Knowledge Studies in Higher Education

Volume 4

Scope of the Series

Even though knowledge is the main content of teaching and universities are key knowledge producers, scholars have only recently begun to actively explore research on knowledge studies in higher education. As this field of study has grown, it has increasingly overlapped with the research focus of other fields, namely research and science policy, and information studies. However, these three fields have developed independently with little interaction between them, causing our understanding of knowledge to be limited, compartmented, and lacking a multidimensional perspective. This book series is designed to improve knowledge studies in higher education by stimulating interactions between these different approaches.

Coverage in this series includes:

- University and knowledge production
- R & D funding systems
- Education reforms
- Innovation systems for emerging regions
- School curriculum and knowledge
- Social utility of knowledge production
- University research and in-house research
- Research collaborations.

With its comprehensive overview and multidisciplinary perspective, this series provides scholars and policymakers with the theory and data they need to make more informed decisions regarding knowledge research in higher education.

More information about this series at http://www.springer.com/series/11778

Karen L. Webber
Editor

Building Capacity
in Institutional Research
and Decision Support
in Higher Education

Editor
Karen L. Webber
Institute of Higher Education
University of Georgia
Athens, GA, USA

Preface

Gina Johnson, Association for Institutional Research

Recently I was invited to give a presentation at the Midwestern Higher Education Compact's (MHEC) Multi-State Collaborative on Military Credit (MCMC) program's annual meeting. The topic was Institutional Research and Military Student Success. In the presentation, I reflected back on my time as a data and policy analyst at MHEC, before I had ever heard of the term "institutional research." Following my work in multiple institutional research offices followed by almost two years on the staff in the executive office of the Association for Institutional Research, I recently shared the ways in which I believed the *Duties and Functions of Institutional Research* (2017) can be utilized to measure and increase the success of miltary-connected students in higher education. The exercise could be repeated for other categories of students and many aspects of the higher education experience. I am pleased to say the presentation was well received, and, in fact, I may have made IR professionals out to be heroes who can save the day with data and information. The only dark cloud in the otherwise sunny response from the attendees following the presentation came from those who shared that they lack access to their institution's IR team because they are so busy with the many other duties that draw their attention. And so, like so many conversations in higher education and IR circles these days, we returned to capacity. Imagine what we could accomplish if only we could expand the institutional research capacity across higher education!

The authors of the chapters in this volume, *Building Capacity in Institutional Research and Decision Support in Higher Education*, outline the challenges inherent in expanding the ability of students, staff, faculty, and administrators to make decisions informed by the data and information collected, analyzed, interpreted, and reported by institutional researchers. With rare exceptions, global higher education is facing a situation in which there are fewer resources coupled with more demands. As the field of institutional research continues to evolve in higher education and as a profession, how do we respond to these demands and build capacity if, at the same time, we experience reduction in human and budgetary resources? Thankfully these

same authors who outline the challenges offer solutions that we in the higher education and IR community can embrace.

Purpose and Organization of This Book

In her introduction to this volume (Chap. 1), Webber outlines the changing landscape of higher education that impacts the method and speed with which institutional researchers can accomplish the duties and functions of IR, including massification of higher education, technology's role in decision support, and various external drivers that prompt the conducting of more institutional research. Institutional research professionals are both impacted by the speed at which the higher education landscape is changing and solutions to dealing with this changing landscape. When faced with rapid change and a need to react quickly and intelligently, it is precisely the duties and functions of institutional research that can help leaders and others involved in the pursuit and provision of higher education. As previously cited, these duties and functions include:

- Identify information needs
- Collect, analyze, interpret, and report data and information
- Plan and evaluate
- Serve as stewards of data and information
- Educate information producers, users, and consumers

These duties and functions must occur across an institution, system, or organization to ensure successful data-informed decision-making. And institutional researchers play an essential and central role in ensuring this occurs.

While this book necessarily presents the rapidly changing circumstances in which higher education finds itself reacting to often negative forces, it also provides hopeful and helpful suggestions for surviving, and thriving in, such a rapidly changing, demanding environment. Indeed it is institutional research itself that can best help IR professionals help their colleagues make the types of decisions that must be made for their institution to succeed. And the knowledge, skills, and tools possessed by institutional researchers, along with the ability to prioritize needs and leverage technology and other resources to further expand IR capacity, will assist institutions in expanding other capacities to better utilize the shrinking pool of resources available.

To assist the reader in accessing these strategies for expanding the capacity of institutional research in his or her setting, this book is organized in a way that guides the reader through the challenges to the opportunities for capacity expansion. The book begins with an introduction to the text to provide context and background. This introduction is followed by a series of chapters, specifically two through eight, that outline the challenges facing higher education and institutional research and the necessary background about the field of IR to understand the chapters to follow. Chapters 9 through 15 explore IR capacity building with a global lens, highlighting

the development of, challenges facing, and opportunities for growth in institutional research in various regions around the world. The book concludes with a chapter expanding on ways in which institutional research can develop capacity and a vision of where the field is headed in the future.

Overview of the Chapters

In Chap. 1, the introduction to this text, Webber outlines the difficulty in defining institutional research due to many factors, including variances in organizational structure and diffuse roles of IR practitioners due to the increasingly interdisciplinary role of higher education, the influences of technology on higher education and the work of IR, the preferences for team work, and the commitment to widening participation in higher education in the USA and internationally.

In Chap. 2, The Impact of Global Forces in Higher Education on the Development of Institutional Research, Botha describes six forces acting on higher education, including massification, globalization, the advent of a knowledge society, the development of information and communication technology, accountability, and competition and rankings. Each of these forces has particular impacts on institutional research and its evolution as a field. To assist institutions in responding to these forces, Botha reminds IR professionals to focus on the big picture while conducting their detailed work.

Knight provides Conceptual Models for IR and Organizational Intelligence in Chap. 3 of the volume. Models explored include organizational intelligence, the golden triangle, the four faces of IR, and others. As the field of institutional research matures, it is moving from a more specialized and independent model to a more integrated one. The chapter ends with an exploration of institutional effectiveness as an umbrella term and field that encompasses institutional research, assessment, planning, program review, and accreditation. Knight suggests that institutional effectiveness works to actively move an institution toward a culture of evidence.

In Chapter 4, The Need for and Value of Scholarship in Institutional Research, Borden's explanation of the evolution of the field from research centers of faculty members focuses on scholarly research to inform institutional decision-making to the professionalization of IR as administrators and staff with technical data storage and retrieval skills. The shift occurred for numerous reasons, including an expansion of IR into institutions beyond research universities, an expanded client base for IR, and the expansion of tools and for- and non-profit providers of IR—like tools and products. Borden calls for the continued focus on applied research knowledge and skills in IR to help inform institutions as they incorporate predictive analytics and conduct institutional research in a collaborative environment to interpret and analyze implications to complex issues in higher education.

Briner and Rome, in Chap. 5, The Need for and Value of Data Management, outline how institutional researchers can play a role in development and coordination of data governance programs in their settings. Data management through

appropriate governance allows institutions to assign responsibility for specific data assets, formally define the responsibilities for these assets, and allow for data use by individuals who can benefit from access to the data for informed decision-making. Involvement in data governance by institutional researchers ensures consideration of data use in the process.

In Chap. 6, Let Me Paint You a Picture: Utilizing Visualizations to Make Data More Accessible, Drake, Pytlarz, and Patel highlight the ways in which data visualization tools can build institutional research capacity by allowing more people to interact with data and, after an initial investment of time to create the visualization systems, freeing up institutional research professionals to conduct more advanced analyses. They further discuss the benefits of using data visualization tools, such as an increased ability to identify patterns that inform decision-making, and deeper insights from exploration of data. Tips for successful creation of data visualization tools are also presented.

Mathies, in Chap. 7, Uses and Misuses of Data, calls out institutional research as one of the few units in an institution that views the organization at both the micro and macro levels and, with this unique set of views, is able to use data in engaging ways. To reduce the instances in which data are misused, in the ways detailed in the chapter, a set of guidelines are outlined, including connecting data and context experts, ensuring strong data governance and access rules, and providing guidelines for use and development of analytics and metrics.

In Chap. 8, The Finance Conundrum for Higher Education, Hillman and Kindschy encourage readers to consider the finance conversation to include not just price but cost and subsidy as well. Institutional researchers, as consumers and producers of financial information, can leverage finance questions to help an institution define, measure, and assess quality. The chapter ends with a set of resources for IR professionals interested in using finance data.

Chapters 9 through 15 explore professional development for the institutional research professional throughout the world. In Chap. 9, Bramblett and Broderick review Institutional Research and Decision Support in the United States and Canada. The authors make note of the diversity of educational backgrounds of IR professionals and the diversity of IR practice in settings across the two countries while highlighting the similarity of principles in the educated IR workforce, with its requisite analytical and technical skills.

In Chap. 10, Williams and Kane focus on institutional research and decision support as practiced in the UK, Ireland, Germany, and the Netherlands. The authors note that, while decision support as a practice informs decisions made by university leaders in areas such as teaching and learning, and services and facilities, IR is not conducted by a central office focused solely on this activity, but rather is conducted in a decentralized manner. Professional development and coordination will strengthen IR and decision support in these settings.

Chapter 11 turns its focus on IR in Latin America. In it, Pita Carranza outlines the ways in which IR is performed in South American universities, though the term

institutional research is not commonly used to describe such work, and the profession of IR is not well established there. The chapter describes IR-like quality improvement functions in Argentina and Chile, the process that led to the implementation of these activities in higher education in these countries, and future challenges for the field in South America.

Calderon describes the transformation of Australia's higher education system and the role of planning and institutional research in these reforms in Chap. 12. As a major contributor to the Australian GDP, higher education is important to the economic health of the nation, and its success is therefore well worth researching. Australian IR focuses on planning and has evolved rapidly since the 1980s with national, comprehensive data collections that shape university decision-making. The chapter considers current and future challenges for the field of IR and planning and outlines strategies for developing IR and planning capacity in higher education.

In Chap. 13, Chetty and Muller outline the evolution of IR in South Africa within the pressures of an ever-changing national context and higher education landscape. While not unique to South Africa, IR professionals in the country are adapting their work and embracing change as government spending on higher education decreases, completion rates remain lower than expected, and calls for accountability increase. The chapter focuses on ways to build IR capacity in this rapidly changing environment that has parallels globally and from which IR professionals in other settings can learn as they build capacity in their institutions and organizations.

The Middle East and North Africa (MENA) are the focus of Cinali's Chap. 14. In it, the author describes a fast-growing higher education sector in which liberal arts institutions and US accreditation highlight the need for accurate and timely data and a subsequent increase in hiring of IR personnel. The focus of this region is on well-trained IR professionals who have the skills and abilities to perform tasks that ensure data-informed decisions can be made in the rapidly changing and expanding environment of higher education in the MENA countries.

In Chap. 15, the final chapter in the section on global IR capacity building, authors Lin, Fu, and Ko focus on the development of IR in China, Korea, Japan, and Taiwan. Commonalities across Asian countries exist related to the development of institutional research; at the same time, cultural and institutional differences shape IR in each setting. Like other countries across the world, increased competition for financial resources and accountability demands are pushing the evolution of IR to strengthen institutions' abilities to ensure data-informed decision-making. The chapter outlines the growth and expansion of IR in selected universities in these four Asian countries.

Webber closes out the text in Chap. 16 with a summary of The Future of IR and Decision Support: Ensuring a Seat at the Table. In it she highlights the growth of the IR profession globally and an increased recognition of the function of IR in evidence-informed collaborative improvement processes in higher education. Highlighting the knowledge and skills that are critical to successful institutional

research, Webber focuses on building IR capacity by ensuring a central role for the function within an institution. She also asserts that increased staff and professional development for those in IR, particularly focused on the social science training, a strength of many in this profession, is critical to building IR's capacity and strength in higher education.

Denver, Colorado, USA   Gina Johnson

Reference

AIR. (2017) *The duties and functions of institutional research.* http://www.airweb.org/Resources/ Pages/IR-Duties-Functions.aspx. Accessed June 30, 2017.

Acknowledgments

Contents

Part II   IR and Decision Support Around the World

Part III   Advancing IR and Decision Support