# Preface

This book originated in a research project that set out to use a study of history and physics in Australia today to examine two important sets of questions. The first set of questions is about knowledge and the content and structure of the curriculum of schools and universities. What value do traditional studies such as history and physics have in the changing world and knowledge fields of the twenty-first century? How have fields like history and physics changed? What do those who work in these fields see as important in their teaching and research activities? The second set of questions is about the changing policy environment and the management of schools and universities today. How are changes of governance affecting the knowledge work of schools and universities?

The project itself was built on an earlier research project that had studied changing thinking about the school curriculum around Australia over the past half century. This had found considerable upheaval among curriculum leaders and policy-makers about what should ground curriculum today, how it should be structured, what should be emphasised. Should this be learning, or standards, or skills, or capabilities? Where does knowledge come from? Which school subjects should have priority? How to avoid an over-crowded curriculum?

From the other end the project was built on our experiences of working in the research environment of Australian universities, including in a senior management role. Here other questions were apparent. What is specific to different fields of knowledge, and how are they impacted by priorities of funding bodies and university management? What impact do the curriculum reforms taking place in undergraduate teaching have on research agendas and research quality? How are universities and academics dealing with a knowledge explosion, demands for impact, preferences for collaboration or interdisciplinarity and ever greater scrutiny of research productivity?

Both the school curriculum questions, and the knowledge production and university management questions have been the subject of a lot of attention in the academic literature as well as on the ground. In this book, we use interviews with over 100 teachers and academics working in two important disciplinary fields to take a fresh look at what is happening now, and to take up the academic literature

and arguments about knowledge and about what matters going forward. The design of the study lets us keep in view what is similar and different about these forms of knowledge drawn from the humanities/social sciences on the one hand, and the sciences on the other. And it lets us see and think about the role of formal education institutions, across the trajectory from secondary school to the undergraduate years to research training and research.

Parkville, Australia

Lyn Yates
Peter Woelert
Victoria Millar
Kate O'Connor

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