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BUILDING UP MATHEMATICS: THE LEGACY OF ZOLTÁN DIÉNÈS

MICHAEL O. J. THOMAS

Auckland University, New Zealand

While most mathematics educators have heard of Zoltán Diénès (1916-2014), since his outstanding work sits alongside that of Piaget, Bruner and other early giants in our field, and may be familiar with his multibase (or Diénès') blocks, in this talk we will try to give a wider perspective on his seminal contribution to mathematics education. This includes the ideas of guided discovery, multiple embodiments, such as algebraic materials and logic blocks, and other approaches that have the aim of assisting students to perceive the structure of mathematics. Our journey will be based on ideas from his publications, ranging from the well-known book *Building up Mathematics* (Diénès, 1961) to lesser known papers published in the *New Zealand Mathematics Magazine* and in the book *A Concrete Approach to the Architecture of Mathematics – The Collected Papers of Zoltán Diénès* (Thomas (Ed.), 2009), along with insights into his thinking from email correspondence and an interview.

References

- Diénès, Z. P. (1960). *Building up mathematics* (4th edition). London: Hutchinson Educational.
- Thomas, M. O. J. (Ed.) (2009). *A concrete approach to the architecture of mathematics. Collected papers of Z. P. Dienes*. Auckland: The University of Auckland, 1-345. ISBN 978-0-473-15317-5.