

CRITICALLY ASSESSING THE SELECTION OF BEGINNER STUDENTS IN ARCHITECTURE AT THE UNIVERSITY OF PRETORIA (1971-2016)

by

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Abstract In this study a critical assessment is undertaken of the methods employed for the selection of beginner students for purposes of admission to studies in architecture. The study employs mixed methodologies that include studies of literature and archival sources, a national survey, heuristic analysis and critical reflection.

A brief overview of education in architecture and its development in South Africa introduces the study. The admission procedures and assessment tools employed for the selection of beginner students into systems of architectural education internationally is investigated through the analysis of case studies and published surveys. The lack of available information on the subject necessitated that a national survey be undertaken so as to determine how and by what means assessment tools are employed by schools of architecture in South Africa for the selection of students for admission to studies in the discipline of architecture. The findings of the survey are critically examined so as to establish an understanding and framework of local practice.

In the thesis the final focus is on the academic informants, procedures, assessment tools and outcomes for the selection of beginner students for admission to the Department of Architecture, University of Pretoria. This case study covers three consecutive episodes that span the forty-five years up to and including the 2016 academic year in order to critically assess, reflect upon and make pertinent and informed recommendations as to current procedures both specifically for the institution as well as nationally and internationally.

Keywords admission; architectural education; assessment tools; beginner students; selection; University of Pretoria.

PREFACE

This study originated from my daily work with students and prospective students at the Department of Architecture, University of Pretoria. Their ambitions and questions, my curiosity and the support of current and former colleagues, from both the academic and administrative sides, contributed to this research finally coming to fruition. I extend my gratitude to every one of them for their contributions over the course of twelve years. The Admission Officer of the Faculty, Jenny van Rooyen, and my colleagues Moloko Mothemela and Johan N. Prinsloo must be singled out – my heartfelt thanks to them for their steadfast backing of, and ongoing participation in, the selection project.

The formative influence of my mentors, Professors Emeriti Roger C. Fisher and Schalk W. le Roux, deserve a special mention. Both lectured Design during my first year of study and some decades later I am privileged to have undertaken a formal research study under each of them. Their humanity, wisdom and pedagogic values continue to inspire me. I especially thank Professor Fisher for acting as the promotor of this thesis.

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This study is dedicated to my wife, Rachel, without whom it would not have seen the light of day.

DECLARATION

I, the undersigned author, declare that the applicable research ethics approval has been obtained for the research described in this work and that I have observed the ethical standards required in terms of the University of Pretoria's Code of Ethics for Researchers and the Policy Guidelines for Responsible Research.

This treatise is submitted in fulfilment of part of the requirements for the degree Philosophiae Doctor in Architecture at the University of Pretoria. No part thereof has already been, or is currently being, submitted for any other degree or examination at any other university.

A handwritten signature in black ink, appearing to be 'Nico Botes', written in a cursive style.

Nico Botes
12 February 2018

RESEARCH CONTRIBUTIONS RELATED TO THIS STUDY

- BOTES, N. 2015. Knocking at the practitioner's door: Job shadowing and the threshold to the architectural professions. *Architecture South Africa*, (76) Nov/Dec:39-46.
- BOTES, N. 2015. Gatekeeping for the architectural disciplines. Invited presenter, Workshop on Student Admission and Attrition, Faculty of Veterinary Sciences, University of Pretoria. Onderstepoort, 22 January.
- BOTES, N. 2014. Workplace exposure as part of selection for beginner students in the architectural disciplines: The ninth tool. Paper presented at the Architectural Education Symposium, University of the Witwatersrand, 22 January.
- BOTES, N. 2012. Towards demystifying the 'black box': body as site. *South African Journal of Art History*, 27(2):121-132.
- BOTES, N. 2010. Chicken pie, distinctions and inkblot tests: rethinking the selection of undergraduate students for design programmes in the built environment. Invited presenter, Research Seminar Series, Faculty of Art Design and Architecture, University of Johannesburg, 17 May.
- KHAN, Z & Botes, N. 2017. In your hands & self-portrait: introductory spatial design exercises in the first-year studio. Proceedings of the 14th National Design Education Forum of Southern Africa Conference:104-117. <http://www.defsa.org.za/papers/your-hands-self-portrait> (accessed 15 December 2017).

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