learning, 12(2), 1–14.
9- Kaup, M., Kim, H. C., & Dudek, M. (2013). Planning to learn: The role of interior design in educational settings. International Journal of Designs for Learning, 4(2).
10- Norbert M. Seel, Thomas Lehmann, Patrick Blumschein, & Oleg A. Podolskiy. (2017). Instructional Design for Learning : Theoretical Foundations. Brill.
11- Nussbaumer, L. L. (2009). Evidence-based design for interior designers. Fairchild Books.
12- Pakravan, S., Keynoush, S., & Daneshyar, E. (2022). Proposing a pedagogical framework for integrating urban agriculture as a tool to achieve social sustainability within the interior design studio. Sustainability, 14(12), 7392.
13- Patel, T., & Alfaro, S. A. (2022). A design case for utilizing theories as a heuristic thinking device to create empathy in [interior] design studios. International Journal of Designs for Learning, 13(1), 46-60.
14- Sosa, M., Ahmad, L., & Musfy, K. (2022). Adaptive ephemeral interiority: Upcycling site-specific

    interiors. Interiority, 5(2), 155.

15- Taie, M. (2014). Skill acquisition theory and its essential concepts in SLA. Theory and Practice in Language Studies, 4(9), 1971-1976.

16- Wiley, D. A. (2000). Connecting learning objects to instructional design theory: A definition, a metaphor, and a taxonomy. In D. A. Wiley (Ed.), The instructional use of learning objects (Vol. 2830, pp. 1–35).

17- Yanksari, F. (2020). Exploring Building Information Modeling (BIM) and the design process in interior design pedagogy (Doctoral dissertation, University of Minnesota).

18- Yengin, I., & Ince, I. F. (2014). Applying the adaptive control of thought-rational theory into the design of mobile worked examples applications. International Journal of Robots, Education and Art, 4(2), 21.