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Volume 7 (1); June 15, 2018 [[Booklet](#)]

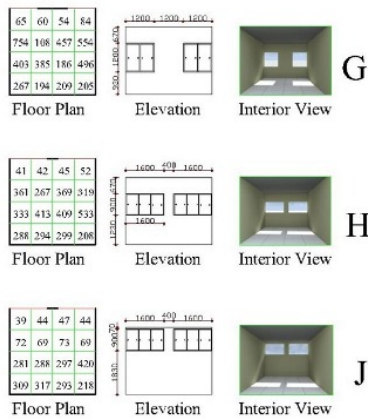


Figure 2: Details of simulated rooms with elevations G, H, and J.

	<p>Citation: Idowu O. M. and Humphrey S. (2018). Aesthetics and day-lighting correlation: an experimental study of form and placement of windows on buildings. <i>J. Art Arch Stud.</i> 7 (1): 01-10. Journal homepage: www.jaas.science-line.com</p>	<p>Journal of Art and Architecture Studies (JAAS) ISSN: 2383-1553 Volume 7, No. 1: 01-10. 2018 SCIENCE LINE</p>
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Research Paper

Aesthetics and day-lighting correlation: an experimental study of form and placement of windows on buildings.

Idowu O. M. and Humphrey S.

J. Art Arch. Stud., 7(1): 01-10, 2018; pii:S238315531800001-7

DOI: <https://dx.doi.org/10.51148/jaas.2018.1>

ABSTRACT

Design concepts or principles such as 'Form follows function', 'Beauty in usability', or 'Attractive things work better' suggest that a positive correlation exists between aesthetics and functions of a building. Windows are designed probably for aesthetics and daylight in spaces of a building. However the design of windows for adequate daylight may be antithetical to that of aesthetic enhancement. This study sought to ascertain the effect of window form and position on, and the correlation if any, between aesthetics and daylight in spaces of a building. 143 respondents in four groups who were mainly undergraduate and postgraduate students and lecturers in Architecture were the respondents in the study. Six simulated elevations of an existing building with different form and placement but same window area were ranked in order of aesthetic pleasantness. Six architectural models of a typical room in the building were constructed with the window forms and placement as on the simulated elevations. Day-lighting levels were observed with lux meter outside, and at 16 positions on the floor of the simulated rooms. Mean daylight factors and daylight levels of in the rooms were calculated. Spearman's Rank Order Correlation Coefficients were employed to ascertain correlation between aesthetic rankings of the elevations and respective daylight factors. It was found that window forms and positions affect both aesthetic rankings and daylight factors in rooms of the buildings. Correlation coefficients of +0.94 were obtained in three of the four ranking groups, while the other ranking group recorded a coefficient of +0.77. The study concluded that the correlation between aesthetics and day-lighting through window design is at least appreciable and positive. It was recommended that windows form be rectangular with geometric proportion toward 'the golden ratio'

Keywords: Buildings; Window form; Window position; Aesthetics; Day-lighting; Correlation.

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Chalchote, Chaisang, A., Chaiyaprasit, A., and Akhavan, A. A. (2018). Literature Architecture in Thailand: Narrative the space. *Journal of Architecture Studies*, 7(1), 1-10. <https://doi.org/10.1080/20732177.2018.1481111>



Figure 9: Broken glass window with wooden frames



Figure 12: Wooden ceiling in the lobby hall.

Journal of Art and Architecture Studies
ISSN: 2073-1038
Volume 7, No. 1, 2018
2018 EDITION



Figure 17: Upper terrace and the elephant motif grounded with quadrants in both sides



Figure 10: Wooden door used as security to upper part of the staircase

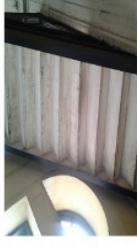


Figure 5: Wooden part of the staircase

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