Challenges and potentials of transforming soundscape research to revitalise building acoustics in undergraduate architectural education

Jieling Xiao, Francesco Aletta, Islah Ali-MacLachlam

Dr. Jieling Xiao, Birmingham City University
Dr. Francesco Aletta, University College London
Dr. Islah Ali-MacLachlam, Birmingham City University

Soundscape research has been increasingly popular in the built environment field. It is defined in the ISO 12913 series as the acoustic environment perceived and/or understood by a person in a place. In recent years, the research of soundscape also expands from the urban environment to the indoor environment. Compared to traditional building acoustics, the soundscape concept brings interesting perspectives however challenges to undergraduate architectural curriculums balancing the qualitative and quantitative attributes. Soundwalks, acoustic measurements and computational simulations are commonly used methods in soundscape research. Embedding these methods in the teaching, we aim to enable students to experience, analyse and articulate the sound environment to inform their design concepts and details. Through a number of workshops with different architectural courses, we reflected on the success and failures of our own experiences to inform a research informed soundscape teaching and learning strategies for undergraduate architectural education in the future.
• Author(s) Biography (200 words each):

Jieling is a senior lecturer in environmental design at Birmingham School of Architecture and Design. She is interested in people’s everyday sensory experiences in cities across different cultures and how planners and designers can learn from such. Her research focused on the understanding, assessing and enhancing the perceptual qualities of public spaces via design, public participatory and artistic inputs. In particular, how sounds and smells are perceived and considered in the design process. She often use walks and participatory methods to understand people’s experiences, emotions and decision-makings in relation to spaces.

Francesco is a researcher currently based in London at the UCL Institute for Environmental Design and Engineering. He is a member of the Italian Acoustical Society (AIA) and the Secretary of the Technical Committee Noise of the European Acoustics Association (EAA). He has been active for more than 10 years in soundscape studies, and environmental acoustics more broadly, with a particular focus on soundscape descriptors and indicators and the harmonization of protocols for gathering perceptual data on acoustic environments. He was recently appointed by the British Standards Institution as Committee Member in the WG 54 “Perceptual assessment of soundscape quality” to work on the development of the ISO 12913 series on soundscape.

Islah is course leader of BSc degrees in Music Technology and Sound Engineering and Production, and academic lead in acoustics in the department of Digital Media Technology, Birmingham City University. He is interested in environmental acoustics, particularly those associated with urban spaces, and methods for creating and understanding the effect of soundscapes on their inhabitants.