

## **A Multimodal Measurement Approach Using Narratives and Eye Tracking to Investigate Visual Behaviour in Perceiving Naturalistic and Urban Environments**

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**Abstract :** Abstract: The majority of existing landscape research has been derived by conducting heuristic evaluations, without having empirical insight of real participant visual response. In this research, a modern multimodal measurement approach (using narratives and eye tracking) was applied to investigate visual behaviour in perceiving naturalistic and urban environments. This research is unique in exploring gaze behaviour on environmental images possessing different levels of saliency. Eye behaviour is predominantly attracted by salient locations. The concept of methodology of this research on naturalistic and urban environments is drawn from the approaches in market research. Borrowing methodologies from market research that examine visual responses and qualities provided a critical and hitherto unexplored approach. This research has been conducted by using mixed methodological quantitative and qualitative approaches. On the whole, the results of this research corroborated existing landscape research findings, but they also identified potential refinements. The research contributes both methodologically and empirically to human-environment interaction (HEI). This study focused on initial impressions of environmental images with the help of eye tracking. Taking under consideration the importance of the image, this study explored the factors that influence initial fixations in relation to expectations and preferences. In terms of key findings of this research it is noticed that each participant has his own unique navigation style while surfing through different elements of landscape images. This individual navigation style is given the name of 'visual signature'. This study adds the necessary clarity that would complete the picture and bring an insight for future landscape researchers.

**Keywords :** human-environment interaction (HEI), multimodal measurement, narratives, eye tracking

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