

The Promise of Business Doctoral Education

Setting the pace for innovation,
sustainability, relevance, and quality

Report of the AACSB International
Doctoral Education Task Force

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TABLE OF CONTENTS

Foreword	6
Introduction	8
Pursuing Purpose	12
Academic and Professional Career Paths	14
Basic and Applied Research	20
Teaching and Communication Skills	22
Intercultural and Interdisciplinary Perspectives	23
Strengthening Capacity	27
Understanding the Cost and Value of Doctoral Education	27
Understanding Student Success Factors	30
Identifying Alternative Funding Models	30
Building Program Portfolios	34
Collaborations and Consortia	35
Expanding Access	38
Capacity Building	39
Student Mobility	40
Faculty Mobility	42
Program Flexibility	43
Distance Delivery	44
Assuring Quality	46
Attributes of Quality: Faculty	48
Attributes of Quality: Students	48
Attributes of Quality: Program Design and Management	49
Attributes of Quality: Evidence of Student Success and Satisfaction	56
Cultivating an Ecosystem	59
Data and Information for Students and Employers	59
Networks to Support Continuous Improvement, Innovation, and Collaboration	60
Programs to Facilitate Career Success	61
Our Challenge to Business Schools	63
1. Ensure a clearly defined purpose for doctoral programs.	63
2. Routinely assess attributes of quality.	63
3. Understand the costs and articulate the value of doctoral education.	64
4. Strengthen doctoral students' preparation for academic careers, where appropriate to the program mission.	65
5. Actively explore innovations in doctoral education.	65
Recommendations to AACSB	69
1. Define and uphold standards of quality through a comprehensive accreditation model.	69
2. Encourage continuous improvement and adherence to standards of quality through educational offerings.	70
3. Expand efforts to collect, analyze, and disseminate data concerning business doctoral programs.	70
4. Enhance the perceived value and credibility of a broader range of career outcomes and research expectations.	71
5. Assist schools in marketing and differentiating their programs, and assist other stakeholders in selecting among available options.	72
6. Actively support the important need to increase doctoral education capacity and quality in underserved regions.	73
Appendix: Five Sample Business Doctoral Program Models	74
AACSB International Committee on Issues in Management Education	79
About AACSB International	80

FOREWORD

Many, if not all, of us who work in academia are connected to doctoral education in some way. Whether through our own experience of pursuing a doctoral degree, interaction with doctoral faculty and their research, or our involvement at our respective schools and institutions in creating, delivering, and managing business doctoral programs, doctoral education is often viewed as the defining aspect of higher education. The reports published by the Ford and Carnegie Foundations in the late 1950s stimulated discussion (at least in the United States) on the need for greater analytical rigor and focus on scientific methods, research, and knowledge creation within the business school, subsequently prompting business schools to focus greater attention and resources on developing their doctoral program portfolios. This shift in focus is one factor that helped management education gain legitimacy among the different academic disciplines within the university.

Today we are facing yet another significant turning point for evaluating the purpose and delivery of doctoral education within the realm of business and management education. This report comes at an important and fascinating time within higher education, as well as for AACSB International. Now is a time of innovation, experimentation, opportunity, and even uncertainty in higher education, at all levels. The 2013 AACSB Accreditation Standards focus on three areas—innovation, impact, and engagement—goals that business schools are encouraged to strive to achieve within their school's activities and practices. The Business Doctoral Education Task Force has kept these three themes in mind throughout its research on business doctoral education, worldwide. Business schools and others have come to the realization that in order to prosper, innovation is required. For business education to prosper, doctoral education—the research and future faculty it creates—must be assessed with innovation, as well as the different stakeholders it serves, at the forefront.

In defining the charge for this task force in early 2012, the AACSB Committee on Issues in Management Education posed a series of questions regarding business doctoral education, its global trends, and its future needs. The committee also asked for attention to strategies that schools could use to offer sustainable and quality doctoral education. It asked the task force to offer recommendations to AACSB as to how it could better guide schools to deliver top-quality and relevant doctoral degree programs.

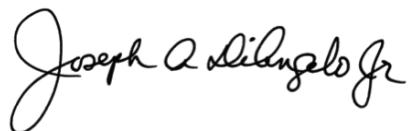
This report, I hope, will serve as a spark to ignite new energy focused on preserving the strengths of business doctoral education while enhancing its ability to serve management education and practice. In this report, the Doctoral Education Task Force pushes business school leaders to extend the boundaries of our understanding of the purposes served by doctoral education, and to question our reliance on traditional program design and delivery models. It challenges us—business school administrators, doctoral program directors, and faculty members—to think differently about purpose, capacity, access, and quality in the face of changing priorities and pressures. Additionally, the task force challenges those who serve and support management education to facilitate those objectives through development of a robust ecosystem in support of doctoral training goals.

I suspect that some readers will be surprised with some of the innovations across global business doctoral education presented in this report, while others may already be quite familiar with the models studied by the task force. However, every reader will likely benefit from an elevated awareness and understanding of what is occurring, as well as a broadened sense of the value that business doctoral education offers

different stakeholder groups—the school, administration, faculty, students, and industry. The variety of different programs and academic approaches presented in the report hopefully will encourage the creation of an eclectic, rich base of faculty members for schools around the world.

On behalf of AACSB, I wish to thank Robert Sumichrast, who chaired the AACSB Doctoral Education Task Force, and the other members whose names are listed on preceding pages for their thorough research, thoughtful inquiry, and well-articulated findings. I extend our gratitude for helping to define a path for business schools and AACSB to work together to promote innovation, sustainability, relevance, and quality in doctoral education.

More than any other project to which I have contributed during my time as a volunteer and leader at AACSB, this report gives me hope that management education has a vibrant future ahead. The doctoral education we deliver today will shape the next generation of business school faculty and strengthen business schools' contribution to sound, evidence-based management in business practice. That, to me, is a promise worth fulfilling.

A handwritten signature in black ink, appearing to read "Joseph A. DiAngelo Jr".

Joseph A. DiAngelo
2012 - 2013 Chair, Board of Directors, AACSB International
Dean, Erivan K. Haub School of Business
Saint Joseph's University

INTRODUCTION

To suggest a path for the future of business doctoral education at a time when the current model for higher education itself faces many potential disruptions is a daunting task. Yet that is what the AACSB Committee on Issues in Management Education has asked us to do. The timing may in fact be ideal, given pressures on business schools to connect to a range of societal and business challenges, and ongoing concerns related to doctoral education purpose, capacity, access, and quality. In this report, we aim to pay particular attention to how doctoral education can continue to evolve in a way that best supports different needs, experiences, and goals around the globe.

Regardless of future directions for higher education, some of the necessary areas of focus seem glaringly obvious. We must better understand, and better pursue, a broader set of society-serving goals through doctoral education. We must seek innovations in doctoral program design and delivery that expand access to doctoral education among currently underserved populations, and enhance the ability of schools to use scarce and valuable resources more effectively. We must create services and infrastructures of support and information for potential doctoral students and other stakeholders of business doctoral education. We must not settle for anything less than the highest quality training possible.

Through this report, we hope to set a path forward for business schools, individually and collectively, to promote innovation, sustainability, relevance, and quality in business doctoral education.

An Accomplished History

In 2012, more than 2,300 doctoral students at AACSB-accredited business schools successfully defended their dissertations and went on to pursue careers at educational institutions, in industry, and in the public and not-for-profit sectors. Our study of the programs they have pursued has revealed a surprising amount of diversity in doctoral education models worldwide. Numerous factors contribute to the diversity of doctoral education models, including perspectives on the role of doctoral education, institutional structures, academic traditions, and various other contextual factors. Some of the most obvious dimensions of diversity are in the categories of program purpose and intended outcomes, structure, and delivery method.

Decade after decade, business doctoral education has produced a stream of highly trained researchers who have advanced the intellectual foundations of business and management, sustained vibrant academic communities, and elevated the scholarly reputation of business schools within universities.

Yet despite some differences across programs, many of these students had an experience that largely mirrored the doctoral training received by their dissertation supervisors, and their supervisors before them. Doctoral education, in many respects, has been refined over decades as a rite of passage for those aspiring to one day enter the faculty ranks.

The models for doctoral education that have dominated during this timeframe have served management education well, and we believe they will endure. Decade after decade, business doctoral education has produced a stream of highly trained researchers who have advanced the intellectual foundations of business

and management, sustained vibrant academic communities, and elevated the scholarly reputation of business schools within universities.

Yet the lens through which we evaluate the needs served by doctoral education is broadening, and imminent issues in global doctoral education still must be addressed. The Doctoral Education Task Force is concerned that the current trajectory for doctoral education limits its potential as a thriving system at the heart of management education.

In an aspect of education for which expectations are particularly high—the creation of new knowledge through an original research contribution—and for which quality is determined not through a test but through the professional judgment of one's peers (and for which, as a consequence, the role of supervision is key), this reliance on tradition succeeds both at extending the theoretical understanding of a discipline and at reinforcing rigorous research methods.

However, in no other aspect of education would we expect that the next generation should be trained in the same way as the preceding generation. Nor would we expect an educational product to remain static and narrow in its purpose and potential student prospect base. The same expectation of evolution and innovation must apply at the doctoral level.

A New Age for Doctoral Education

Higher education is entering a new age. Doctoral education must, as well. The forces driving this transition have been chronicled in many contexts and include globalization, technology, and evolving faculty models, among other things. Yet less than three percent of AACSB member schools' collaborations are designed to involve doctoral education. Technology appears to be less present in the provision of doctoral education than at the undergraduate or master's levels, despite doctoral education being the level most acutely in need of enablers to access. Today's evolving faculty models increasingly are incorporating industry engagement and the production of research that bridges the academia-practice divide—neither of which is well represented in doctoral education.

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The rise of the knowledge economy is changing competitive dynamics in business, too, with implications for business doctoral education. Skills refined through doctoral education, such as problem framing and data analysis, are increasingly valued in certain professional roles and industry circles. Business schools are paying long overdue attention to enhancing the value and visibility of their research, especially within the business world.

While the expectations for doctoral education are rising, barriers to innovation remain substantial. Established models for doctoral education largely are driven by inherent traditions and processes, which are viewed by many as sources of strength and quality rather than weakness and misalignment. Dominant models of doctoral education are reinforced by mechanistic faculty labor market customs, rigid reward structures, and inefficient regulations. Especially when they are aimed at developing researching professionals, new, largely untested models have had difficulty gaining acceptance when measured against traditional quality indicators. Finally, inflexible accrediting standards and ranking/rating criteria also may unknowingly stifle innovation by perpetuating inefficient and ineffective faculty models. Shifts

in the financing of higher education from public to private sources, and the resulting strain on many business schools' budgets, can be viewed not only as a motivation to change, but also as a major obstacle to innovation in doctoral education. Particularly among programs that have been accustomed to being heavily subsidized, such a shift will necessitate innovation in funding and delivery models. But access to the funds necessary to make program changes, such as developing relationships with potential collaborators and migrating content online, will become increasingly difficult.

AACSB must be an ally for business schools in this new world. The timing is right for this as well. The accreditation standards unanimously adopted by AACSB members in 2013 should encourage schools to be more innovative in doctoral education. A broader view of faculty models—one that emphasizes strengthening the intersection of theory and practice—has emerged. In recognition of growing competitive pressures, AACSB is strengthening its support for business schools to be more deliberate and strategic about their distinctive missions. It is asking accredited schools to do a better job of defining *who* they serve and *how*, as well as to *what end*.

While challenges related to the supply of qualified faculty still resonate strongly with many business schools, the impetus for attention to doctoral education models is much broader than solving issues of supply and demand. It is also broader than ensuring the critical role of doctoral education in sustaining scholarship, as was the focus of a 2003 report by an AACSB-appointed Doctoral Faculty Commission.¹ The impetus is that research, in multiple forms and through many channels, can help business practice, and business doctoral education plays a crucial role in developing the knowledge, skills, and mindset required to undertake impactful research in all its forms.

The Way Forward

This task force has been asked to take a bold step. Business schools also must be bold. Doctoral education appears to have great potential for innovation and positive change. Management education leaders must accept a new responsibility: to shepherd a transformation of doctoral education to better meet the needs of the academic and professional organizations graduates will enter, while preserving the quality and integrity of doctoral education amid pressures to cut corners and lower standards.

Careful review leads us to highlight five priorities that serve as the drivers of our recommendations.

1. **Pursuing Purpose:** Expansion in the missions and delivery models of doctoral education is necessary to serve a broader set of societal needs and reach a broader set of individuals. Numerous factors contribute to the diversity of doctoral education models globally, including perspectives on the role of doctoral education, institutional structures, academic traditions, and various other contextual factors. Yet the perspective that any one individual has of this diversity is often limited, weighted heavily toward the perception of one's own experience as the "norm" for training at this advanced level. New doctoral education models that are emerging collectively serve a broader range of career paths and research outcomes, thus expanding the capabilities and employability of doctoral graduates. The trend should be encouraged.
2. **Strengthening Capacity:** In an era of increasing financial constraints, attention to the financial models for doctoral education takes on greater importance. Business schools are compelled to enhance efficiency in the delivery of doctoral education. For schools that offer doctoral degrees, questions exist about financial viability, resource utilization, and more. The same challenges can deter other schools from starting new programs. Yet attention must not rest solely on the capacity

¹ AACSB International Doctoral Faculty Commission, *Sustaining Scholarship in Business Schools*, AACSB International, 2003, www.aacsb.edu/publications/researchreports/archives/sustaining-scholarship.pdf.

to deliver doctoral education to more individuals; of equal importance is capacity to deliver the highest possible quality educational experience. The report explores some strategies that may assist schools with altering the financial model for doctoral education.

3. **Expanding Access:** Improved access to doctoral training has potential to strengthen faculty models, knowledge development, and the practice of business and management. The importance of expanding doctoral education in parts of the world where it is limited and ensuring that those programs are affordable, accessible, and (critically) of high quality, is evident. Across all regions, access to educational opportunities that align with individuals' intended career paths, research interests, and personal circumstances can likely also be strengthened. Capacity building initiatives, as well as the facilitation of student and faculty mobility, program flexibility, and distance delivery may all be strategies with a role to play in support of these needs.
4. **Assuring Quality:** Meanwhile, expectations of program quality exist as a fundamental value across each of these priorities. In an evolving context of experimentation with different program models, how will quality effectively be measured? What frameworks can those with responsibility for doctoral programs look to in order to ensure that quality is not sacrificed? Professional judgment will always be critical to assessing the quality of doctoral education, since the primary outcome of the program is a dissertation whose quality is judged by expert review. The task force also believes that a series of attributes associated with students, faculty, program design and management are evidence of student success and satisfaction, are characteristic of high-quality programs. These indicators of quality will be different across doctoral programs oriented, for example, for those pursuing an academic career and those pursuing a career in industry. Regardless of orientation, a doctoral program should be characterized by rigor and ensure that students are challenged to achieve the highest level of learning.
5. **Cultivating an Ecosystem:** For doctoral education to thrive, it needs to be supported and served by information resources, networks for idea exchange, and service providers/platforms. Some of this exists today, but existing players and resources are insufficient for the new demands of doctoral education. Resources and networks must be more global in scope, more inclusive, and simultaneously more targeted to different types of doctoral programs. Building a stronger context for doctoral education is necessary for schools to be able to offer doctoral education, and for students to identify and pursue an appropriate doctoral program, but also will be critical if we are to use doctoral education as a means of strengthening the connection between business and industry.

The work of previous AACSB task forces has helped set the stage for better understanding where doctoral education fits within the trajectory of global management education. Additionally, this report adds to a growing body of literature focused on the needs for graduate education in an evolving societal context. The report, at various times, will complement, reinforce, or contradict the messages conveyed by other organizations, but it is our hope that it is one more contribution to a dialogue that will ultimately lead to positive evolution in this critical aspect of management education.

PURSUING PURPOSE

Quality business doctoral education has potential to add value in numerous contexts including business schools, business, and broader society. The fraction of individuals who go on to earn doctoral degrees in business have a level of knowledge and unique skills that position them to have tremendous impact on the education of others, the management of firms, and, perhaps most important, the discovery of new truths. Business doctoral education exists to advance the knowledge and practice of business and management.

Our research, however, has led us to the conclusion that business schools have not fully embraced the broad set of purposes that doctoral education is poised to serve. Particular opportunities exist to better support individuals pursuing a range of career paths within and beyond academia, and to support a broader range of research outcomes. Doctoral education should play a much greater role in helping to bridge the gap between business and business schools.

These goals can be—in fact, must be—achieved without sacrificing or diluting the defining characteristic of doctoral education: the creation of an original research contribution, as determined through the review of a group of peers. Heightened attention to emerging agendas should be motivated, in part, by a desire to sustain current strengths.

Particular opportunities exist to better support individuals pursuing a range of career paths within and beyond academia, and to support a broader range of research outcomes.

If doctoral programs, collectively, are to serve a broader set of societal needs, then individual programs must more strongly assert their distinctive missions and the ways in which they intend to create value. We believe that clearer distinctions among programs and additional clarity of purpose can help address several current challenges:

1. A growing class of “professional” doctorates is emerging without a clear understanding of what should characterize these programs. Currently, a lack of clear consensus exists on which components of doctoral programs are necessary to prepare individuals for a career in academia (where they might make a contribution to knowledge) versus a career in business (where they might more directly influence practice or make a contribution to professional knowledge).
2. Those who conduct applied research continue to struggle to create greater legitimacy for their work within the academy. Business schools also continue to struggle with methodologies for measuring and articulating, to industry as well as other stakeholders, the value proposition of being involved with doctoral education.
3. As the contexts and populations served by business doctoral education continue to evolve, schools often experience difficulty in evolving program design accordingly; this inertia frequently is the result of a lack of clearly articulated program objectives against which to benchmark.

Our review of programs globally has led us to recognize two distinct dimensions along which the purpose of programs may vary. The first concerns the intended career path for which the program aims to prepare participants, while the second concerns the focus of the program's research training. A clearly defined purpose along each of these two dimensions can yield insights useful for program format, curriculum, and output expectations. In this section, we explore the implications of differences along these two dimensions of purpose.

Before continuing, we note that any discussion of individual program orientation or mission is complicated by ambiguities in the nomenclature referencing doctoral programs (see Box 1). We believe this ambiguity also does a disservice to students and those who recruit them, in that it hinders their ability to easily discern basic differences among programs. For these reasons, we deliberately avoid a reliance on degree designations (e.g., PhD, DBA) to differentiate among program types in this report.

Box 1. Degree Title and Positioning

Our review of business doctoral programs at AACSB-accredited institutions reveals numerous degree titles, including Doctor of Philosophy (PhD), Doctor of Business Administration (DBA), Executive Doctorate, and Doctor of Management, among others. Some designations are specific to certain regions, such as the Dr. rer. oec (Doctorate in Economics) and additional habil qualification awarded at institutions in many German-speaking countries. Other variations are apparent in references to "classes" of doctorates (e.g., professional doctorates, executive doctorates, industrial doctorates, and many more). For some of these classes, the task force has encountered only one or two instances, while others are more pervasive.

As individual programs aim to more distinctly assert unique characteristics, the variety of terms used in conjunction with doctoral programs will increase, much as has been the case with master's level programs. Most decisions concerning terminology are made locally, and are influenced by the local higher education context as well as positioning, branding, and even politics. In this environment, better sources of information are needed to help potential students, and those who recruit them, navigate this complex environment.

Of concern, however, is the inconsistent use of the two most common doctoral program designations—the PhD and the DBA. The PhD tends to refer to programs that focus on basic research and on individuals who pursue academic careers, while the DBA tends to refer to programs, with some significant exceptions, that focus on applied research and that are aimed at working professionals. These exceptions are significant and can be confusing. There are DBA programs that, in their preparation for individuals pursuing academic careers, mirror what one would typically expect to find in a business PhD Program. One prominent example is the DBA awarded by Harvard Business School. Additionally, numerous other DBA programs are marketed as relevant for both academic and professional career paths. These include the DBAs offered by Cleveland State University ("designed to engage and prepare a new generation of aspiring academicians and driven practitioners for rewarding careers") and Kennesaw State University ("for expanded roles within academia or industry"), among others.²

² Cleveland State University Monte Ahuja College of Business, "Doctor of Business Administration Program" webpage, 2013, www.csuohio.edu/business/academics/doctoral.html and Kennesaw State University Coles College of Business, "DBA Program" webpage, 2013, coles.kennesaw.edu/graduate/dba/.

Some exceptions to the standard use of the PhD and DBA titles are driven by higher education regulatory structures. In India, for example, the Indian Institutes of Management are not authorized to offer the PhD; instead, they offer a Fellow Program in Management that local educational authorities consider equivalent to a PhD offered by Indian universities.³

Further complicating attempts at distinction between the two is the fact that some PhD programs have always produced graduates who enter professional career paths. According to Tiffin and Kunc's survey, nearly half of the graduates of Latin American PhD programs find employment in business, consulting, and government jobs.⁴ Similarly, in Germany the doctoral degree is commonly regarded as a higher-level credential for practitioners. In China, the recent boom in doctoral enrollments has been attributed to growing demand for a higher-level qualification among practitioners seeking career advancement.

Academic and Professional Career Paths

Increasingly, doctoral programs are recognized to prepare individuals for a wide range of career paths within academia and industry, or both. Subsequently, in terms of purpose, the most significant point of differentiation among doctoral education models concerns whether the program is intended for individuals aspiring to a professor, researcher, and/or administrator role in an academic setting, or for practitioners interested in advancing their careers by developing their research capabilities.

Rather than categorizing programs' intended career paths as falling within either academia or industry, the task force recommends viewing programs' intended career paths along a continuum, whereby some programs might adopt an approach that leans heavily toward one career path but gives graduates some options for versatility (see Figure 1). Furthermore, across and within programs, intended career outcomes may vary. Within programs, variance typically results from "tracks" or from highly individualized experiences.

Figure 1. The Career Path Continuum



Careers as Practitioners

Programs on the right side of the continuum already are increasing in some contexts and we expect that growth to continue, especially in markets such as the U.S. where these programs have until recently been uncommon. The problem-framing, research, and data analysis skills fostered through a doctoral program are valued in roles beyond the boundaries of the university, especially in the knowledge-driven society that much of the world operates in today.

Unfortunately, quantifying industry demand for graduates of business doctoral programs is challenging. Much of what we learned is anecdotal, from schools that offer doctoral programs developed for this purpose.

³ See, for example, Indian Institute of Management Ahmedabad, "FAQs of Fellow Programme in Management" webpage, 2013, www.iimahd.ernet.in/programmes/fpm/how-to-apply/faq.html.

⁴ Scott Tiffin and Martin Kunc, "The Ph.D. Imperative in Latin America," *BizEd* (July/August 2008).

In Europe, especially, the need for programs oriented toward nonacademic career paths has been widely recognized. The League of European Research Universities noted in a 2010 report its vision to extend perceptions of the value of doctoral training for nonacademic career paths.⁵ Similarly, the European University Association's Ten Basic Principles for doctoral education recognized "that doctoral training must increasingly meet the needs of an employment market that is wider than academia."⁶

In some countries, such as the United Kingdom and Australia, the category of degrees more oriented toward professional practice has come to be known formally as "professional doctorates." There, the term "professional doctorate" is used generally to refer to a doctoral-level qualification pursued by practitioners (often highly experienced and senior level) in one of numerous professional fields (including, but not limited to, business and management).⁷

We also observe significant differences across regions in the perceived need by industry for people with professional doctorates. For example, in Germany no formal distinction exists between "professional" and "academic" doctorates. Yet the majority of people completing doctoral degrees use the degree toward advanced positions in industry. Those seeking an academic professorship typically pursue an additional level of training, referred to as the habilitation.

But even where professional doctorates are somewhat more well-defined, market confusion also appears to occur. Lockhart and Stablein (2002) identify two different models of the professionally oriented doctoral program. The first considers the program "an advanced MBA with a company-based project component" in which "[t]he tools, but not the aims, of academic research are taught and applied." The second "explicitly acknowledges and attempts to bridge the academic-practice divide, DBA research being expected to 'make a significant contribution to theory and practice' (Massey University, n.d.)."⁸ The British Economic and Research Council Postgraduate Training Guidelines for professional doctorates indicates that "the focus of a professional doctorate is a dual one—to make a contribution to both theory and practice or to develop professional practice through making a contribution to professional knowledge."⁹

This issue of differentiation is not unique to business programs. Declercq et al. (2008) note that the U.S. Council on Education for Public Health requirements and the accreditation process offer no guidance regarding the distinctions between a PhD in public health and the DrPH program. They note that "[t]he challenge for schools of public health is to seriously address the question of how much of what we offer in a DrPH program is the result of the needs of the field and how much is a repackaging of our research training."¹⁰ Similarly, Perry and Imig (2008) (of the Carnegie Project on the Education Doctorate) note that, "[a]ccording to the National Research Council, some 142 graduate schools of education award both [the PhD and EdD] degrees, with little differentiation between the preparation of future faculty and researchers and that of leading practitioners."¹¹ Sarros et al. (2005) posit that "[m]isconceptions and misunderstandings of what constitutes a professional doctorate compared with a PhD frustrate the ready acceptance of professional doctorates as an appropriate alternative to the PhD."¹²

⁵ League of European Research Universities, Doctoral degrees beyond 2010: Training talented researchers for society, March 2010, www.leru.org/files/publications/LERU_Doctoral_degrees_beyond_2010.pdf.

⁶ European University Association, Bologna Seminar on "Doctoral Programmes for the European Knowledge Society": Conclusions and Recommendations, Salzburg, Austria, February 3–5, 2005, www.eua.be/eua/jsp/en/upload/Salzburg_Conclusions.1108990538850.pdf.

⁷ See, for example, Tom Bourner, Rachel Bowden, and Stuart Laing, "Professional Doctorates in England," *Studies in Higher Education* 26, no. 1 (2001); and Jeroen Huismans and Rajani Naidoo, "The Professional Doctorate: from Anglo-Saxon to European Challenges," *Higher Education Management and Policy* 18, no. 2 (OECD 2006).

⁸ J.C. Lockhart & R. E. Stablein, "Spanning the academy-practice divide with doctoral education in Business," *Higher Education Research & Development* (2002): p. 21–22.

⁹ Economic and Social Research Council, Post Graduate Training Guidelines Version 5 (2005).

¹⁰ Eugene Declercq, Karen Caldwell, Suzanne Havala Hobbs, and Bernard Guyer, "The Changing Pattern of Doctoral Education in Public Health From 1985 to 2006 and the Challenge of Doctoral Training for Practice and Leadership," *American Journal of Public Health* 98, no. 9 (September 2008): p. 1,565.

¹¹ Jill A. Perry and David G. Imig, "A Stewardship of Practice in Education," *Change* (November/December 2008): p. 42.

¹² James C. Sarros, Robert J. Willis, Robyn Fisher, and Adrian Storen, "DBA Examination Procedures and Protocols," *Journal of Higher Education Policy and Management* 27, no. 2 (July 2005): p. 153–154.

Still, professional doctorates, in business schools and in other disciplines, do seem to be widespread, and growing. We agree with the suggestion by Gill and Hoppe (2009) that the “business professional doctorate should be viewed as an essential part of the broader research ecology, rather than as a weak substitute for the disciplinary PhD.”¹³

Based on their review of “majority models” of professional doctorates and PhDs, Bourner et al. (2001) identify twenty features of professional doctorates that distinguish them from other, academically oriented doctoral education models. They use these features to support a distinction between the “professional researcher” created through the traditional PhD process and the “researching professional” created through the professional doctorate. While their model is helpful in differentiating the two types of programs, our observations suggest that every business doctoral program will not—and should not necessarily—fit neatly into either a “professional” or “academic” oriented classification.

A number of PhD programs, for example, may target individuals looking to pursue an academic career but also produce graduates who go into professional careers within industry.

Still, we offer in Table 1 a list of attributes of programs that lean more heavily toward the professionally oriented end of the career outcome continuum. These attributes are explored further in varying degrees in later sections of the report.

Table 1. Common Attributes of Professionally Oriented Business Doctoral Programs

Target Demographic Characteristics	Primarily individuals with significant prior work experience In many cases, the student is working simultaneously while completing the program
Target Demographic Motivations	Varied. Motivations include aspirations for teaching at a university, credentialing, and personal and professional development
Skills Focus	Ability to define a problem/research question
	Ability to review and synthesize existing literature/research related to the question
	Ability to apply a broad range of research to a problem
	Ability to conduct valid research to gain new insights into the question
	Ability to frame and communicate research findings in a way that adds value to a specific organization or industry
Research Focus	Generally leans more heavily toward the applied/translational end of the research focus continuum
	Often is conducted within a practice setting
	Often, but not exclusively, the aim is not simply “understanding” a question, but also a commitment to bring about change
Format	Often, but not necessarily, part-time
	More likely than an academically oriented doctoral program to experiment with blended and/or distance-based learning approaches
Rigor	Expectations and metrics of success may include research relevancy to practice, ability to apply research findings into the workplace, etc.
	Should not be regarded as less rigorous than an academically oriented program, although expectations are likely to be different

¹³ T. Grandon Gill and Uwe Hoppe, “The Business Professional Doctorate as an Informing Channel: A Survey and Analysis,” International Journal of Doctoral Studies 4 (2009).

If more professionally oriented programs are to emerge, three needs must be addressed. First, understanding about the best way to design a professionally oriented doctoral program must be increased among doctoral-granting institutions. Second, awareness must be increased among practitioners about the availability of professionally oriented doctoral programs and the role they play in business practice. Interest among business people exists, but understanding of how to identify, access, and best use these types of doctoral programs is still lacking. The third is to adjust the training curriculum accordingly so as to meet the aims and objectives of the program. The recently formed Executive DBA Council, comprising 20 member schools representing 10 countries, is making strides toward addressing these needs.¹⁴

Box 2. The Industrial Doctorate

A slight variation on the professional doctorate model is a class of programs that the European University Association (EUA) collectively terms “industrial doctorates.” Whereas in many professional doctorate models, the participant’s ongoing employment with a company implies some level of collaboration between the academy and industry (in the form of research addressing an applied problem, and the participant’s access to the company’s data and/or other resources), industrial doctorates are characterized by “close interaction between a company, a doctoral candidate and, of course, a university. A distinctive characteristic is that industry experts take part in the supervisory committee, officially or informally.”¹⁵

The EUA-sponsored “DOC-CAREERS” project, undertaken from 2006 to 2008, studied 33 universities, 31 companies, and 18 other stakeholder organizations (including several business schools) in order to understand the motivations, benefits, and challenges these collaborations present for universities, industries, and doctoral candidates.¹⁶ In the Salzburg II Recommendations for improving doctoral education in Europe, released in 2010, the EUA governing council called for the facilitation of “cooperation between providers of doctoral education and the non-academic sectors to the mutual benefit of all partners” through activities such as joint research projects and industrial doctorates.¹⁷

Although variations of the industrial doctorate exist in different (predominantly European) countries, the Industrial PhD Program in Denmark seems to be among the oldest and most established. At Copenhagen Business School, the Industrial PhD has achieved higher completion rates than a formerly offered, and now closed, professional doctorate (DBA) program, and is growing in popularity.¹⁸

Careers as Academics

On the left side of our career-focus continuum are programs that are more oriented toward an academic career path, although what is meant by an academic career path is, it seems, increasingly more varied and complex. Certainly, most faculty appointments involve teaching, research, and service, but the priorities

¹⁴ Executive DBA Council website, www.executivedba.org, updated 2011, accessed May 21, 2013.

¹⁵ Lydia Borrell-Damian, European University Association, “DOC-CAREERS,” University-Industry Partnerships for Enhancing Knowledge Exchange, 2009, www.eua.be/fileadmin/user_upload/files/Publications/DOC-CAREERS.pdf, p. 27.

¹⁶ Lydia Borrell-Damian, European University Association, “DOC-CAREERS,” University-Industry Partnerships for Enhancing Knowledge Exchange, 2009, www.eua.be/fileadmin/user_upload/files/Publications/DOC-CAREERS.pdf, p. 42.

¹⁷ European University Association, Salzburg II Recommendations: European Universities’ Achievements Since 2005 in Implementing the Salzburg Principles, 2010, www.eua.be/Libraries/Publications_homepage_list/Salzburg_II_Recommendations.sflb.ashx, p. 7.

¹⁸ Based on presentation by Peter Lotz, Vice Dean of PhD Education at Copenhagen Business School, delivered at 2012 EFMD Doctoral Programmes Conference.

schools place on these activities, and the types of intellectual contributions emphasized through the school's research mission, vary substantially. A one-size-fits-all model of research training hardly seems appropriate for the various roles that academics will play in the emerging faculty landscape.

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Thus, rather than look only at the emergence and past evolution of doctoral education, one must consider what kind of training business schools are likely to want and/or need among their faculty in the future. Specifically, what will be the role(s) of research-trained faculty in support of business school missions?

One clue emerges through the work of the AACSB Blue Ribbon Committee on Accreditation Quality, which proposed a new model, adopted as part of the AACSB 2013 Business Accreditation Standards, for classifying the types of qualifications held by a school's faculty members. In this model (see Figure 2), initial academic preparation and professional experience intersects with sustained engagement activities to create four categories of faculty members. One goal of this model is to encourage and acknowledge faculty models that cultivate a closer connection between theory and practice.

Figure 2. Categories of Qualified Business School Faculty, per the AACSB 2013 Business Accreditation Standards

Initial Academic Preparation and Professional Experience	Sustained Engagement Activities	
	Academic (Research/Scholarly)	Applied/Practice
Professional Experience, Substantial in Duration, and Level of Responsibility	Scholarly Practitioners (SP)	Instructional Practitioners (IP)
Doctoral Degree	Scholarly Academics (SA)	Practice Academics (PA)

A more varied range of research doctoral programs is appropriate for a model in which professional experience matters in faculty. Professional doctorates create an alternative path of legitimacy for becoming a faculty member. However, this can occur only if we think more broadly about the roles of business school faculty with diverse experiences and preparation. Three categories of the matrix in Figure 2 are particularly relevant to our discussion of doctoral programs as preparation for academic careers:

- The Scholarly Academic (SA) is an individual with, "normally, a doctoral degree emphasizing advanced foundational discipline-based research" who sustains currency and relevance through scholarship and related activities.¹⁹
- The Practice Academic (PA) describes individuals with, "normally, a doctoral degree emphasizing advanced foundational discipline-based research," but who "augment their initial preparation as academic scholars with development and engagement activities that involve substantive linkages to practice, consulting, other forms of professional engagement, etc., based on the faculty members' earlier work as an SA faculty member."²⁰ This task force believes that participation in applied

¹⁹ AACSB International, Eligibility Procedures and Accreditation Standards for Business Accreditation, 2013, www.aacsb.edu/accreditation/business-standards/2013/2013-business-standards.pdf, p. 40.

²⁰ Ibid, p. 39.

research while in a doctoral program and/or prior or simultaneous practical experience can be instrumental in the preparation of this type of faculty member.

- The Scholarly Practitioner (SP) has past “professional experience, substantial in duration and level of responsibility,” that is typical of most entrants into professionally oriented doctoral programs. Such individuals augment their experience with “development and engagement activities involving substantive scholarly activities in their fields of teaching.”²¹ For some individuals, professionally oriented doctoral programs or non-degree programs aimed at cultivating research skills (see Box 3) could serve to enhance their abilities to engage in scholarly activities.

Box 3. Cultivating Research Skills Through Other Means

We believe that opportunities exist for non-degree courses or programs aimed at developing or enhancing research skills. Such opportunities might utilize resources and infrastructure intended primarily to support doctoral programs, but be targeted towards individuals who do not need (or for various reasons are unable to commit to) an entire doctoral education experience.

One primary audience for such courses or programs could be existing faculty members who are in need of more advanced research skills. Some such individuals may or may not have already have earned a doctoral degree but, regardless, would find additional “continuing education” useful for strengthening their research capabilities—in accordance with their personal career goals and/or their employer school’s expectations for research active faculty.

Others who have not earned a doctoral degree but have substantial professional experience may find that such opportunities could enhance their abilities to fill roles as “Scholarly Practitioners” within business schools. For these individuals, exposure to even the fundamentals of research methods may go a long way in facilitating greater levels of collaboration with Scholarly Academic or Practice Academic colleagues.

The AACSB endorsed Post-Doctoral Bridge to Business Programs, aimed primarily at assisting individuals with doctoral degrees in non-business fields to transition to roles as business school faculty members are examples of one such non-degree initiative. Globally, options for individuals to enhance their level of engagement with research through non-degree “continuing education” opportunities appear quite limited.

Also worth exploring is the role that master’s level programs that give participants a very rigorous grounding in research, such as the Master of Research, can play in preparing individuals to engage with research without necessarily undertaking a doctoral program. We believe great unexplored potential exists for additional models that build on doctoral education’s capacity to serve a broader range of purposes through other courses or programs.

Regardless of their path into academia, a heavier reliance by business schools on faculty members with industry connections has potential to help enhance management education in several ways:

²¹ Ibid.

1. Cultivating and maintaining channels of communication and collaboration between the business school and business practice: The AACSB 2013 Business Accreditation Standards, for example, elevate attention to professional engagement and its meaningful intersection with academic activities.
2. Elevating the value and visibility of applied research, and contributing to a better understanding of the roles that different types of faculty and staff play in the creation and dissemination of impactful research, as called for by the AACSB Impact of Research Task Force.²²
3. Addressing the shortage of qualified faculty in some world regions by legitimizing alternatives to the basic/foundational research doctoral program as the entryway into an academic career. The result should be a more diverse pool of faculty who, hired in accordance with the school's mission, better enable the school to advance knowledge through teaching, research, and service.
4. Elevating the understanding, among faculty, of the questions and issues faced by those within organizations. Many would argue that this will lead to better formulated research questions, a higher chance of the research leading to impact, and business schools' overall heightened engagement with and relevance to practitioners.

At the same time, programs designed for individuals who will rely less on professional experience and more on sustained, deep immersion in scholarly literature remain a critical component of the doctoral education landscape. As noted in the preamble to the AACSB 2013 Business Accreditation Standards, “quality business education cannot be achieved when either academic or professional engagement is absent, or when they do not intersect in meaningful ways.” Schools that aim to prepare individuals to serve roles as characterized by the Scholarly Academic category are also called to think deeply about how well their graduates are prepared to fulfill that purpose.

Evidence suggests, for example, that some research-intensive institutions are starting to look for doctoral graduates with deeper knowledge of specialized areas and a demonstrated ability to publish in top journals. This is especially true among the institutions that are competing to be viewed as the most elite, given the impact of faculty research productivity on institutional reputation, fundraising, and school rankings.

We are entering an era in which it is not the specific degree that matters, but rather how the individual’s training, interest, and past performance suggest what the person is capable of accomplishing, and the degree to which this, in turn, supports the mission of the school.

Basic and Applied Research

The growth in breadth of doctoral programs is producing a more varied range of scholars than the traditional doctoral programs of the past. Nevertheless, the creation of an original, substantive research contribution, as judged by a group of peers, is the defining characteristic that distinguishes a doctoral program from other types of education. Regardless of the intended career path of program participants, expectations for rigor in this keystone of doctoral education must be upheld.

Across programs, however, various types of research and forms of research output may meet the standard of an “original research contribution.” For the purpose of this report, the task force has considered that, like the intended career path of program graduates, the research emphasis in a business doctoral program likewise falls somewhere along a continuum where one side characterizes programs that emphasize “Basic/

²² AACSB International, Final Report of the AACSB International Impact of Research Task Force,” 2008.

Foundational” research and the other represents programs that emphasize “Applied/Translational” research. One might also consider the two ends to represent Boyer’s so-termed “scholarship of discovery” and “scholarship of application,” and the middle of the continuum to represent the connection between the two in any one course of study.²³

Figure 3. The Research Focus Continuum



The OECD Frascati Manual, which outlines standards for the collection of data on research and development, defines basic and applied research as follows:

- Basic research is experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts, without any particular application or use in view.
- Applied research is also original investigation undertaken in order to acquire new knowledge. It is, however, directed primarily toward a specific practical aim or objective.²⁴

The AACSB's *Final Report of the Impact of Research Task Force* offers the following additional clarification concerning applied research:

To be considered scholarship, [applied research] contributions must go beyond observation and description, and beyond what might be considered service to business organizations. These intellectual contributions are based on knowledge of theory and the application of rigorous approaches to inquiry.

The dominant model of doctoral education in the United States involves schools characterized by the far left of both continua (e.g., both academic career orientation and basic research focus). Increasingly, growth in models is characterized by the far right of the two continua (e.g., professional career orientation and applied research focus).

Globally, however, parallel alignment between where a school falls on the two continua (expected career path and research focus) is not as common as one might expect. Administrators who represent several professional doctorate programs²⁵ suggested in our interviews that students had expressed interest in eventually pursuing some sort of relationship with academia, whether by seeking academic employment upon retirement from an industry position, or by becoming further involved in academic research. These programs had not operated long enough to effectively gauge whether these expressed aspirations have been pursued and achieved.

Some schools have taken an approach to doctoral education that gives students a choice of educational paths according to their intended careers. Two-track programs such as the St. Gallen PhD in Management in Switzerland award all students the same degree upon completion of the program, yet students' experiences in the program vary. Students hoping to pursue a career in industry have fewer courses and attend the program on a part-time basis, while those hoping to pursue an academic career attend full-time

²³ E. L. Boyer, *Scholarship Reconsidered* (New York: The Carnegie Foundation for the Advancement of Teaching, 1990).

²⁴ A Frascati Manual, Proposed Standard Practice for Surveys on Research and Experimental Development (OECD 2002), www.keepeek.com/Digital-Asset-Management/oecd/science-and-technology/frascati-manual-2002_9789264199040-en, p. 77–78.

²⁵ E.g., City U-Fudan and Georgia State University.

and have more course requirements. Some in the latter group ultimately choose to pursue the habilitation as a further level of qualification. Another approach to granting students flexibility is that offered to students of the Doctor of Management (DM) program at the Weatherhead School of Management at Case Western Reserve University. While the DM is a professionally oriented doctoral program positioned for working executives, those individuals who wish to reorient their careers to formally pursue positions as academic researchers and scholars are offered an option to extend their study through the Designing Sustainable Systems track in the PhD in Management Program. In addition to the three papers required for the DM program, these students are required to pass a comprehensive exam “demonstrating adequate knowledge of [their] field’s theories, research methods, and results” and to defend a dissertation in which they “extend their contributions to managerial knowledge.”²⁶

These two examples suggest the importance of ensuring alignment not between the research focus and intended career path (although this may be useful), but rather alignment between research focus and the way the overall program is structured, who is involved, and how success is measured. This means designing seminars, courses, and other components of a “curriculum” not only to align with a student’s field of study, but also to best support the desired research outcomes. It may mean thinking differently about the types of faculty involved in delivering seminars, supervising dissertation research, and sitting on a dissertation committee. It may mean alternative expectations for the work comprising the dissertation or equivalent body of work that demonstrates a contribution to knowledge.

Teaching and Communication Skills

The emphasis on developing research capabilities among doctoral students often, it seems, far outweighs attention to developing effective teaching skills. It is telling that, when our task force asked a sample of doctoral program directors to describe features of their programs they considered to be innovative, several mentioned having added courses, modules, or other requirements designed to help students become effective teachers. That doctoral programs, particularly those oriented toward individuals pursuing academic careers, do not place more emphasis on teacher training is a disservice not only to their graduates, but also to their graduates’ future employers and future students.

The timing is right for greater attention to laying the foundations for effective teaching within doctoral programs.

The timing is right for greater attention to laying the foundations for effective teaching within doctoral programs. Around the world, higher education institutions are being held more accountable for evidence that student learning outcomes have been achieved. The typical pattern of faculty tenure and incentive systems that reward research contributions over effectiveness in the classroom is increasingly being questioned, even if it has not undergone much evolution.

The AACSB 2013 Business Accreditation Standards include a series of expectations related to teaching and learning, including a standard related to student-faculty interactions and another related to teaching effectiveness. The basis for judgment for the latter suggests that schools should include “graduate students who have teaching responsibilities” among the set of individuals who are provided developmental activities to enhance teaching.

We would go further to recommend that even doctoral students who do not have formal teaching responsibilities be exposed to instruction, mentorship, and best practices concerning course development,

²⁶ Weatherhead School of Management, Case Western Reserve University, updated 2010, weatherhead.case.edu/degrees/doctor-management/curriculum.

classroom management, and effective pedagogical techniques. For those students who intend to pursue academic careers, such development opportunities not only should be encouraged, but expected.

The university setting provides an especially good opportunity for those interested in pursuing academic careers to observe, learn about, and begin to practice effective teaching techniques. But our rationale extends beyond mere convenience. Doctoral programs are, effectively, the last stage of career preparation for individuals pursuing careers as faculty members, and as noted by Boyer, being an effective faculty member involves much more than simply being a strong researcher:

Surely, scholarship means engaging in scholarly research. But the work of the scholar also means stepping back from one's investigation, looking for connections, building bridges between theory and practice, and communicating one's knowledge effectively to students.²⁷

Such training also can be important for professionally oriented programs. As noted earlier, many individuals in professionally oriented programs express interest in potentially pursuing a teaching position at some time in the future, and could benefit from access to related skill-development opportunities while in the doctoral program.

Moreover, the communication skills needed to be an effective teacher (e.g., the ability to explain complex ideas on a level that can be understood by a less knowledgeable audience) also are extremely valuable in other settings, such as the industry settings that graduates of many professionally oriented programs would enter. The ability for academics to communicate theory in a way that is relevant to practitioners is likewise a vital skill if schools are to enhance the value and visibility of research and cultivate stronger industry partnerships.

Regardless of the degree to which teacher training is emphasized in conjunction with the research training of a doctoral program, no program can expect to completely prepare future faculty members for the evolution of their careers. Especially given the accelerating pace at which higher education is evolving, business schools that hire graduates of doctoral programs have an obligation to invest in the continued development of an individual's teaching and research skills over the course of his or her career, as areas of focus evolve. But attention to teaching and communication skills within doctoral programs sends a strong signal about the importance of these activities within graduates' future careers.

Intercultural and Interdisciplinary Perspectives

A final point about the purpose of doctoral education and its relation to program design is that the task force believes the roles graduates of business doctoral programs will play in the future increasingly call for programs that cultivate intercultural perspectives and interdisciplinary networks. These two areas of focus surfaced in our survey and interviews as emerging areas of interest, exploration, and even priority among doctoral programs.

Intercultural Perspectives

The AACSB Globalization of Management Education Task Force report noted the importance of hiring faculty with global perspectives and continuing to develop that knowledge over the course of the faculty member's career. The dean of the Samuel Curtis Johnson Graduate School of Management at Cornell University similarly articulated this need for faculty as follows: "[F]undamentally, we must create true global

²⁷ Ernest L. Boyer, *Scholarship Reconsidered: Priorities of the Professoriate*, The Carnegie Foundation for the Advancement of Teaching, 1997, p. 16.

knowledge. To achieve this, we must create models under which faculty members conduct research in foreign contexts. That requires them to physically spend time in other parts of the world, breathing the air, feeling the environment, and developing a deep understanding of the local context. The current practice of ‘exporting’ locally produced knowledge simply is not enough.”²⁸

However, few international business school alliances exist to support collaborative research and educational development (vs. delivery). According to an AACSB survey concerning its member schools’ collaborative agreements, only a very small number of such agreements include provisions for collaborative research among faculty. Even fewer agreements include provisions for collaborative development of learning and pedagogical materials. Less than one in five schools reports having at least one collaborative agreement intended to support faculty research; one in ten business schools uses at least one collaborative agreement to support pedagogical development.²⁹

Doctoral education serves as an important opportunity to cultivate the global perspectives, knowledge, and networks that will enhance schools’ international research collaborations and the creation of true global knowledge. In the United States, Bentley University’s doctoral program encourages doctoral students to spend semesters at foreign universities and its own professors to host students from abroad, in an effort to “maintain a vibrant international PhD community.”³⁰

Yet other doctoral program directors have expressed to us the belief that some faculty members are likely to see a semester spent abroad as a disruption to students’ relationships with their dissertation advisors (or perhaps, from the perspective of the advisor, a disruption to the research assistance provided by that student). Additional reasons that doctoral programs may be slow to embrace internationalization include the narrow focus of research done in a doctoral program or the opinion that study abroad at the doctoral level is a diversion of valuable time and resources.

Despite these objections, several schools that we encountered (primarily in Europe and Latin America), characterized internationalization to be a critical component of their doctoral programs. One school in Latin America notably requires students to spend at least one semester abroad, be engaged in joint research with foreign academics, and present research at international conferences.

European schools, in particular, are in an environment that historically has been open to international collaborations, and where encouragement of international mobility is still growing. One of the EUA’s 2005 Ten Basic Principles was that “[d]octoral programmes should seek to offer geographical as well as interdisciplinary and intersectoral mobility and international collaboration.”³¹ The Salzburg II Recommendations that followed went further, calling for mobility to be “an integral part of a candidate’s research project” and for universities to use internationalization strategies as “a tool in increasing the quality in doctoral education and in developing institutional research capacity.” Suggested interpretations of internationalization include collaborative doctoral programs as well as international joint doctoral programs that involve “joint, integrated curricula, joint committees and juries, and the joint degree.”³²

Supporting this objective within business schools is the European Doctoral Programmes Association in Management and Business Administration (EDAMBA). The association aims to manage a network of business schools that offer doctoral education in order to facilitate the exchange of information and best

²⁸ Soumitra Dutta, eNewsline Deans Corner, November 2012.

²⁹ AACSB International, AACSB Collaboration Survey 2011-2012, DataDirect, 2012.

³⁰ Sue Newell, “A matter of degrees: A doctoral programme for the 21st century,” EFMD Global Focus 4, no. 3, 2010.

³¹ European University Association, Bologna Seminar on “Doctoral Programmes for the European Knowledge Society.”

³² European University Association, Salzburg II Recommendations: European Universities’ Achievements Since 2005 in Implementing the Salzburg Principles, 2010, www.eua.be/Libraries/Publications_homepage_list/Salzburg_II_Recommendations.sflb.ashx.

practices, the exchange of PhD candidates, and research cooperation. The association also supports the European Doctoral School on Knowledge and Management (EUDOKMA), which offers courses, seminars, and research stays to doctoral students enrolled in recognized business, economics, and related doctoral programs; students who have fulfilled the international research and mobility requirements receive a EUDOKMA certificate.

Another important but less discussed dimension of intercultural perspectives concerns the cultivation of an appreciation for different approaches to research questions (i.e., intellectual culture). Clusters of scholars who tend to share the same intellectual culture have a tendency to emerge at individual schools. Some involved with doctoral programs have expressed the value of sending students and faculty to other institutions to engage in research and immerse themselves within that university's culture. Even in instances for which the immersion does not involve the crossing of political borders, such experiences can enhance students' abilities to view research questions from different angles and perspectives. Dual supervisory models, discussed at greater length in our chapter on Strengthening Capacity, often serve a similar objective in that the student receives guidance from a second individual who may have different research and/or professional experiences.

Interdisciplinary Focus

The research focus of some students may appropriately be narrowly defined, and this approach to research has been traditionally dominant. For some doctoral candidates, particularly but not exclusively those pursuing goals in industry, an interdisciplinary aspect to the program might be more appropriate.

The AACSB Task Force on Business Schools and Innovation wrote that:

Business schools are a natural hub for research on innovation because their main subject cuts across many disciplines and their best scholars often come from related disciplines. That is valuable because there is a special and more relevant role for interdisciplinary research when it comes to supporting innovation. Because the roots of the innovation research already cut across organizational functions and industries, interdisciplinary research into management innovation should do the same by involving faculty from multiple disciplines.³³

That task force goes on to suggest that “schools on an innovation mission should reach out to other campus units, especially in the sciences and engineering, to create interdisciplinary learning and research environments, as well as to engage relevant communities in unique ways.”

Some schools have done so in the context of doctoral education through the creation of interdisciplinary programs, such as one at Open University where some students are co-supervised by individuals in the Faculty of Social Sciences and the Faculty of Mathematics, Computing, and Technology. Others have established partnerships for doctoral education, such as that between the University of Ljubljana's Faculty of Economics and the school's Statistics and Environmental Science departments. At the University of Mannheim, the graduate school fosters the interdisciplinary exchange of methods and research approaches by coordinating the graduate curricula in the three doctoral centers and by encouraging (and requiring) graduate students to benefit from advanced teaching in empirical and quantitative methods in neighboring fields.

³³ AACSB International, Business Schools on an Innovation Mission: Report of the AACSB International Task Force on Business Schools and Innovation, 2010, p. 25-26.

Notwithstanding the interest in science, there still remains great potential for more broadly focused social science doctoral programs that address research methodologies and quantitative empirical methods from different disciplines, and look at societal questions. Some would argue that as “management and business” is a social science, doctoral students should be exposed to a far greater degree than presently occurs to the ways of framing problems and issues. Such an approach, it has been argued, will not only give the opportunity for genuinely new insights into problems to surface, but will enable methodological expertise that might exist in other disciplines to be mainstreamed.

STRENGTHENING CAPACITY

Despite an often overwhelming sense of intrinsic value, doctoral education is widely viewed as being a cost center to schools, especially in comparison to other degree programs. The resources required to deliver a quality doctoral program are substantial and the outcomes, it is argued, are often not immediately realized and are difficult to quantify.

Schools that offer doctoral education often face ongoing questions concerning the financial viability of their programs and decisions about resource utilization in today's era of increasing financial constraints on higher education. Attention to the financial models that enable doctoral education delivery thus take on greater importance. Our focus on capacity in this section relates to the degree to which schools have the resources and ability to deliver doctoral education, to deliver doctoral education to a greater number of individuals, or to deliver an educational experience of the highest possible quality.

In conversations with program directors, faculty, and administrators, we have heard a general consensus that many schools' understanding of the costs and values of offering doctoral education is not at the level it could and should be. Nor are most schools fully aware of the variety of approaches to resource utilization and revenue generation used by programs globally. Given the costly nature of doctoral education and our call in the next chapter for continued attention to expanding access to quality doctoral education, both issues require focused attention.

Although schools are urged to practice some level of transparency of the financial structure of their doctoral programs, this section is not intended to suggest that schools need to make such financial information publicly available. Rather, schools are encouraged to analyze such information and data to better understand the viability of their program and identify areas of opportunity for improvement and enhancement. In this section, we aim to assist schools with undertaking this type of analysis, and we discuss some alternative resource models that may enable strengthened capacity.

Understanding the Cost and Value of Doctoral Education

While some schools have carefully considered the cost and value of their doctoral program, anecdotal evidence suggests that many business schools have not carefully documented the full cost of a doctoral program, even though it is universally agreed to be substantial. Even more schools are believed to have made no formal attempt to quantify the benefit to the business school, the profession, or society at large. Certain faculty, administrators, and other school leaders may feel it is risky to fully disclose the cost of the doctoral program, and fear that highlighting the extent to which the program is a cost center to the school may inadvertently result in reductions to the program.

However, this task force has observed that institutions that have conducted formal assessments regarding the cost of offering a doctoral program are subsequently in a more informed position to be able to measure and articulate the value of the program, and to look for innovative ways of improving quality or expanding participation. We furthermore believe that greater visibility, transparency, and understanding of the costs associated with delivering a doctoral program could lead to the adoption of more innovative sources of funding to sustain, or expand, doctoral programs. This development could help schools realize new approaches to organizing their programs and delivering them more efficiently.

Calculating the costs associated with doctoral education is a difficult task, and the process for doing so varies from one school to another. Those schools that have undertaken this exercise have sought to quantify costs and values in the general areas listed below. Although the description appears rather straightforward, we recognize that determining actual values for all of the items listed is often far from straightforward. Nevertheless, we provide the list as a guide.

Costs

- Cost and number of doctoral stipends being offered, including other covered student expenses (e.g., health insurance, travel and living expense reimbursement, etc.)
- Faculty costs for teaching doctoral seminars or courses (especially if course credit is given for such courses)
- Cost per student as a function of faculty time (and faculty pay)
- Administrative costs for staff support of the program
- Administrative costs for having an academic head of the doctoral program
- Technology expenses, especially if the program is delivered in an online or blended format, including support staff and vendors
- Travel expenses, for example, visiting faculty travel, student travel, conference/workshop-related travel
- Costs to acquire and/or maintain reference materials, journal subscriptions, and data sets

Values

- + Tuition paid by doctoral students, either individually or through grants and outside fellowships, or state and/or nationally provided subsidies
- + The value of any intellectual property generated by the faculty in working with doctoral students
- + The value of teaching, teaching support, and grading that doctoral students provide that is usually at a lower cost than hiring adjunct or additional faculty to provide that teaching
- + The value of research support in the form of assisting with data collection and analysis, and jointly writing papers with faculty members, among other roles
- + The value of such research support in funded research. Here, it should be noted that marginal value (i.e., the cost of hiring a professional researcher to work on a grant) versus the overall value (would any grants be awarded if there were no doctoral program?) are two different approaches to this item.
- + Alumni giving from doctoral graduates

A school needs a clear understanding of why it offers a doctoral program, and what it must invest to do so, if it intends to continue to support the program in the long term.

Other costs and values might be more difficult to calculate but remain important for some schools. These might include:

Costs

- Costs associated with the use of building space, particularly if space is tight and the doctoral program prevents other, higher revenue generating space
- Possible reputational effects of a poor-quality doctoral program
- Opportunity costs of allocating funds to doctoral education instead of to more profit-generating activities (e.g., developing/enhancing the MBA program)

Values

- + Ability to attract high-quality faculty through a vibrant research environment with bright individuals at the forefront of knowledge, including a healthy doctoral program
- + Reputational effects of having a quality doctoral program
- + Ongoing contacts and organizational influence through the doctoral alumni network
- + Contacts and organizational influence through research and projects undertaken by doctoral students
- + Contribution to capacity building and/or sustainability of the profession

Schools that have attempted to better understand the cost and value of their program(s) are generally not driven to do so by a desire to calculate net gain or loss, or to determine a “break-even” target that must be achieved. Rather, the exercise is undertaken to gain a stronger sense of the impact that each of several variables has on the overall cost and value of offering doctoral education, in order to guide policy and strategy.

Once the costs and benefits of the doctoral program are given, it is then easier for the faculty and administration to rationally discuss issues such as the appropriate size of the doctoral program. For instance, it may be that a doctoral program is incurring significant fixed costs, but the marginal value of a doctoral student is positive. In this case, it would suggest that the doctoral program should be expanded in order to better recoup the fixed costs.

A calculation of the costs and benefits can also reveal lost opportunities for benefits or, conversely, the incurring of unnecessary costs. For instance, it might be noted that doctoral students are not being engaged in outside projects, which would represent a lost opportunity for both the school and the doctoral students.

The calculation of the costs and value of a doctoral program is not easy: it is a mix of quantitative and qualitative measures, with both fixed and variable values. But a school needs a clear understanding of

why it offers a doctoral program, and what it must invest to do so, if it intends to continue to support the program in the long term.

Understanding Student Success Factors

Especially since much of the value of doctoral education comes from impacts not realized until students' completion of the program, ensuring a high student success rate reduces the cost associated with students who will return less value. We believe substantial opportunity exists for business schools to use data they already possess to better understand the cost factors and degree of success of their doctoral programs. Many schools, for example, fail to make use of data that could lend insights into the program's admission practices and student success factors.

For example, one school reported having analyzed demographic data about students completing and failing to complete its doctoral program, and found that individuals who were slightly older and had a few years of prior work experience tended to fare better than recent undergraduate students. This prompted a series of discussions about the program design and new insights to be used in evaluating potential candidates. If decisions about whom to admit and whom to deny could be made to correlate better with successful completion and a successful career, programs could assure that they were spending resources more efficiently.

Another analysis that might be insightful would be to assess the correlation between characteristics of the faculty member supervising the dissertation and the "success" of the doctoral student. Many schools desire to hire only faculty from schools considered to have graduated from peer or better institutions. Does this hiring strategy actually have the impact that schools perceive it will, in the context of doctoral education? Deeper analysis could reveal to schools the implications of their hiring strategies.

Identifying Alternative Funding Models

Our efforts to identify particularly effective funding models were challenged by the limited transparency of schools' overall financial strategies in relation to their doctoral programs. Still, we learned enough to know that many schools are challenged by limited and, in some cases, shrinking funding for their doctoral programs. For many individual schools, a need exists to better understand and pursue a broader range of funding sources than they have relied on in the past.

We will presume that schools are already taking advantage of available public sources of funds, such as state subsidies allocated on the basis of student headcount and/or research productivity, to the degree that they exist and that schools are eligible recipients. Such funding schemes can vary widely in availability and application from one country to another.

The threat of decreasing public funding that is found in many contexts around the globe makes this less a source of funds to pursue, and more a source to preserve. As noted in the introduction to AACSB's 2012 publication, *Impact of Research: A Guide for Business Schools*, "given growing pressure from various stakeholder groups—namely students, their parents, and legislators—to make higher education more affordable, the ability of schools to articulate the impacts of their investments in scholarship on students' educational experiences and on the broader communities they serve is essential."³⁴ We believe that, as schools enhance their abilities to articulate the value and impact of their doctoral programs and resulting research, they are better positioned both to preserve these funding sources and, possibly, to improve their fundraising efforts, as well.

³⁴ AACSB International, *Impact of Research: A Guide for Business Schools: Insights from the AACSB International Impact of Research Exploratory Study*, www.aacsb.edu/publications/researchreports/currentreports/impact-of-research-exploratory-study.pdf, p. 6.

The funding strategies of most U.S. business school doctoral programs are dominated by use of funds generated through other programs and activities or through endowments. Doctoral students may engage in teaching or research support to help offset the costs of the education provided. Within this model, options for enhancing available funds are limited primarily to strategic decisions and negotiations concerning investment in revenue-generating activities and the subsequent allocation of the resources they produce.

Instead, we focus on three categories of funding sources that schools might further explore as part of strategies to strengthen capacity. These funding strategies include the pursuit of research grants and contracts, shifting the cost of doctoral education to students (or their sponsors), and cultivation of industry partnerships.

Research Grants and Contracts

The availability of funding through research grants is heavily dependent on context, including eligibility for national or international research funds, as well as the subject of the research undertaken through doctoral study. Zhao and Jiang (2009) note, for example, that “compared with developed countries, national grants in management research are still very limited in China. Despite a fast-growing economy and the great need for management knowledge, funding for management research lags far behind the funding for other sciences.”³⁵ The same challenges are echoed by management researchers in other regions, including developed countries. Across the globe, governments’ attentions are focused on (rightfully) the role of science, technology, engineering, and mathematics (STEM) to enhance international competitiveness, but often (wrongly) at the exclusion of the role of management research as a necessary complement.

Without intervention by business schools or organizations advocating on their behalf, this appears unlikely to change in the near future. In this context, one strategy is to compete more strongly for existing available funds. This will work for some business schools, particularly those that increase investments in training faculty and doctoral students on how to write competitive grant proposals, or that increase investments in research staff support. Schools should consider whether these strategies make sense in their context.

However, this strategy only works for individual schools at the expense of others. A necessary complement is for more collaborative efforts to yield influence on potential funding sources to increase the availability of funds to support management research and business doctoral programs. Glazer (1982) argued that “the rhetoric of cooperation often conflicts with the competitive thrust of autonomous institutions that vie with each other for enrollments, grants, and state aid. However, college and university administrators are increasingly dependent on external resources for institutional survival and by joining together in a consortium, seek to improve their bargaining position and to manipulate their environment [18, p. 211]³⁶. Yet decades later, we find few instances in which collaborations aimed at securing financial support for doctoral level education and research are actively pursued.

Some schools have used grants or other external funds awarded for specific faculty-driven research projects to support doctoral student positions. Copenhagen Business School offers, for example, a set of PhD Fellow positions that are funded largely through external grants awarded to a professor or research team. Students accepting fellow positions are funded for three years of PhD studies, but are also admitted into the PhD program based on their qualifications to provide research support related to the funded project. Similarly, in the United Kingdom there is a push for larger grants to be used as opportunities to support research

³⁵ Shuming Zhao and Chunyan Jiang, “Learning by Doing: Emerging Paths of Chinese Management Research,” *Management and Organization Review*, Vol. 5, Issue 1 (2009): p. 19.

³⁶ Judith S. Glazer, “Designing and Managing an Inter-University Consortium in a Period of Decline,” *The Journal of Higher Education*, Vol. 53, No. 2 (Mar. - Apr., 1982): p. 179.

training; as a consequence, it is becoming more common for research grant proposals to include a PhD student bursary.

Research centers, especially those successful at securing grants and other external funding for large-scale research projects or broad research on a particular area of interest, also could serve as a conduit for channeling funding to support doctoral students. Research grants might not be directly awarded to the doctoral student, but could contribute to the funds used to support the doctoral student (likely, in return for research assistance related to the grant project or overall research center mission). Often, centers are interdisciplinary in nature; research with an interdisciplinary focus may be eligible to compete for funding from a broader array of funding sources, i.e., those active in each of the disciplines represented by the question being investigated.

Shifting the Cost of Doctoral Education to Students

Across the globe, doctoral students bear varying levels of responsibility for covering the costs associated with doctoral education. In some cases the proportion covered by students can be substantial. These students turn to savings, simultaneous employment, employer “sponsors”, loans, self-secured grants, or other forms of financial assistance to cover program-related expenses. A model wherein students cover most or all program costs is more common among programs aimed at working professionals (including “students” simultaneously working as faculty members), but also is found among academically oriented programs in some regions, such as Europe. According to one report, in 2011-2012, 40% of United Kingdom-based PhD students, across all disciplines, “did not have their fees paid by funding bodies or sources were unknown.”³⁷

In our conversations with doctoral program directors, many representing schools in all continents indicated that students are required to pay tuition to attend the doctoral program. In some locations students are required by law or state policies to pay tuition. However, in many cases schools offer stipends or grants that would wholly or partially cover their cost of attendance. Variations in eligibility for and availability of such financial “aid” serve as the largest point of differentiation in the models for who pays for different programs. At some schools where both full- and part-time tracks are available, for example, only full time students are eligible for stipends. Other programs offer students funding only during the initial years of the program and students are subsequently expected to apply for outside funding. Other schools entirely waive fees for all students.

Globally, most professionally oriented doctoral programs expect students to be self-funded, although the degree to which the students receive partial or full funding support from the company at which they are simultaneously employed varies. In many cases, the company views the research undertaken by the employee while pursuing the doctorate to be directly applicable to the company or the industry it serves, and funding participation in the doctoral program is thus considered a valuable investment to the company. Yet levels of company support may vary and also be easy to overestimate. One U.S. school offering a DBA, for example, reported that companies were less willing to sponsor students than had been expected when the school began offering the program.

In markets where professionally oriented doctorates are just now emerging, companies likely face a greater learning curve about the role these programs play. This suggests a need for schools offering the programs to work harder to communicate the programs’ purpose and value. The Cranfield School of Management is one example of a school that has sought to articulate the organizational benefits a company will acquire by funding an employee to complete its International Executive Doctorate (DBA) program.³⁸

³⁷ Marazzi, Luca, “Self-funded PhD students deserve support, not stigma and secrecy.” The Guardian, Higher Education Network blog, 6 June 2013 06.02 EDT, www.guardian.co.uk/higher-education-network/blog/2013/jun/06/self-funded-phd-students-secret.

Some academically oriented programs have also found a pool of “employer-funded” doctoral students among schools aiming to enhance the qualifications of their faculty members without doctorates. In such cases, the employing school is willing to cover related tuition and fees, and provide the student with additional financial assistance during the program, in exchange for the student’s commitment to return to a full-time faculty position for a certain amount of time following program completion. While some schools have built entire programs on this model, in many cases such students are incremental additions to a cohort of students subsidized by the school offering the program. We expand on this practice in the following section on Expanding Access.

Shifting the burden of cost to students, however, is not without challenges and is a strategy that should be pursued with caution. Especially among programs at which large numbers of students do receive financial assistance, anecdotal evidence suggests that some self-funded students struggle with “socio-academic” embarrassment,” and a sense of being viewed as less capable than funded peers.³⁹ Some academics question whether a growing portion of self-funded students accompanies a lowering of standards for admission and program completion.⁴⁰ Also of great concern to program administrators is the risk that additional sources of funding will result in further reductions to existing institutional support.

These are concerns that should be heeded, and that schools should seek to mitigate through proper program design and management. However, with the right approach, schools may find opportunities to implement different tuition models across programs and participants. One dean at a U.S. institution, for example, shared that he and the university provost had negotiated an agreement through which the business school could retain nearly 90 percent of the revenue from any tuition-paying doctoral student, enabling most of that revenue to directly support the business school and doctoral program and resulting in a slight expansion in the number of students enrolled. Other programs, such as those oriented toward working professionals, may find a pool of candidates who are able and willing to cover program costs if the alternative is that the program does not exist.

Cultivation of Industry Partnerships

Beyond sponsoring individual employees to pursue doctorates, we believe that a case can be made for more business school-industry partnerships that, in whole or in part, help to fund doctoral programs. Whether involving a single program and company, a group of schools, or groups of companies, such partnerships have potential to not only enhance support for doctoral education, but to help bridge the practice-academia divide through collaborative pursuit of mutually beneficial desired outcomes.

One large-scale successful model is that of the U.S. based Accounting Doctoral Scholars Program, administered by the AICPA Foundation. Funded by several of the country’s largest accounting firms and state CPA societies, the program aims “to increase the pool of academically qualified accounting faculty in tax and auditing, with recent experience in public accounting, at U.S. universities that provide talent to the public accounting profession.” As of 2012, the program was supporting 114 individuals in doctoral programs across a range of U.S. business schools.⁴¹

The industrial doctorates discussed in Box 2 of the Pursuing Purpose section are other examples of programs that elicit higher levels of close interaction between the company, student, and school than other

³⁸ Cranfield University School of Management, International Executive Doctorate (DBA), 2013, Organisational and Personal Impact webpage, accessed on May 20, 2013, www.som.cranfield.ac.uk/som/p2792/Programmes-and-Executive-Development/Doctorates/International-Executive-Doctorate/Benefits-to-Your-Organisation

³⁹ Gibney, Elizabeth, “PhD students ‘embarrassed’ to be self-funded,” Times Higher Education, 2 May 2013, www.timeshighereducation.co.uk/news/phd-students-embarrassed-to-be-self-funded/2003587.article.

⁴⁰ Pugh, Rachel, “What’s up, Doc: Are too many students sailing through the British PhD?,” The Independent, 14 May 2009, www.independent.co.uk/student/postgraduate/postgraduate-study/whats-up-doc-are-too-many-students-sailing-through-the-british-phd-1684291.html.

professionally-oriented doctoral programs, and typically involve industry funding. As noted, the programs are thought to have such potential for value to a range of constituents that they are recommended in the Salzburg II Recommendations as a means of improving doctoral education in Europe.

The benefits to business schools of industry partnerships go well beyond the potential for financial support to achieve doctoral education goals. A survey of university research groups in Brazil that claimed any kind of interaction with firms revealed, for example, that the most important benefits of such interactions, as perceived by group leaders, were the development of new research projects, knowledge and information exchange, financial resources, and insight for new collaborative research projects.⁴²

But schools must be aware of the challenges associated with industry collaboration at the doctoral level, and willing to work to find solutions. One challenge often cited by industry representatives, for example, is the difficulty working with doctoral students or faculty because of a lack of coordination. Each additional individual or entity involved in a program requires a greater commitment to effective communication about program timelines, progress, and outcomes. Confidentiality concerns are also potentially an issue, but can be mitigated through established trust (cultivated through a relationship with the school and/or student), as well as clear expectations for the publication and dissemination of research findings.

Additionally, some business schools may need to be the initiators of conversations with industry representatives, to raise awareness of how such partnerships can enable practitioners to have greater influence on management education and research and enhance the practical relevance of scholarship. Many schools already have strong relationships with industry partners that could be further developed in the context of doctoral education. Often, investments in professional staff are necessary to ensure dedicated organizational support for the collaboration.

Finally, while it may seem easier to encourage industry partnerships in support of programs with a more applied research focus, we caution that such an approach by itself is too narrow and underrepresents the value and relevancy of basic research. The *Final Report of the AACSB International Impact of Research Task Force* cites several examples of basic research that have had substantial impact on management practice, and asserts that, “indeed, several prominent researchers and executives take the view that the most valuable contributions of business schools to practice have come through the advancement of basic knowledge rather than the pursuit of immediate relevance.”⁴³

Building Program Portfolios

Some schools have strengthened their capacity to deliver doctoral education by offering a portfolio of different business doctoral programs. Delivering multiple types of programs at a single institution alleviates some of the financial burdens associated with doctoral education by allowing schools to reach more students without a corresponding increase in fixed costs, thereby lowering the total cost per student. Furthermore, to the extent that different types of programs leverage the expertise of a broader range of faculty members, the school may be less constrained by the capacity of any one individual to engage with doctoral education. Revenues received from students in self-funded or employer-sponsored programs may help offset the school’s burden related to school-funded programs.

⁴¹ Doyle Z. Williams and Steve Matzke, “The Accounting Doctoral Scholars Program: A status report,” Journal of Accountancy, October 2012, www.journalofaccountancy.com/Issues/2012/Oct/20126283.htm.

⁴² Wilson Suizigan, Eduarda Albuquerque, Renato Garcia, and Marcia Rapini, “University and Industry Linkages in Brazil: Some Preliminary and Descriptive Results,” Seoul Journal of Economics 22, no. 4 (Winter 2009): p. 605.

⁴³ AACSB International, Final Report of the AACSB International Impact of Research Task Force,” 2008, p. 18-19.

Our review of different doctoral education models globally has revealed that schools are increasingly looking into how professionally and academically oriented doctoral programs can complement one another when delivered at the same institution. One example of this is at IE Business School, where collaboration among students from both programs is viewed as being important in enhancing both groups of students' research. Similarly, the aforementioned Industrial PhD at Copenhagen Business School is presented as one of four "different routes to a PhD" that an individual can follow. The remaining three are a research fellow, an independent PhD student, and a visiting PhD student.⁴⁴

Collaborations and Consortia

Finally, if one of the primary purposes of doctoral education is to sustain the management education profession, then it follows that there needs to be far greater coordination of effort (and sense of purpose) between schools if the management and business school community as a whole is to deliver on this objective. The formation of consortia is seen as one way in which schools without the capacity to deliver the whole of a doctoral program on their own can combine, pooling either resources or expertise so that schools can share costs or enhance quality through joint provision of certain aspects of the program. Consortia of which we are aware also operate internationally, within particular disciplines or fields of study. Even when the cooperation or sharing does not lead to the delivery of an agreed program of study, academic networking, as well as faculty and student exchange, have been seen to be extremely beneficial to both staff and students in raising standards and ensuring that students and staff are attached to a 'critical mass of activity'.

One example of where this has happened very successfully for a number of years has been in the delivery of advanced training for doctoral students in the North of England. There some 10 institutions have been collaborating for the last seven years to support the delivery of advanced "theory" and methodology for doctoral students across the North. The original aim, still valid today, was to recognize that various advanced techniques and skills would not necessarily be present in all institutions—even those that are research led. The objective, therefore, was to bring together students who would otherwise have been isolated and provide a suitably experienced academic to deliver the session from one of the collaborating institutions. Although originally funded by the research council, the network (North Advanced Training Network) has been so successful that institutions now contribute 3,000 GBP a year each to ensure the seminars series is maintained. Reviewed regularly, the network is responsive to the current needs of students and the benefits the students gain from connecting to colleagues at a similar stage in their development is seen as one of the main advantages; a close second is the resource efficiencies of simultaneously serving more than one or two students, which would have been the case before the existence of the network.

In terms of program development and delivery, logic behind creating consortia generally is to: (1) mainstream good practice from collaborators where the specialist expertise at the highest level is unavailable at any one institution, and (2) to bring in competence from other social science disciplines in areas where significant expertise already exists at a higher level than might exist in the management and business field (e.g., particular expertise in discourse analysis may not reside in the business department, but might well reside in, for example, the sociology department). Some forms of consortia, for example doctoral training centers, serve as a way to ensure that knowledge can be accessed at the highest level, and not only to achieve critical mass for size.

⁴⁴ Copenhagen Business School, Different Routes to a PhD, updated March 7, 2013, www.cbs.dk/node/107877.

For some programs, a consortium between other schools in close geographic proximity can also help in sharing costs through joint delivery of certain module or training courses, such as teacher training for future faculty. The Montreal Joint Doctoral Program, for example, is a collaboration of four business schools in Canada (Concordia University, HEC Montréal, McGill University, Université du Québec à Montréal), which for the past 37 years have combined their educational efforts to deliver a PhD in business administration that is more expansive and flexible than any one of the participating schools could offer alone.

Another example is the Ecricomé PhD Universa program which awards students with a PhD in Management, and is delivered jointly by five business schools in France (BEM – KEDGE Business School, Euromed Management- KEDGE Business School, ICN Graduate Business School, Reims Management School, and Rouen Business School).⁴⁵ The program is the equivalent of three full-time years of study, but can be taken part-time. The student can either choose an advisor/supervisor from one of the five schools, or the Ecricomé PhD Universa Program can help the student identify the most suitable supervisor for the chosen research subject from affiliated faculty. After the thesis defense, the PhD degree is granted on behalf of the Ecricomé Doctorate Board. The PhD student is awarded with a diploma of the PhD degree signed by the dean of his/her host school, in the name of Ecricomé PhD/Universa and the five member schools, and by the supervisor.

Alas, history shows that consortia in higher education do not form and survive easily, largely due to the strong culture and traditions found in institutions of higher education. Further, the competition factor among institutions, especially at the doctoral and research level can make it difficult to collaborate effectively. Baus and Ramsbottom (1999) add, “Most faculty are rewarded for independent effort, and colleges have focused on what distinguishes them from one another rather than on shared characteristics and needs.”⁴⁶ Often this is one of the factors that leads to a consortia ending its activities. Today, the rationale for engaging in such consortia might be finally beginning to overcome the barriers.

But there are examples of success, particularly where government has given institutions a nudge and there is an incentive to cooperate. Such a case exists in the United Kingdom where universities can only access funded studentships from research councils if they are trained in an accredited Doctoral Training Centre (DTC). The established criteria for what constitutes a DTC (in terms of numbers of students registered, range and level of expertise across a range of disciplines, etc.) makes it very difficult for single institutions to meet the criteria. As a consequence, collaborations have emerged between research led institutions in order to secure research student funding from the research council. Today, 21 such DTCs are recognized for their doctoral training by the research council purposes.⁴⁷

The White Rose Social Science Doctoral Training Centre represents an example of this type of consortia, and is a collaboration across the social sciences at the Universities of Leeds, Sheffield, and York. The White Rose DTC prepares doctoral graduates for “future research and leadership challenges in a global and increasingly competitive market place” through access to a community of social researchers and training courses, as well as a range of other training opportunities, including formal and informal training courses, seminars, summer schools and workshops, and industrial placement opportunities.⁴⁸ Similarly, the University of Gothenburg, London Metropolitan University, and Strathclyde Business School have also formed a consortium, this one aimed at identifying the nature of the restructuring of European labor markets as a product of the ever changing economic and social environment. This multi-site doctoral

⁴⁵ Ecricomé PhD Universa (2013). www.ecrime.org/ecrime-phd-universa/presentation/home.html

⁴⁶ Frederick Baus and Claire A. Ramsbottom, “Starting and Sustaining a Consortium.” *New Directions for Higher Education*, no.106, Summer 1999: p. 4

⁴⁷ Economic and Social Research Council (2013), Information about Doctoral Training Centres webpage, www.esrc.ac.uk/funding-and-guidance/postgraduates/dtc/index.aspx, accessed on May 20, 2013.

⁴⁸ White Rose Social Science Doctoral Training Centre (2013) webpage, www.wrdtc.ac.uk/

program is known as the Changing Employment project and involves several university, social, and industry partners.⁴⁹ Such types of consortia and training centers present advantages to schools, especially of close proximity, to pool resources and strengths in order to deliver higher-quality training to doctoral students, and to present potential for sharing certain costs related to doctoral research training.

⁴⁹ University of Strathclyde Glasgow, News Releases, "Multi-million project will map the changing nature of employment," updated May 22, 2013, accessed June 07, 2013, www.strath.ac.uk/press/newsreleases/headline_717814_en.html.

EXPANDING ACCESS

Underpinning our discussions of purpose and capacity is a belief in the benefits of expanding global access to quality doctoral-level training. Even the most well-intended and well-supported doctoral programs will fall short of their potential if they do not effectively reach the populations they are intended to serve. Likewise, management education as a whole fails to achieve its potential if certain populations that may benefit from opportunities for doctoral education are underserved.

Especially given the broad range of purposes that doctoral education might support, we also hold the position that mere access to quality doctoral-level training often is insufficient. Rather, our focus must be on facilitating access to the best research training possible that is most aligned with an individual's intended career path, research interests, and personal circumstances. Herein lies the challenge and, perhaps, some of the greatest opportunities for innovation in doctoral education.

In framing a discussion about increasing access to doctoral education, we must first identify the necessary “accessible” components. Participants need access to expert training on research methods and the discipline of focus; access to intellectual dialogue and discourse among peers; and access to a rich set of reference materials, research tools, and data. They often benefit from access to a supportive system or framework that provides direction and accountability. They deserve access to a candid, critical review of their own research questions, methodology, and conclusions.

Furthermore, an increase in access to doctoral education is not necessarily the same as an increase in doctoral education attainment. We do not advocate for a greater number of doctoral program graduates as the goal or measure of success in this dimension, per se. While in many contexts increasing the number of graduates of high quality programs would be beneficial, new challenges are created when the supply of doctoral program graduates outnumbers the demand for individuals with that level of training. Additional challenges are found when there is a mismatch between the design and intended purpose of the programs those graduates completed and the roles they are needed to fulfill. Rather, we advocate for strategic actions to expand access in a way that helps accomplish the following three goals, globally:

1. Strengthen business school faculty models.
2. Strengthen capacity for knowledge development.
3. Strengthen the practice of business and management.

Participants need access to expert training on research methods and the discipline of focus; access to intellectual dialogue and discourse among peers; and access to a rich set of reference materials, research tools, and data.

Much of the need associated with pursuing these goals through enhanced access will be met by broadening the purposes served through doctoral education and strengthening schools' capacity to deliver doctoral education, as discussed earlier. But these are just two of many relevant and necessary solutions. Increasingly, globalization and technology are linking individuals and institutions in ways that create new

opportunities for enhancing access to quality doctoral education. In this section, we explore some of the strategies that could have an impact on the achievement of those three goals.

Capacity Building

The primary barrier to access is that of schools' limited capacity to deliver doctoral education, either because of financial constraints or (often related) faculty insufficiency. These obstacles often prevent schools that would like to deliver doctoral education from actually delivering it (or doing so successfully). A second barrier is that of sustainable financing; financial constraints also can limit schools' ability to support faculty members to pursue doctoral training abroad, as such programs are generally expensive for the sponsor school and require a multi-year commitment of funds.

An International Association of Universities report on a pilot project on the Changing Nature of Doctoral Studies in sub-Saharan Africa, for example, described the capacity challenge in that region as follows:

The study revealed a real need for increased financial support for institutional resources requested for successful doctoral programmes to be made available, and for both doctoral students and supervisory staff. The study revealed a continuous decline in funding for doctoral research in universities and in particular to maintain and expand research infrastructures. This problem impacts negatively on the participating universities ability to retain qualified staff.⁵⁰

In addition to funding and staff retention, many schools report a challenge related to the development of appropriate expertise. Where doctoral education and research are at a relatively emergent stage, schools are experiencing a natural lag in which older faculty members are less likely to have received a doctoral degree than younger faculty members. These faculty members may also be less likely to have been hired with expectations for ongoing research activity. The dearth of faculty members with business doctorates can be an obstacle to offering doctoral programs or, at the least, can mean that the development of new doctoral programs and of a research culture will be an incremental process over many years.

This lag can be augmented by additional challenges that often further complicate efforts to increase research and doctoral supervision capacity. The first occurs when faculty capable of supervising doctoral research have heavy teaching loads, or are heavily engaged in consulting as a means of supplementing low academic salaries, and thus have little time for research or research supervision.⁵¹ The second occurs when efforts to train future faculty through doctoral programs fail because graduates find greater incentives, often in the form of more lucrative salary opportunities, within industry positions. For example, the director of one well-regarded Latin American doctoral program notes that, "Overall, more people with doctorates in other areas such as economics, engineering or basic sciences, and most of those who study management are interested in establishing a business or practice in companies, rather than doing research and teaching in the area."⁵²

Even in regions with sufficient faculty expertise, the high cost of providing doctoral education often limits the number of students a school is willing to accept and support. This cost may be aggravated by student expectations of financial support. In these cases, capacity building must rely on strategic resource allocation decisions and pursuit of alternative funding models and, potentially, collaborative arrangements designed to increase scale.

⁵⁰ International Association of Universities, *Changing Nature of Doctoral Studies in sub-Saharan Africa: Challenges and Policy Development Opportunities at six universities in Sub-Saharan Africa*, 2010, www.iaiu-aiu.net/sites/all/files/IAUFinal%20Report_Docitoral%20Programmes.pdf, p. 45.

⁵¹ John D. Daniels, "La Enseñanza, la Investigación y el Servicio a la Comunidad," in CLADEA, *Revista Latinoamericana de Administracion*, 1999: p. 28–34.

⁵² Educameicas, PhD in Management in Latin America, May 16, 2011, accessed April 30, 2012, www.educameicas.com/articulos/reportajes/doctorados-en-administracion-en-america-latina

Some doctoral programs that are in early stages of development have succeeded in building capacity by first collaborating with another school or group of schools. Such an approach can help reduce the initial cost of delivery as well as provide adequate faculty capacity to deliver a doctoral program. Collaborative supervision agreements also can help with quality assurance, especially when they involve a less-experienced professor under the “mentorship” of another. In some countries, jointly administered doctoral programs have served a developmental role and have preceded independently offered doctoral programs. In Bosnia and Herzegovina, for example, the University of Sarajevo offered a joint program with the Universities of Ljubljana and Vienna for several years before ultimately offering a PhD independently. Similarly, three business schools in Thailand (at NIDA, Thammasat University, and Chulalongkorn University) ran a Joint Doctoral Program in Business Administration for several years. Aided through initial funding and academic assistance provided by the Canadian International Development Agency (CIDA), this partnership aimed “to optimize the use of available resources through effective networking and collaborations” in order “to accelerate formation of faculty and research resources at the doctoral level.”⁵³ Since disbanded, the collaborative initiative allowed the schools to pool resources to support a joint doctoral program until such time as the schools had acquired sufficient faculty resources to offer their own programs.

Student Mobility

Often, thoughts of student mobility in the context of doctoral education naturally turn immediately to international enrollments. This practice has been the dominant solution to challenges related to access over the past decades. Nearly half (45 percent) of doctoral students at North American business schools are citizens of another country; similarly, 42 percent of doctoral students in Oceania have another country of origin. European countries host an even greater percentage of doctoral students with other countries of origin, at 54 percent.⁵⁴

Such international mobility plays an important role in helping to foster global perspectives and global best practices, particularly when mobile students return to their home countries upon graduation or later in their careers. Yet such mobility often also fosters fears of brain drain, as internationally mobile students decide to stay in their destination countries for employment upon graduation. The AACSB Globalization of Business Education Task Force found, for example, that approximately 21 percent of graduates from U.S. AACSB-accredited business doctoral programs in the 2001–2007 timeframe (approximately 250 graduates per year) comprised a likely “brain gain” for the United States and a “brain drain” for various other countries.⁵⁵

In many cases, schools have programs that provide support—either directly via financial subsidies or indirectly via course off-loads—for individuals to pursue a doctoral degree prior to or after accepting a teaching position. Models vary, with some schools supporting individuals’ pursuit of doctoral degrees in other countries and some supporting doctoral education at other schools in the same country.⁵⁶ Schools in countries where barriers to international recruitment are significant factors and in places with an inadequate local supply of doctoral programs (either in terms of quantity or quality) tend to rely on their countries’ own citizens who have studied elsewhere and return for a faculty position.⁵⁷

⁵³ Thammasat University, Curriculum: Doctoral Program in Business Administration, amended 2004, www.reg3.tu.ac.th/registrar/_link/_8_knowledge/curric_ma_ma_eng/02phd-jdba.pdf.

⁵⁴ AACSB International, AACSB Business School Questionnaire 2011-2012, DataDirect, 2012.

⁵⁵ Ibid.

⁵⁶ In still other cases, schools support existing faculty to pursue doctorates at the same institution. While useful for capacity building, this approach does not involve student mobility.

⁵⁷ See Faculty Mobility section below for additional discussion of the barriers to international recruitment.

A study by the Oak Ridge Institute for Science and Education (ORISE) examined the stay rates of foreign doctoral students in the United States and uncovered differences in trends depending on the country of origin and fields of study of the doctoral students. The results of the most recent study done in 2009 showed that doctoral recipients of the social sciences had substantially lower stay rates (were less likely to stay in the United States after graduation) than those in other science and engineering disciplines. Further, students whose country of citizenship was China, India, Iran, Romania, Bulgaria, or Yugoslavia were most likely to stay in the United States after graduation, while those whose country of citizenship included Saudi Arabia, Thailand, Jordan, Brazil, South Africa, Chile, New Zealand, or Indonesia were the least likely to stay.⁵⁸ These differences may be at least partially due to the degree to which schools in each country support individuals to study elsewhere with a commitment to return.

Our interviews revealed that business schools in several countries support students for doctoral education in another country as a common practice. Malaysia's four "research universities," for example, all send lecturers abroad to pursue PhDs, in line with the national public service department policy that higher education institutions should sponsor PhD students. Other schools in the country are reportedly following suit. In Saudi Arabia as well, public universities receive funding that enables them to send faculty members abroad for doctoral degrees (though this is limited to Saudi nationals). Often, schools will hire individuals upon receipt of a bachelor's degree as a teaching assistant, then offer a scholarship for the individual to pursue a PhD. After a year of teaching in Saudi Arabia, the individual then travels abroad and, upon successful completion of doctoral studies in the agreed upon field/discipline, is guaranteed an associate professor position. Similarly, public universities in Turkey may pay stipends for doctoral students to study abroad on the condition that they return to a teaching position at the sponsoring university.

In other cases, business schools provide support for individuals to pursue doctoral degrees at other schools in the same country. This practice is reported to be common within Chinese Taipei, where faculty members without doctoral degrees may pursue them on a part-time basis while maintaining teaching positions at other institutions. In such instances, the school at which the individual teaches does not provide financial support for the pursuit of the doctorate, but will lower the expected teaching load.

An expanded view of student mobility would take into account other approaches wherein students move, while in the program, to the location of one component of the doctoral training experience. Doctoral students at ICFAI University in India, for example, after successfully completing their qualifying examination, spend a year abroad at another institution as part of the school's Visiting Scholar Program. During this time, the candidates are expected to "fine tune their thesis proposal" and gain "exposure to the teaching and research environment in an international context."⁵⁹

We also see such examples in the consortia programs mentioned earlier, wherein students may pursue research seminars offered by faculty at one of several participating institutions. Such consortia can offer students who are willing to be mobile (often among institutions that are relatively close to one another) a larger pool of course offerings, faculty expertise, disciplinary specialties and even linguistic opportunities than one school could offer on its own.

Access to expertise that might strengthen a doctoral student's investigation of a research question in a particular area also can be facilitated through student mobility via so-called "cotutelle agreements" or "sandwich degrees." In such arrangements, the student spends time in and is co-supervised by faculty from

⁵⁸ Oak Ridge Institute for Science and Education, Stay Rates of Foreign Doctorate Recipients from U.S. Universities, 2009, January 2012, www.orise.orau.gov/files/sep-stay-rates-foreign-doctorate-recipients-2009.pdf.

⁵⁹ ICFAI University, "The PhD Program" webpage, 2013, www.icfaiuiversity.in/PhD.html.

both institutions. Typically, cotutelle arrangements require each student to have a legally binding agreement between the university and the partner institution. Such agreements are typically drafted after the student has identified individuals at both schools willing to supervise the research, and after both supervisors have agreed on the details such as the scope of the project, expected outcomes, timeframe for completion, and financial contributions. The student then conducts research at both the home and foreign institution under the co-supervisors. Ultimately, the student submits one dissertation that must meet the respective rules and guidelines of the two institutions. One or both institutions ultimately will award the degree.

Faculty Mobility

Similarly, faculty mobility as related to doctoral education capacity and access takes two forms. The first involves the hiring, either on a permanent or temporary (visiting) basis, of faculty from other countries to enhance a school's ability to deliver doctoral-level training. The second involves faculty who remain affiliated with a foreign institution but travel to the location of a cohort of students in another country.

Barriers to international faculty recruitment can be significant, however. As noted by the AACSB Globalization Task Force, "the international markets for some faculty members are extremely competitive and all but exclude some countries from recruiting internationally. This experience is particularly true for faculty members with doctoral education credentials and extensive publication records in respected journals."⁶⁰ Other frequently cited barriers include national hiring regulations, language barriers, and an unfamiliar or unappealing geographic/social/political environment.

Another approach to enhancing access for students who might not otherwise have opportunities to pursue doctoral education involves shorter term faculty mobility (sometimes in conjunction with student mobility). As examples, we point to two different instances of doctoral programs aimed at enhancing the capabilities and credentials of existing business school faculty in regions without mature business doctoral education systems. The first is a faculty development PhD program in which a U.S. school provides doctoral education to working faculty in Latin American business schools. The second is a distance-delivery DBA offered by a European business school to working faculty in Asia, in which students are co-supervised by a faculty member from the European school and a local supervisor.

Both examples involve the offering of doctoral-level coursework in another country so that the participants can simultaneously maintain their teaching positions at their home institutions. Both also are delivered by schools based in a country where higher education and doctoral education are well developed, and where the portion of faculty with doctoral qualifications is very low. In each case, faculty from the degree-granting institution travel to the location of the partner, or "sponsoring" institution, where the students are located.

Access to doctoral education also can be enhanced through program models that allow greater flexibility in the pace of program completion and expected outcomes.

In the Latin American program, candidates take a full course load through at least the first two years of the program. In a structure that resembles many executive education models, faculty from the U.S. school travel to the Latin American location to offer the courses over weekends, totaling approximately three to four class days per month during the fall and spring semesters. During the summer semester, the students travel to the U.S. school for a required seven-week residency. Although the Asian program model does not require as much coursework, faculty from the European school similarly travel to the Asian partner institution to deliver each of two one-week "blocks" of courses in research methodology.

⁶⁰ AACSB International, *Globalization of Management Education: Changing International Structures, Adaptive Strategies, and the Impact on Institutions*, 2011, p. 85.

A reliance on faculty mobility can have other advantages in addition to enhancing access to doctoral education in the host region. The experience also can contribute to the personal and professional development of the faculty member, and also to the development of research on diverse global contexts. As noted in a recent book authored by Howard Thomas, Peter Lorange, and Jagdish Sheth:

Both faculty and students need to immerse themselves to gain a deep understanding of the unique issues of emerging markets. . . This might be even more vital for the faculty. We have witnessed the fastest transformation of university cultures with faculty-abroad programmes, even more so than student-abroad programmes. Our suggestion is that faculty at all ranks should be encouraged, if not mandated, to learn about emerging markets by teaching and doing research in and not on emerging markets. This is reverse learning. At one time, faculty from less developed economies came to advanced countries for a doctoral degree or post-doctoral research and to learn the way these countries taught and researched. Now, it must be faculty from advanced countries undertaking serious visits to study and research in emerging markets.⁶¹

Program Flexibility

Access to doctoral education also can be enhanced through program models that allow greater flexibility in the pace of program completion and expected outcomes. Such an approach is likely to have the greatest impact on individuals for whom access to programs is limited by personal or professional circumstances.

Full-time programs limit the pool of potential applicants to only those who are able and willing to delay careers or put them on hold. This practice often is much less appealing to individuals who are mid-career. The prevailing design of many emerging professionally oriented doctoral programs, particularly those that rely on participants “sponsored” by an employer, thus accommodates part-time participation. Flexibility in the pace of program completion also may make programs more accessible to individuals who seek to maintain teaching appointments while augmenting their research skills through a doctoral program. If well designed, a doctoral program could mix both full-time and part-time doctoral students without sacrificing rigor or lowering expectations for quality outcomes among either set of participants; such a combination could also help to enhance both groups’ level of academic and professional engagement.

Other dimensions of pace-related program flexibility that may increase access to doctoral education are policies to accommodate students’ short-term personal circumstances, such as the birth of a child, without jeopardizing their ability to complete the degree. Formal “childbirth accommodation policies” have been a relatively new phenomenon at U.S. graduate schools, having emerged only over the past decade. A recent Eurodoc survey of more than 7,500 PhD students representing 12 European countries found that “more than 50% of respondents in Sweden, Norway and Finland said they are strongly discouraged from taking parental leave, compared with 18% in Spain, 30% in Germany and 34% in France.” Even larger proportions of men and women in those countries reported pressure to delay having children.⁶²

With any kind of increased flexibility, however, comes a greater need to manage corresponding risks, such as the potential for students to become distracted, disconnected, or disengaged. Another potential risk is that the format does not enable and expect the high degree of immersion in the topic being studied necessary for ultimate success. Strong student support networks, a close student-supervisor relationship, and clearly defined expectations all can help mitigate these risks. We discuss these and other attributes of quality in the next section.

⁶¹ Howard Thomas, Peter Lorange, and Jagdish Sheth, *The Business School in the Twenty-First Century: Emergent Challenges and New Business Models* (Cambridge: Cambridge University Press, 2013).

⁶² Rachel Bowden, “Major survey of PhD students in Europe sheds light on working life,” *nature.com*, *naturejobs* (blog), October 4, 2011 (17:15 BST), *blogs.nature.com/naturejobs/2011/10/04/major-survey-of-phd-students-in-europe-sheds-light-on-working-life* (emphasis in original).

Distance Delivery

A final strategy that deserves attention is that of distance delivery in doctoral education. While some programs that rely on faculty who travel to another location to deliver doctoral seminars or meet with students are termed distance programs, we primarily refer here to the use of technology and online platforms to facilitate doctoral education that involves participants in different locations.

To date, few AACSB-accredited institutions have experimented with delivery of a doctoral program in an online or distance delivery format, with variable success. The task force believes that, given anticipated advances in technology-enabled learning platforms and pedagogies, high-quality doctoral programs of the future could include some components delivered online, and that online platforms can furthermore enhance opportunities for cooperation. Such a development has the potential to help with issues of access in regions of the world currently underserved by doctoral education.

Recall the example noted above of the DBA offered by a European business school to working faculty in Asia, in which students are co-supervised by a “principal supervisor” who is a faculty member from the European school and a “second supervisor” from the local institution. In this model, the principal supervisor is expected to maintain monthly contact with the student via email, telephone, or video conference. The second supervisor is expected to be copied on all correspondence with the principal supervisor, as one intended outcome of this arrangement is to develop the supervisory skills of the faculty member at the Asian institution (which historically has not offered its own doctoral degrees). At the same time, the second supervisor is expected to help with local context-specific knowledge about the discipline and related professional practice, assist in identifying and accessing local networks or data sources, and provide guidance on local career path expectations. In this format, effective, non-face-to-face communication among all parties is essential to the student’s success.

We can also conceive of a potential role for massive open online courses (MOOCs), whether in their current or future forms, or for similar but less massive online counterparts. The MITOpenCourseware website, which might be considered a predecessor to the current MOOC movement, includes materials for a Doctoral Seminar in Research Methods I, “designed to lay the foundations of good empirical research in the social sciences.”⁶³ Carnegie Mellon University’s Open Learning Initiative similarly includes a course on “Empirical Research Methods.”⁶⁴ Already, several MOOCs exist to provide instruction in topics such as statistics, data analysis, and related technical skills that might be useful for doctoral candidates.⁶⁵

Imagine, as well, an online seminar or discussion that is facilitated by a leading researcher and thought leader in a given field, and that connects doctoral students around the globe with an interest in his or her research. Platforms that facilitate virtual connections or “classrooms” might be particularly relevant for non-degree, continuing education opportunities, as discussed earlier in Box 3 Cultivating Research Skills Through Other Means. Business schools should expect more such experimentation and look forward to better understanding the potential role of such open courses in support of doctoral education and research training.

A completely online doctoral program delivered by AACSB-accredited institutions may also not be in the too-distant future. The Global Business School Network, comprising numerous well-regarded doctoral-granting business schools in collective pursuit of the goal to “[tackle] the developing world’s severe shortage

⁶³ Massachusetts Institute of Technology MITOpenCourseware, “Doctoral Seminar in Research Methods I” course webpage, 2013. ocw.mit.edu/courses/sloan-school-of-management/15-347-doctoral-seminar-in-research-methods-i-fall-2004/index.htm.

⁶⁴ Carnegie Mellon University Open Learning Initiative, “Empirical Research Methods” course webpage, 2013. oli.cmu.edu/courses/future/empirical-research-methods/.

⁶⁵ See, for example, the courses offered through MOOC provider Coursera (www.coursera.org).

of management talent by building local management education capacity,” recently announced plans to push the boundaries of business doctoral education in an online format. The aim: to develop a collaborative online PhD program directed at students in the developing countries. Plans for the program involve “full use of online technology, starting with the model provided by University of North Carolina’s Kenan-Flagler School of Business’ online MBA program” and a reliance on the collective resources of the network’s member schools.⁶⁶ Such an effort will provide an interesting case study both for institutional collaboration and for the role of online platforms and technologies in doctoral education.

⁶⁶ Guy Pfeffermann, “Taking the Lead in Meeting the Global Need for PhD Faculty,” Global Business School Network Blog, February 26, 2013, www.gbsnonline.org/blogpost/760188/160246/Taking-the-Lead-in-Meeting-the-Global-Need-for-PhD-Faculty?hhSearchTerms=doctoral+and+education&xtersms=.

ASSURING QUALITY

This report has advocated for a broader view of the missions and delivery models of doctoral education, in order to better serve a more varied set of societal needs and reach a larger set of individuals. In this evolving context of experimentation with different program models, how will quality effectively be measured? What frameworks can those with responsibility for doctoral programs look to in order to enhance quality through greater achievement of objectives related to society, business, and management education?

In the decades through which business doctoral education has emerged, external judgments of quality have been largely based on an assessment of the research capabilities of faculty who support the program, and often the research record of the single individual who serves as the supervisor. If the faculty involved in delivering seminars, supervising dissertations, and serving on dissertation committees were respected scholars in their fields, then an assumption could be made that the student was receiving proper training. Second, if the dissertation held up to a rigorous review process (and increasingly, the student demonstrated an ability to publish), the student was believed to have received the proper training for his or her future career.

However, we believe that defining quality in doctoral education in the manner described above is increasingly difficult, for the following three reasons:

1. As the breadth of program missions expands, indicators of quality that are applicable to some programs are not applicable to others. Quality will increasingly need to be defined in the context of the mission of the program and the outcomes it aims to achieve.
2. The network of schools and faculty involved in delivering doctoral education is expanding and increasingly bridges diverse countries and educational contexts. This expansion is necessary both for meeting the burgeoning demand for management education and knowledge around the world, and for ensuring that the intellectual underpinnings of the discipline benefit from cross-cultural perspectives. However, in this environment, relying on the delivering school's reputation as the sole indicator of quality is increasingly difficult.
3. Discussions of quality increasingly involve attention to impact. The AACSB 2013 Business Accreditation Standards, for example, call for business schools to produce "high-quality intellectual contributions that are consistent with its mission, expected outcomes, and strategies and that impact the theory, practice, and teaching of business and management."⁶⁷ The inclusion of this standard was guided by, and reinforces, the work of the AACSB Impact of Research Task Force. Business doctoral programs should aim to produce graduates who can contribute positively toward that goal, of which a narrow focus on publication record is just one part.

Our discussions with business school deans and doctoral program directors suggest a yearning for the type of information that might demonstrate long-term success of program graduates, such as placement rates into academic positions, career progression, publication records, citation rates, and time to achieve tenure.

⁶⁷ AACSB, Eligibility Procedures and Accreditation Standards for Business Accreditation, 2013, www.aacsb.edu/accreditation/business/standards/2013/2013-business-standards.pdf, p. 16.

Yet even in today's emerging era of more accessible data, we recognize that asking schools to track this information in a way that is comprehensive and comparable is impractical; furthermore, a true assessment of success along these dimensions would be available years, if not decades, too late to be useful in a program's ongoing continuous improvement.

This task force thus recommends an approach to assessing quality that builds on the professional judgment and mission-linked framework found within the AACSB Accreditation process. It advocates for an approach that provides deeper attention to program mission, content, design, and learning outcomes as a part of AACSB Accreditation reviews. Multiple aspects of the recently adopted AACSB 2013 Business Accreditation Standards support this approach. "In an environment of increasing accountability," states the preamble to those standards, "it is important that AACSB Accreditation focus on appropriate high-quality inputs (human, financial, physical, etc.) and the outcomes of those inputs within the context of the business school's mission and supporting strategies."⁶⁸

Similarly, this section outlines attributes of a quality doctoral program by drawing attention first to inputs, and second to the outcomes they support. We deliberately avoid any attempt to strictly define or prescribe what constitutes a quality doctoral program. Graduates of professionally oriented programs, for example, should emerge with a different set of strengths than those exhibited by graduates of academically oriented programs; indicators of quality should, therefore, also be different.

We recognize that this approach does little to help schools that are interested in the quality of a program through which a potential hire has passed. No framework or metric exists that can substitute for the due diligence of a school as it investigates the likelihood that a potential new hire will contribute to the educational, research, and outreach dimensions of its mission. Hiring schools will still want to review the individual's record of publication and other forms of intellectual contribution, interview the individual to learn more about his or her grasp of the requisite knowledge, and ensure the candidate is a good fit for the roles and responsibilities of the position being filled.

The approach in this section may actually lend more use to organizations that are supporting employees to pursue doctoral education, and that have an interest in evaluating the *potential* of a program to meet the organization's needs. Such organizations might be either companies sending employees to professionally oriented doctoral programs, or other business schools intent on enhancing the research credentials of existing faculty without doctorates.

Our main goal, however, is to provide an outline for schools—either those that currently offer business doctoral programs or those that are considering doing so—to use in the evaluation of their own programs (or potential programs). The pages that follow list and discuss attributes that we believe are important in four categories:

1. An appropriately qualified faculty, with appropriate supervisory experience, who are able to develop and direct student learning;
2. A critical mass of students, with appropriate goals, characteristics, and prior preparation, to ensure an appropriate learning environment and experience;
3. An appropriate program of training, with learning experiences designed to develop appropriate disciplinary knowledge and research skills, and to support other dimensions of career success;

⁶⁸ Ibid, p. 3.

4. Evidence of student success, which will include the creation of an original contribution to knowledge, as well as such things as satisfactory completion rates and students moving on to successful careers in academia or in industry.

Surely others exist, and we admit to only scratching the surface of what is actually needed with regard to each item. The importance of each item listed below will furthermore vary with the mission of the school or program. Nevertheless, we encourage schools to use the following lists and discussion as a basis for internal assessments of quality and efforts at continuous improvement, guided by program mission and professional judgment.

Attributes of Quality: Faculty

- Do faculty members involved with the program—delivering seminars and supervising or advising doctoral students—have a demonstrated record of capability to produce high-quality research?
- Does the research record of faculty members involved with the program align with the research focus of the program (i.e., basic-applied continuum discussed earlier)?
- Do faculty members involved with the program collectively represent breadth of knowledge as well as depth?
- Do faculty members involved with professionally oriented programs have a record of professional engagement? Some schools have reported greater challenge in finding faculty who are appropriately qualified to supervise a professional doctorate, because they are looking for individuals with demonstrated research success as well as professional experience.
- Do faculty members involved with the program cultivate and maintain strong professional networks with other researchers in their disciplines, including researchers at other schools?
- Are faculty members involved with the program overloaded with other responsibilities, or are they able to engage meaningfully with doctoral students in addition to other responsibilities?
- In the aggregate, do faculty members involved with the program represent a range of educational training, backgrounds, and perspectives? This question might include faculty members at other institutions with which the student meaningfully engages during the course of the program.

Attributes of Quality: Students

- Does the program consistently admit high-quality individuals, with the ability to self-lead and engage intellectually with the topic?
- Do students admitted into the program have appropriate prior academic preparation? The level that is appropriate may vary according to the program structure (e.g., for some programs, a master's degree is necessary, for others it is not).
- Do students admitted into the program have appropriate prior professional experience? Prior and ongoing business experience is often considered a substitute for the intense immersion of an academically oriented doctoral program. Students in professional doctorate programs should be expected to be admitted, at least partially, on the basis of their professional experience (which should be substantive).

- Do students (and potential students) have a clear understanding of program goals, requirements, and intended outcomes?
- Do students cultivate and maintain strong professional networks with other researchers in their disciplines, including at other schools?

Attributes of Quality: Program Design and Management

- Has the school defined a clear program mission and validated the demand for a program with that mission? One school we spoke with, for example, recounted that it had originally positioned its doctoral program as an academically oriented PhD program, but decided to change it to a professionally oriented DBA program after discovering that the majority of program applicants were individuals with substantial professional experience. They were applying to the PhD program because it was the only locally available program, even though its original manifestation was not a strong fit for their needs.
- Does the program enable, and expect, a high degree of rigor and academic integrity?
- Does the school have a funding strategy to support the program for the expected length of study of all students?
- Does the school deploy a staffing model that provides sufficient time and quality of interaction between supervisor(s) and student?
- Beyond the student-supervisor relationship, does the school foster “a collegiate environment in which students, faculty, administrators, professional staff, and practitioners interact and collaborate in support of learning, scholarship, and community engagement”?⁶⁹ Such interactions are critical to fostering exposure to diverse ideas as well as an appreciation for the connection between academic research and other aspects of a business school’s mission, such as teaching and outreach.
- Does the school facilitate student access to reference materials, research tools, and databases that together with other resources foster creativity and academic innovation?
- Does the school facilitate student access to companies willing to share data for research purposes?
- Does the school demonstrate the value of, and provide access to, research connections and collaboration via its network of institutional/educational partners?
- Does the school provide appropriate career support to doctoral students in accordance with the program objectives? Such support might be focused less on job placement (frequently, the focus of schools’ career services offices) and more on enhancing awareness of potential applications of management research across a range of career paths, developing an understanding of one’s personal strengths, interests, and long-term career goals, and assisting students to understand how to promote and position themselves for desired opportunities.
- Does the program design enable, and expect, opportunities for a high degree of immersion in the topic being studied? A high degree of immersion aligns greatly with, but does not necessarily

⁶⁹ AACSB International, Eligibility Procedures and Accreditation Standards for Business Accreditation, 2013, www.aacsb.edu/accreditation/business/standards/2013/2013-business-standards.pdf, p. 5.

require, full-time participation in a doctoral program. Reasonable exceptions include individuals who are working or teaching full-time and for whom those activities supplement the focus of the doctoral program; immersion through this format depends heavily on individuals' employment circumstances, but might instead be thought of in terms of an appropriate balance of academic and professional engagement.

- Does the program enable, and expect, opportunities for students to develop a basic knowledge of teaching, pedagogy, and the learning process, especially in programs intended for those pursuing academic careers? This might include opportunities to observe effective teaching and to "apprentice," as well as opportunities for direct support or training.
- Does the program introduce participants to the essential skills of writing, including appropriate organization of an idea and presentation of evidence, as well as appropriate use of references and citations? Likewise, does the program introduce participants to best practices for preparing, publishing, and disseminating research findings? Are these skills cultivated and reinforced throughout the student's studies?
- Does the program offer and encourage opportunities for students to consider the impact of management research on various stakeholder groups? Does the program offer guidance for communicating about research in a way that maximizes impact on those who might benefit? Students should learn how to tailor the communication and presentation of their research to the needs of various audiences (including those unfamiliar with technical language or theoretical concepts, as appropriate) while preserving the main themes of the research methodology and findings.

Across the countries we have focused on, the actual program design and approach to ensuring appropriate knowledge and research skill development vary substantially. Business doctoral education models generally require anywhere between three and eight years for completion, with the actual length determined both by the presence or absence of required components and by the pace at which individuals achieve various milestones.

Especially given the points raised in earlier discussions of purpose and access, we believe that this variety in the program design is appropriate and necessary, so long as the design ensures achievement of high quality learning objectives. Furthermore, we commend the Blue Ribbon Committee that developed the AACSB 2013 Business Accreditation Standards for distinguishing, in the basis for judgment for Standard 9 (curriculum content), what might be expected of programs emphasizing advanced foundational discipline-based research versus programs emphasizing rigorous research for application to practice (see Box 4). The basis for judgment also makes reference to appropriate career preparation.

...variety in the program design is appropriate and necessary, so long as the design ensures achievement of high quality learning objectives.

The implications of different program models on how these objectives are accomplished warrant additional attention to three key dimensions: the role of taught courses or seminars in developing disciplinary knowledge and research skills, the cultivation of a strong student-supervisor relationship, and preparation for teaching or academic careers.

Box 4. AACSB Accreditation Expectations for Curriculum Content

An excerpt from Standard 9 concerning the basis for judgment of “curriculum content [that] is appropriate to general expectations for the degree program type and learning goals,” pertaining to doctoral degree programs, appears below:⁷⁰

Doctorate Degree Programs

In addition to the general skill and knowledge areas and additional learning experiences for specialized master’s degrees, doctoral degree programs normally would include the following:

- Advanced research skills for the areas of specialization leading to an original substantive research project
- Understanding of managerial and organizational contexts for areas of specialization
- Preparation for teaching responsibilities in higher education (for those students who expect to enter teaching careers)

Doctoral degrees also normally would include learning experiences appropriate to the type of research emphasized, as follows:

Programs that emphasize advanced foundational discipline-based research in an area of specialization:

- Deep knowledge of scholarly literature in areas of specialization

Programs that emphasize rigorous research for application to practice in a specified discipline:

- Understanding the scholarly literature across a range of business and management disciplines
- Preparation for careers applying research to practice

The Role of Taught Courses or Seminars in Developing Disciplinary Knowledge and Research Skills

One of the most obvious points of differences across doctoral program designs globally is the degree to which courses or seminars are a required component of the doctoral learning experience, and the implications of that aspect of program design on how the appropriate “deep knowledge” or “understanding” of scholarly literature, as well as advanced research skills, are acquired. In many countries, doctoral programs commonly admit students upon completion of an undergraduate, but not necessarily a master’s, degree. In such cases, coursework over the first few years serves a critical role related to subject matter expertise. Some discipline-focused courses may even include master’s level students. In other program models, a master’s degree is a prerequisite for beginning doctoral-level training. Models that expect admitted students to have already completed a master’s degree in a related field tend not to require many, if any, discipline-focused courses. In this model, advanced content is presumed to be available in master’s courses that the students will have already completed, and further knowledge is acquired through the research stage. Some programs test candidate’s proficiency in a given area as a basis for admission into the program, and a basis for determining the number and level of required taught modules during the course of study.

⁷⁰ AACSB International, Eligibility Procedures and Accreditation Standards for Business Accreditation, 2013, www.aacsb.edu/accreditation/business/standards/2013/2013-business-standards.pdf, p. 31-32.

Required courses or seminars also frequently focus on developing the research methods that the students will come to rely on to successfully complete a dissertation. In other cases, these skills are “taught” through experience, as a research assistant to an existing faculty member or through smaller-scale research projects that precede the full dissertation. Notably, in countries such as the United Kingdom, which historically has not required a “course” component to doctoral training, some movement is transpiring toward a more structured process intended to better prepare students to formulate a well-researched proposal for their dissertation.

For many “professional doctorate” models, advanced knowledge of the subject is presumed to have been acquired through practical experience and/or through master’s level education. In fact, experience is often an admissions requirement, with many such programs accepting only individuals who have many years of experience and who hold senior-level positions in their companies. Thus, in countries where coursework is a substantial component of the “academic doctorate” model, “professional doctorate” models tend to be comparatively shorter in length and to require fewer courses (more focused on research methods than on the specialization) prior to the research/dissertation stage.

Courses and seminars also play a vital role as a forum in which research students can interact with and learn from their peers through the free exchange of ideas and through academic discourse. Such learning is based, however, on a presumption that there exists a critical mass of students at a university, and enrolled in a particular course, to maximize the value of this environment. Especially at those schools where the number of enrolled students is limited, collaborative agreements with other schools for the provision of courses or seminars (as discussed earlier in the sections on capacity and access) can create opportunities for this sharing that might not otherwise exist. Such sharing also does not necessarily need to be limited to individuals with a common research interest; depending on the particular knowledge or skill of focus, benefits are also likely to accrue from the opportunity to engage with individuals from other disciplines and gain exposure to alternative applications of the concepts being covered.

Many programs will expect demonstration of disciplinary knowledge and/or research abilities early within the program, as a means of undertaking assessments of critical knowledge and skills to determine which students are eligible to progress to a later program phase. In some models, the sequence of courses is followed by qualifying exams that are, generally, aimed at ensuring the individual has acquired an advanced knowledge of the discipline. Many program models also involve some other selection or advancement process that is aimed to assess the candidate’s ability to formulate or pose a research question or scholarly project, or ability to critically evaluate work and research conducted by peers.

Across all models, a significant portion of the learning occurs in a self-directed manner, under the oversight of an appropriately qualified supervisor or supervisors. The supervisor plays a critical role in developing and directing student learning beyond the bounds of formal taught courses or seminars, and we therefore consider a strong student-supervisor relationship to be an important distinction of a quality doctoral program.

Cultivating an Effective Student-Supervisor Relationship

Our conversations with business doctoral program directors have reinforced existing literature on the connection between effective supervision of doctoral students and students’ learning, satisfaction, and future career success. Appropriately pairing the supervisor and student based on research interests is an important first step toward a successful relationship. A second is a commitment by both parties to effective, consistent communication throughout the relationship, and a school environment that facilitates and encourages a high level of open communication.

Matching the appropriate supervisor to a suitable student is vital for the successful completion of the doctoral degree.⁷¹ Some programs require students to identify their research interests and aspirations during the application process, so that an appropriate supervisor (or supervisors) can be matched with the student as part of the application process. At other programs, students spend the first couple of years narrowing and focusing their research topic and are then matched with a supervisor. An appropriate pairing based on research interests, expertise, and even personality can be essential given the role of the supervisor in assisting the student to articulate a research question, and eventually guiding him/her through the research and dissertation process. In most programs, the supervisor also sits on the dissertation defense committee.

As has been noted earlier in this report, many doctoral programs allow or even require students to have dual supervision, where one individual serves as the primary supervisor and another serves as a secondary supervisor. The secondary supervisor may represent a different discipline and be sought to provide an additional useful perspective. In other cases, the secondary supervisor may be less experienced than the primary supervisor with regard to research oversight and thus serves in the secondary role to develop his or her own experience and research supervision portfolio. Regardless, students may benefit from having more than one “mentor” during the program and from the opportunity to be guided by multiple perspectives. In such cases, communication between the two supervisors is just as important as communication between each supervisor and the student.

As noted by Gill and Burnard (2008), the relationship between the student and supervisor is often “complex and multifaceted, with each person having particular expectations of the other.”⁷² They conclude, as does Watts (2008), that a positive student-supervisor relationship is one in which participants learn from one another through open and honest debate, are empathetic to one another’s needs, and are sensitive to different work styles.⁷³ Participants also must be accessible in order for communication to be consistent and meaningful. In cases where the student and supervisor are not located at the same institution, a greater effort must often be made to ensure regular communication through email, social media, phone, videoconference, and even (as appropriate) travel to facilitate face-to-face meetings.

Although the supervisor or supervisors is not ultimately responsible for the success of the student either in completing the program or in his/her professional success, it has been observed that only “highly unusual graduate students successfully completed their research degree programs” in cases of a poor student-supervisor relationship.⁷⁴ Thus, doctoral programs would be well served by efforts to encourage student feedback and address any potential issues as they arise. Some schools even require documentation by the student and supervisor providing feedback on the relationship.⁷⁵ Such information can present opportunities for improving the quality of supervision at a given program and plays a role in developing the well being of the doctoral student as well as the success of his or her research, and ultimately his or her career progression.

The key implication for the design and management of a doctoral program is to have enough faculty members, personally active as researchers and with appropriate technical expertise, with time for their students. Faculty members must be available to the students, willing to support them, and have the skills

⁷¹ Sarah Li and Clive Seale, “Just you, me and the PhD,” Times Higher Education Supplement. 1/12/2007, Issue 1776.

⁷² Paul Gill and Philip Burnard, “The student-supervisor relationship in the PhD/Doctoral process,” British Journal of Nursing. 7, no.10, (May 2008), p. 668

⁷³ Jacqueline H. Watts, “Challenges of supervising part-time PhD students: towards student-centered practice,” Teaching in Higher Education, Vol. 13 Issue 3, (June 2008), p. 369-373.

⁷⁴ Norhasni Zainal Abiddin, “The Role of an Effective Supervisor: Case Studies at the University of Manchester, United Kingdom,” European Journal of Scientific Research. Mar2007, Vol. 16 Issue 3, p. 380-394.

⁷⁵ Bridget Juniper, Elaine Walsh, Alan Richardson, and Bernard Morley, “A new approach to evaluating the well-being of PhD research students,” Assessment & Evaluation in Higher Education, Aug2012, Vol. 37 Issue 5, p. 563-576, and Tim Mainhard, Roeland Rijst, Jan Tartwijk, and Theo Wubbels, “A model for the supervisor–doctoral student relationship,” Higher Education, Sep2009, Vol. 58 Issue 3, p. 359-373.

and resources they need to do so. As such, we advise schools to consider their role in providing additional support and training to potential supervisors to assist them in cultivating an effective student-supervisor relationship.

Preparation for Teaching Responsibilities and Academic Careers

In addition to the development of disciplinary knowledge and research skills, preparation for teaching responsibilities (for students who expect to enter teaching careers) is also noted within the basis for judgment for the AACSB accreditation standard related to curriculum content as a normally expected component of doctoral education. As noted earlier within this report, this task force believes that business schools should strengthen the attention given to preparing doctoral students for the variety of roles they will play as future faculty members.

Although a number of schools do provide centers for teaching and learning, formal development of related skills among doctoral students often is neither required nor comprehensive.

The volume of discussion about the tension between research and teaching faced by faculty members seems to be increasing, as does concern about whether or not faculty have the appropriate support and training to be effective in the classroom. This tension also appears to be present within doctoral education, during which teaching is generally neither rewarded nor esteemed nearly as much as research. Anecdotal evidence gleaned from interviews with doctoral program directors suggests that the job market for doctoral graduates values research ability much more than teaching ability. One such director provided the example of a doctoral student who had been granted an award for excellence in teaching and who remarked that he believed it unlikely that the recognition would give him any advantage in the job market. Anderson et al. (2001) reflect a common, but also commonly debated, view when they encourage the academic university culture to “more broadly and effectively recognize, reward, and support the efforts of researchers who are also excellent and dedicated teachers,”⁷⁶ and integrate research with teaching.

We believe that such a shift requires, or could at least benefit from, a greater emphasis on teaching skills for doctoral students. Although a number of schools do provide centers for teaching and learning, formal development of related skills among doctoral students often is neither required nor comprehensive. Very often a doctoral student teaching a course is observed by a faculty member and receives constructive feedback, or learns through observation of experienced instructors. Although helpful in developing future teachers, this method is often not sufficient instruction for learning to teach university students effectively.⁷⁷ Some may argue that having students assist established faculty members in grading or tutoring should qualify as adequate preparation for teaching. However, as noted in the excerpt from the AACSB standard listed above, university departments that do not require or use graduate students for instruction still have the responsibility to provide students with a solid preparation for teaching, as it is likely to be a major part of their future careers.⁷⁸

Brightman (2009) provides a few reasons as to why most doctoral programs do not offer significant training in teaching: (1) a core belief may prevail that general ideas about teaching do not easily translate into the discipline-specific terms and concepts that a faculty member teaching a particular course can readily act on; (2) some faculty members fail to recognize the need for improvement in their own teaching, subsequently believing that doctoral students should solely focus on research methods and discipline knowledge; and (3)

⁷⁶ W. A. Anderson, U. Banerjee, C. L. Drennan, S. C. R. Elgin, I. R. Epstein, J. Handelsman, G. F. Hatfull, R. Losick, D. K. O'Dowd, B. M. Olivera, S. A. Strobel, G. C. Walker, and I. M. Warner, “Changing the Culture of Science Education at research Universities,” *Science Education* 331 (2011):p. 152.

⁷⁷ Harvey Brightman, “The Need for Teaching Doctoral Students How to Teach,” *International Journal of Doctoral Studies* 4 (2009): p. 6.

⁷⁸ William B. Walsted and William E. Becker, “The Instructional Use and Teaching Preparation of Graduate Students in U.S. Ph.D.-Granting Economics Departments,” *AEA Papers and Proceedings* 93, no. 2 (2003): p. 454.

as mentioned earlier, the typical academic reward system places more value on research and scholarship, leading to graduate schools overlooking or under-emphasizing teaching as part of their doctoral programs.⁷⁹

Still, a number of universities, business doctoral programs, and organizations dedicated to management education around the world are seeking to address the issue of better preparing doctoral students to be future teachers. Teaching centers are becoming more available across campuses, staffed by educational developers to aid in offering support for increasing knowledge about teaching, learning, assessment, curriculum and course design, educational technologies, and so forth.⁸⁰ For example, business schools such as the University of California, Berkley Haas School of Business, or the University of Texas, McCombs School of Business, have a Center for Teaching Excellence, which helps foster a teaching culture and provides students with the resources to enhance their quality of teaching. Across the globe, the Indian Institute of Management Kozhikode also has seriously addressed excellence in teaching through its Faculty Development Programme, which not only focuses on enhancing functional area expertise, but also aims to improve one's classroom delivery both as a teacher and a trainer.⁸¹ Also, the Wisconsin School of Business "Teaching Resources" website provides teachers with numerous options and resources on skill development, making available calendars with teaching workshops, seminars, programs, and centers for teaching mentorship.⁸²

These examples are typically resources available to both existing faculty as well as graduate students and raise the question of whether focused attention on enhancing teaching effectiveness should be left to the hiring institution or part of the preparation given students pursuing doctoral degrees, or to what extent. Certainly, the unique educational approaches of different schools (e.g., case, online, and experiential learning, among others) suggest a need for faculty members to receive targeted on-the-job training that corresponds to the chosen mode of delivery, as does ongoing evolution in pedagogical techniques. Even if the basic principles of research are not changing, the channels and processes for communicating effectively are changing, and should be addressed as part of the initial and ongoing career "training."

Some fundamental skills could be, or should be, emphasized to a greater degree within academically oriented doctoral programs. At Bentley University, for example, the incorporation of formal expectations for teacher training among doctoral students is aimed at addressing a gap they identified in both U.S. and European doctoral education. There, PhD candidates in their first two years participate in a teaching workshop that covers pedagogical and classroom management issues. In subsequent years, they are assigned to teach a single course each semester and receive feedback aimed at facilitating continuous improvement.⁸³

Questions have also been raised as to whether training to be an effective teacher is all that is required for would-be faculty members. University professors are expected to generate new knowledge and educate students, yet the nature of the environment in which they fulfill these roles is evolving substantially. As noted by Janet Metcalfe, Chair and Head of Vitae, academics and faculty members now take on a number of demands including research, teaching, administration, knowledge transfer, personnel management, fund raising, writing, promoting science, and developing policy, among other things, and are expected to perform well in all these duties.⁸⁴ This observation is reflected in Vitae's career development mission, which speaks to the importance of providing doctoral researchers with developmental opportunities aimed at cultivating a well-rounded skill set that they can call on throughout their academic careers. Similarly, Burke

⁷⁹ Harvey J. Brightman, "The Need for Teaching Doctoral Students How to Teach," *International Journal of Doctoral Studies*, Volume 4, 2009: p. 6.

⁸⁰ Julia Christensen Hughes, "Challenging the Research Teaching Divide," *Education Canada* 48, no.1 (2008): p. 53.

⁸¹ Indian Institute of Management Kozhikode, Faculty Development Programme, accessed March 2, 2011, www.iimk.ac.in/fdp/fdp.php.

⁸² Wisconsin School of Business, Teaching Resources, accessed March 3, 2011, www.bus.wisc.edu/phd/ProgramOverview/Teaching-Resources.aspx.

⁸³ Sue Newell, "A Matter of Degrees: A Doctoral Programme for the 21st Century," *Global focus: the EFMD Business Magazine*, 4, no.3, (2010) p. 52-55

and Rau (2010) argue that doctoral students should receive more training on the organizational structure of universities, the university system, and funding, “to increase their understanding of the sources of funding for education, effects of these factors on institutional goals and, in particular, the emphasis on research that creates research-teaching tension, which can increase role conflict as faculty members try to allocate their time between these activities.”⁸⁵

Attributes of Quality: Evidence of Student Success and Satisfaction

As noted earlier in this report, the creation of an original, substantive research contribution, as judged by a group of peers, is the defining characteristic that distinguishes a doctoral program from other types of education. The dissertation (or equivalent) often is considered the “measure” of whether many expected knowledge and skill areas (excluding teaching preparation) have been achieved, and thus the dissertation defense serves a critical role in the determination of student success in the program. All research doctoral degree processes that we reviewed include a research/dissertation stage that varies in length from one to several years.

A need exists, however, to align dissertation and research expectations with the program design and objectives. In comparison to the more commonly delivered doctoral program with a basic research focus, what is expected of a dissertation in a program with an applied or translational research focus is less understood. Often, because individuals pursuing professionally oriented doctorates have significant work experience and continue to practice in their field while in the program, their dissertations generally focus on a question that is relevant to their professional practice, rather than “a perceived gap in the literature” in a given subject discipline as is typically the focus of the more academically oriented models. The Executive DBA Council (EDBAC) is terming this “engaged management scholarship” and aims to promote the value of and raise the visibility of this type of scholarship globally through an annual conference.

Because of the applied nature of the research, the research outcomes from professional doctorates can take a variety of different forms. Bourner et al. (2001) identify four that were the most common in their review of existing models: a smaller-scale research project than that required of a Doctor of Philosophy degree, but intended to be evaluated by the same criteria; a requirement to complete more than one research project; a portfolio approach that allows for the submission of a series of documents rather than a single dissertation; and published outcomes.⁸⁶ Sarros et al. (2005) suggest “it is likely that the emphasis in the DBA [research report] will be more focused on outcomes than methodology. While the ability to conduct doctoral research is necessary, a greater emphasis should be tied to the implications for managers and professional practice.”⁸⁷

Academically oriented doctoral programs also appear to be evolving, with an expectation that students not only will have submitted and defended a dissertation, but that they also will have published one or more articles in a peer-reviewed journal, or have work otherwise accepted by a scholarly community (e.g., a peer-reviewed conference presentation). Some doctoral programs will accept a series of papers, with an accompanying integrative paper, as an appropriate dissertation form. Such an approach may be considered very practical by those individuals for whom establishment of a publication record is a primary goal.

However, we caution against an overemphasis on publication record as the sole indicator of quality; such an approach might suggest that the objective of the program is to produce graduates who have the ability to

⁸⁴ Janet Metcalfe, “The Changing Nature of Doctoral Programmes,” UK GRAD Programme, CRAC (Careers Research and Advisory Centre) (Portland: Portland Press Ltd, 2006), p. 81.

⁸⁵ Lisa A. Burke, and Barbara Rau, “The Research-Teaching Gap in Management,” Academy of Management Learning & Education 9, no.1 (2010): p. 140.

⁸⁶ T. Bourner, R. Bowden, and S. Laing, “Professional Doctorates in England,” Studies in Higher Education 26, no. 1 (2001): p. 65–83.

⁸⁷ James C. Sarros, Robert J. Willis, Robyn Fisher, and Adrian Storen, “DBA Examination Procedures and Protocols,” Journal of Higher Education Policy and Management 27, no. 2 (July 2005): p. 153–154.

publish, rather than to produce graduates who have the ability to conduct rigorous research (see also Box 5).

Box 5. PhD by Publication

The PhD by Publication exists by statute as an option in some universities in the United Kingdom, as well as in other parts of the world (although it is becoming less common), and allows individuals to be awarded a doctorate solely on their publishing activity. This route recognizes a body of research that, over a time span, assembles new insights into a phenomenon, via peer-reviewed publication rather than a thesis conceived of and executed in the “traditional” manner (i.e., a doctoral program during which students participate in coursework, seminars, and/or lectures, as well as close work with a thesis supervisor who guides the student’s research development, which ultimately results in the student completing and defending his/her thesis).

This route is often used in cases where researchers have developed the necessary skills to achieve high quality publication that meets the rigorous standards of the blind reviewing process. Typically, “students” of this route are academic staff at the institution who have held an appointment for a certain amount of time and who may already be research-active or have already published work. The final output typically includes a document which includes the rationale for submitting the thesis in an alternative format and an explanation of original contribution to knowledge, including its progression and development, through the individual papers and their collective whole. Criteria and requirements regarding admission, and progression for individuals pursuing a PhD through this route may vary on the granting institution, as well as discipline.

At many universities that offer the PhD by Publication route, the individual is assigned a supervisor(s) to provide guidance through the submission and examination process, as well as examiners to judge the quality of the work produced. Some believe that this route to a PhD limits the focus on and integration of adequate training, supervision, and full knowledge of the research topic in a doctoral program. Other issues or concerns that arise are the independence of the work, particularly with joint authorship, as well as the extent to which students receive the kind of eclectic training experience regarded by many as an important feature of the doctoral degree.

This task force has opted not to focus extensively on the PhD by Publication model, as we view it less as a form of doctoral education and more as a process for certifying that an individual is capable of producing certain outputs (albeit, those that doctoral education generally aims to support). Such a model raises questions concerning the role of business schools in the certification of acquired knowledge or skills, regardless of the degree to which the school itself was involved in their development. This discussion is beyond the scope of this report but may become increasingly relevant with future expansion of open learning platforms.

An opportunity exists for better frameworks to assist schools, and the management education industry, to more effectively monitor and understand the career paths of doctoral program graduates.

Given the essential role of the dissertation within a doctoral program, we believe that more insights are needed into the evolution of dissertation forms and evolving expectations for dissertation quality in the context of different program missions. Other fields, for example, are beginning to see even more varied alternatives to the traditional dissertation format, including dissertations built on digital platforms.⁸⁸

Some of the schools responding to our survey also noted a reliance on other indicators of success as students progress through the program. Co-authorships with faculty, invitations to present findings at conferences, acquisition of research funding support (e.g., grants and fellowships), and quality of teaching (as determined through observation and student surveys) are examples of some of the indicators that schools cited they track. A small number noted holding annual performance reviews for each doctoral student as a means of not only assessing progress, but also identifying any potential risk factors and/or opportunities to enhance program success.

Many would argue that even beyond the successful defense of a dissertation and other in-program outcomes, the ultimate measures of a program's success include its graduates' job placement and subsequent publication record. In fact, among the doctoral program directors that we surveyed, the primary metrics cited for assessing program success fell into these three general categories. However, these metrics each have limitations, not least their applicability to a range of program missions, including those oriented to individuals that are simultaneously employed or seeking industry careers. Assessments of (academic) job placement success often presume that the prestige of the hiring institution is the primary motivator for a graduate's ultimate choice of positions among numerous offers. Yet graduates' decisions of which offers to pursue and accept may be influenced by a variety of factors including geography, lifestyle, and a personal view (that may or may not be shared by the supervisor and other program participants) of where and how they can best "make a difference."

These limitations suggest a need for programs to think carefully about the appropriate metrics of success given the program mission, research focus, and intended outcomes. Furthermore, they suggest a need for greater emphasis on metrics related to career success and satisfaction although, as noted earlier, such metrics are not only difficult to acquire and track, they also require a long timeframe to result in any meaningful conclusions about the role of the program as a contributor to these outcomes. An opportunity exists for better frameworks to assist schools, and the management education industry, to more effectively monitor and understand the career paths of doctoral program graduates.

Box 6. Quality Across Five Program Examples

The Appendix contains profiles of five very different doctoral program models that schools might use as a basis for discussing differences in ways that quality might be assessed. The collection is presented in this report, in part, to demonstrate the diversity of models that we encountered during our interviews and reviews of programs around the world. Yet they also serve as useful starting points for considering key differences in the attributes of quality among programs with different intended purposes, faculty and institutional resources, student audiences, and overall program design. We invite readers to use these profiles as a basis for considering what constitutes quality among a range of program models.

⁸⁸ See Stacey Patton, "The Dissertation Can No Longer Be Defended," Chronicle of Higher Education, February 15, 2013, A20–A23.

CULTIVATING AN ECOSYSTEM

All university degree programs are connected to a wide range of complementary institutions and organizations. They rely on assessments to evaluate potential admissions, intermediaries to provide information to prospective students, institutions to provide financial support for students and education, services to help students develop and manage careers, support for extra curricula activities, and so forth. Similarly, like executives in any organization, university leaders learn from colleagues and collaborate to understand trends and share best practices for improvement. Most higher education professionals recognize the importance of these supporting structures to the success of degree programs and their graduates.

Business doctoral degree programs are no exception. Students and schools rely on test (e.g., GMAT, GRE, etc.) results as indicators of potential success, information about the characteristics and benefits of programs (e.g., program guidebooks, school websites), and career services to prepare graduates for employment (often provided by discipline-based organizations). Business school deans, doctoral program directors, and professors participate in networks to share ideas across schools, often through organizations such as DocNet, European Doctoral Programmes Association in Management and Business Administration (EDAMBA), and AACSB International.

While so far the focus of this report has been on the purposes and characteristics of business doctoral degree programs and the environment in which they operate, this section is concerned with the larger system that surrounds and supports business doctoral education. The general finding of the task force is that the infrastructure and services that support business doctoral education are limited and fragmented relative to other degree program types. Many supporting structures have emerged and evolved over the years to serve business doctoral education, which has remained largely unchanged for decades. Unfortunately, they are not fully developed and connected in a way that maximizes value. More importantly, the task force is concerned that the services will not be adequate as business education continues to globalize and the diversity of program types expands.

...the infrastructure and services that support business doctoral education are limited and fragmented relative to other degree program types.

Moving forward, schools must continuously examine the extent to which supporting systems emerge and align with the needs of various stakeholders. Concerted efforts should be put forth to cultivate a more robust ecosystem, with business doctoral education at the center, to better meet the needs of an increasingly diverse set of stakeholders involved with business doctoral education. The task force is particularly concerned with the following broad areas: data and information for students and employers; networks to support continuous improvement, innovation, and collaboration; and programs to facilitate career success.

Data and Information for Students and Employers

The task force believes that individuals with high potential for interest and success do not have access to much quality information about the benefits of business doctoral education. When considering doctoral programs, prospective students often overestimate the financial commitment and sacrifice and underestimate the financial returns of an academic career in business. They may undervalue the benefits

of the intellectual stimulation that comes from being surrounded by top thinkers and experts in a specific field, and the satisfaction gained through directly influencing others' lives in a meaningful and significant way. Additionally, they often have a limited view of the range of potential career paths that could result. Now as the purposes of business doctoral degree programs are expanding, information about the potential career benefits is likely to be even less clear.

Similarly, the profile of the ideal business doctoral student has never been fully and consistently understood, even under the historically dominant model. For example, expectations about management experience and prior academic preparation varies, especially globally. As the diversity of business doctoral programs increases, the breadth of academic and professional experiences that should be the target for information will expand. In an increasing number of professional doctorate programs, for example, the goal might be to reach more experienced managers who are interested in career enhancement or changes, rather than high-achieving young scholars with highly developed quantitative skills.

Once interested, prospective business doctoral students should have access to relevant and accurate information about the types of programs available and credible signals about quality. A review of commercial online guides quickly reveals that the information provided is too general, irrelevant, or inconsistent to be of use to prospective students. AACSB maintains a promising searchable database on business doctoral program information on its student-oriented website, BestBizSchools.com. The site provides a small base of information about doctoral programs at AACSB-accredited schools around the world. The doctoral programs section is the most frequently used, but overall the website is underutilized relative to its potential. And as the range of doctoral programs and the candidates they seek widens, the information currently provided on the site will become even less useful; it will need to expand to include more information about program goals and characteristics.

Useful models upon which to build already exist. DocNet is an organization of primarily U.S.-based universities granting doctoral degrees in business administration and economics, whose primary purpose is to educate potential students about careers in academia and engage in a variety of recruiting strategies aimed at increasing the pool of qualified applicants for doctoral-granting institutions. Similarly, we might learn from the U.S.-based PhD Project to develop potential target audiences in specific areas and to connect them to schools that fit their needs. Its mission is to increase the diversity of corporate America by increasing the diversity of business school faculty. Each model, if replicated, revised, or expanded globally for different program niches could strengthen the pool of candidates and match them more effectively to programs that meet their needs.

Networks to Support Continuous Improvement, Innovation, and Collaboration

Whenever innovation is necessary, and it is in doctoral education, we expect strategic development to be informed by data and information about trends in the industry. Yet the work of this task force has revealed how little of such information is available on a global basis, especially information that can be parsed to be useful for school-level planning.

Beyond what occurs in AACSB and EQUIS accreditation reviews, which cover the whole academic enterprise and have historically focused more on the qualifications of faculty to teach doctoral-level courses rather than the full range of areas important to doctoral education, only a few venues for business school leaders exist in which to share ideas about best or innovative practices in doctoral education or general developments in doctoral education. EDAMBA has done well to support efforts across Europe by "providing and managing a network to exchange information, to exchange PhD candidates and to promote research cooperation."⁸⁹ Though its primary purpose is aimed at marketing and recruiting

students, DocNet members also share information about best practices, curriculum and admissions issues, student support, and placement. The mission of the recently formed Executive DBA Council (EDBAC) is to foster excellence and innovation in executive doctoral degree programs worldwide, and it aims to do so by offering networking and educational opportunities for professionals who serve and participate in executive doctoral degree programs, including directors, academic directors, faculty, administrators, students, and alumni. Additionally, despite its name, the Association of MBAs (AMBA) offers accreditation services for DBA programs.

In the future, this task force envisions more sharing of information across platforms, suggesting that existing organizations connect to one another and globalize in scope, both in regard to the stakeholders they serve and the types of support and information regarding doctoral education they produce and disseminate.

A current example of such discussion and collaboration is the Doctoral Education and Early-Career Programme (DEEP) by the CEMS – The Global Alliance in Management Education. Recognizing all of the disparate elements and contexts across doctoral programs and delivery worldwide, the CEMS Strategic Board aimed for DEEP to focus more on “creating opportunities for networking, providing access to research output (both online and through doctoral seminars), and consolidating information about alliance members’ doctoral offerings and open faculty positions.”⁹⁰ Further, the CEMS Alliance has been working to develop groups of PhD students in specific fields, who can benefit from meeting peers at other CEMS member universities—a practice that would be particularly helpful for students whose research field is very specialized and who may not have peers at their own institution.

Participation in such networking and collaborative forums should not be exclusive to representatives of business schools. As was discussed earlier, many schools are beginning to recognize the need for sharing across disciplines. Lee S. Shulman, emeritus of the Carnegie Foundation for the Advancement of Teaching, expressed support for development of consortia for doctoral programs as a way to encourage more collaboration and open discussion between the more traditional doctoral programs and with professional schools. He advocates the Carnegie Initiative on the Doctorate, which is an action and research project to encourage and support departments’ efforts to improve the quality of their doctoral programs by designing and putting new initiatives into practice. Through the project, schools are encouraged to participate in an exchange of ideas, curriculum models, data and research, and prototypes for capstone performance and assessments.⁹¹

Whether through consortia, doctoral networks, collaborations, or other means, more discussion and information-sharing can help support continuous improvement and innovation efforts in doctoral education globally.

Programs to Facilitate Career Success

A major subject of concern for the task force has been the preparation of doctoral graduates for career success. Preparation for career success begins with admissions policies and processes. Programs that prepare graduates for academic careers should understand the knowledge and skills necessary and how they are changing. As has been noted elsewhere in this report, admissions criteria should align with program objectives. Similarly, with doctoral programs, we should consider the amount of support available

⁸⁹ European Doctoral Programmes Association in Management and Business Administration (EDAMBA), Mission webpage, 2013. www.edamba.eu/t/default.asp?ID=HEJFI&item=EIGMIK.

⁹⁰ AACSB International, “CEMS- The Global Alliance in Management Education – Globalization of Management Education Spotlight,” June 2011, www.aacsb.edu/resources/globalization/spotlights/CEMSAlliance.pdf.

⁹¹ Lee S. Shulman, “Doctoral Education Shouldn’t be a Marathon: The Salvation may Mean Embracing the Enemy: Professional Schools,” *The Chronicle Review*, April 4, 2010.

to potential students to understand and prepare for admission to doctoral programs that meet their needs. Although the task force has not undertaken a formal study, it believes that considering the range of criteria used to screen prospective candidates will be useful as the diversity of programs expands. For example, as has been the case for executive MBA programs, standardized assessments may be less relevant to executive doctoral programs that build on previous management and leadership experience.

One consistent criticism about the dominant model of doctoral education that focuses on academic research is that the programs do little to prepare graduates to teach effectively in business schools. While the task force believes that programs themselves should take on more responsibility for developing teaching skills along with research skills when academic employment is one of the primary objectives, this section addresses the gap from a different perspective—support structures that can facilitate academic career success beyond enhancements to the programs. University-based teacher training programs are used by doctoral programs, but according to many business school leaders, these programs are less in tune with the needs of business education, which involve a wide range of demographics (traditional undergraduates through senior executives in non-degree programs) and pedagogies (e.g., experiential learning) in business education. Industry-level teacher training programs exist, but they train a relatively small portion of doctoral graduates each year (CEEMAN's International Management Teachers Academy, AACSB's Teaching Effectiveness Seminar, etc.). In addition, continuous training evidently has become even more important given the pace of change in technological support for education.

The AACSB Bridge Program which helps professionals from the corporate world transition to business school teaching careers, could serve as a framework for helping other types of new entrants to business faculty ranks. Again, the PhD Project might serve as a potential model in specific areas. In addition to attracting African Americans, Hispanic Americans, and Native Americans to business PhD programs, it provides a network of peer support on their journey to becoming professors. The emerging 50+20 Project, which aims to develop a Global Doctoral Consortium in Sustainability and Responsibility, could create a similar support structure for academic careers in a multidisciplinary environment.

As emphasized throughout this report, increasing numbers of doctoral programs aim to develop research skills for business practice rather than academic settings. For these programs, a useful endeavor would be to consider how the services already provided to MBA (especially executive MBA) students and graduates might be applied. More interestingly, how might academic and industry connections be developed to increase the opportunities for both academic and practice career paths? As mentioned earlier, better and more frequent communication of the values and benefits that business doctoral research presents to industry can serve as a starting point for enhancing collaboration between academia and industry. Such collaboration can help elevate business schools' research value and visibility efforts.

OUR CHALLENGE TO BUSINESS SCHOOLS

This task force was asked to recommend ways to strengthen sustainability, innovation, relevance, and quality in doctoral education. Yet to simply recommend that individual schools consider certain actions seems inadequate. The actions that we believe are necessary to fulfill the promise of doctoral education in a new age of higher education and societal development will require creativity, boldness, and a clear focus on desired outcomes. They will likely require sacrifice of time, resources, and even tradition.

Thus, instead of recommendations, we offer a series of challenges aimed at those business schools that offer doctoral education. The same challenges apply to business schools that are considering a potential role in serving various societal needs through doctoral education. We intend this series of challenges to help form a basis for discussions among doctoral program directors, business school administrators, faculty, and others with a stake in doctoral education. Moreover, we intend to provoke each school to think deeply about how it can best serve societal needs through doctoral education.

We identify five challenges for business schools, intended to sharpen a focus on upholding high quality and encourage innovations in design and delivery.

1. Ensure a clearly defined purpose for doctoral programs.

Our report has shown increasing room for variety in the purposes served by business doctoral education. Clarity of purpose is an integral foundation for ensuring a quality educational experience aligned with the characteristics and career aspirations of students.

Moreover, effective differentiation among doctoral programs serves students by contributing to a richer set of options for personal and professional development. It serves graduates' future employers by ensuring a stronger connection between the knowledge and skills developed through doctoral education and the contributions they are expected to make to the organization.

Better differentiation serves business schools by ensuring the right applicant pool, setting appropriate expectations for admitted students, and serving as a basis for decisions about program design. Even incremental improvements in these areas can have substantial impacts on reducing the cost of offering a doctoral program.

Clarity of purpose, whether narrowly defined or defined in terms of solving broad categories of problems, is essential for enabling schools to address the challenges that follow.

2. Routinely assess attributes of quality.

The AACSB 2013 Business Accreditation Standards note the general knowledge and skill areas normally expected to be covered in a doctoral-level education, and specify some differences in learning experiences according to the type of research emphasized. These are important thresholds of quality.

Yet schools can enhance their ability to achieve these thresholds and improve the overall quality of their doctoral programs by numerous other dimensions. These attributes are likely to lead to higher retention

and graduation rates, and to greater career success and satisfaction for graduates. And they are especially important in an age in which doctoral programs, collectively, serve a variety of societal needs.

The three sections covering “Attributes of a Quality Doctoral Program” are presented within this report as a framework to guide recurring exercises aimed at identifying opportunities for improvement and innovation. We challenge deans and doctoral program directors to periodically run through the list of attributes and undertake a critical assessment of the current state of the school’s doctoral education. A goal through this process may be to more clearly articulate the purposes intended to be served through the program, and then to identify program strengths that should receive greater emphasis as well as opportunities for enhancing access, capacity or efficiency, and quality in that context.

3. Understand the costs and articulate the value of doctoral education.

In the introduction to its recently released guide for business schools concerning the impact of research, AACSB writes,

At a time when many schools around the world are facing budget cuts, schools must ensure they are using resources efficiently to achieve stated objectives. Furthermore, given growing pressure from various stakeholder groups—namely students, their parents, and legislators—to make higher education more affordable, the ability of schools to articulate the impacts of their investments in scholarship on students’ educational experiences and on the broader communities they serve is essential.⁹²

We challenge all schools to carefully estimate the full cost of the operation of their doctoral programs, including “hard” costs such as student stipends, tuition waivers, and the like, and “soft” costs such as faculty time and the use of space for seminars and student offices. Having a clear understanding of costs and their drivers is the first step toward enabling innovations that will enhance efficiencies and capacity.

Cost analyses also should involve efforts to assure that schools are spending resources efficiently. Program directors should attempt to better define characteristics that help identify candidates who will be successful in doctoral programs. If decisions about whom to admit and whom to deny can be made to better correlate with successful completion and a successful career, programs could assure that they were spending scarce (and expensive) resources in the most productive way.

We further challenge all schools to strive to articulate the full benefit of offering a doctoral program to different stakeholders. We recognize that quantifying some benefits may be impossible. For example, one can quantify the benefit that is realized when a doctoral student teaches a required course that otherwise would have been assigned to a faculty member. What is less clear is how a school could quantify, for example, the benefit from having peer schools hire its graduates.

Regardless, it is increasingly critical that schools be prepared to articulate the benefits presented by doctoral education to other stakeholders, particularly potential, current, and graduated students, but also to the broader community that it serves and the individuals or organizations on which it relies for funds. How does having a doctoral program contribute to advance knowledge and the school’s ability to be a thought leader? Has the school become better engaged with researchers and educational institutions around the world as a result of the doctoral program? What is the link between research supported or driven through

⁹² AACSB International, “Impact of Research: A Guide for Business Schools,” 2012, www.aacsb.edu/publications/researchreports/currentreports/impact-of-research-exploratory-study.pdf, p. 6.

doctoral education and the teaching in the school's undergraduate and graduate programs? How do these outcomes elevate the school's competitiveness?

4. Strengthen doctoral students' preparation for academic careers, where appropriate to the program mission.

Although research is an important skill, it is not the only skill vital to the facilitation of a strong doctoral program. Teaching is, after all, the field into which the vast majority of doctoral candidates will go at least for a while, if not permanently, and this task force believes simply not enough focus is placed on training those candidates for a requirement they will face in the academic job market.

This task force believes that doctoral programs have an important role to play in helping to strengthen teaching effectiveness. Schools would expect the managerial acumen of their master's level graduates to be refined over time with on-the-job training and continuing education, yet they still seek to impart a basic level of understanding of the fundamentals of good management to students in their master's programs. The same expectation should apply to the professional skill of teaching, at least in doctoral programs that seek to train individuals for future academic careers.

We challenge schools to enhance the opportunities for students to develop a basic knowledge of teaching, pedagogy, and the learning process. At minimum, doing so would send a signal that effective teaching is an important skill for those in academic careers. Likely, such opportunities could strengthen the classroom support provided by doctoral students during their course of study. Ideally, this program enhancement also would be a foundation for effective teaching that is complemented and reinforced by policies and developmental opportunities at the schools that hire graduates of doctoral programs for teaching positions.⁹³

We furthermore challenge schools, in the design of programs that are not intended for individuals likely to pursue teaching responsibilities, to address similar skill sets that augment those individuals' abilities to communicate effectively to their intended audiences, whoever they may be. Other skills related to classroom management, such as facilitating discussion and asking questions that are likely to lead others to acquire certain insights independently, are likely also useful for individuals in non-teaching roles.

5. Actively explore innovations in doctoral education.

Innovation among individual programs is important for the reasons of sustainability, capacity, access, and relevance. Yet among the variety of activities undertaken by business schools, innovation in doctoral education seems slow to unfold.

In their 1988 report, Porter and McKibbin commented on the static state of doctoral education in the United States:

Doctoral education is another area of business school activity that seems largely frozen and thus unaffected not only by the momentous changes occurring in the business world, but also by any other external forces. Today's preparation of doctoral students for careers as faculty in business schools is just about the same as it was in the 1980s and the 1970s, and the 1960s.⁹⁴

⁹³ See AACSB International, Eligibility Procedures and Accreditation Standards for Business Accreditation, 2013: Standard 12: Teaching Effectiveness.

⁹⁴ Lyman W. Porter, Lawrence E. McKibbin, and the American Assembly of Collegiate Schools of Business, Management Education and Development: Drift or Thrust into the 21st Century? (New York: McGraw-Hill Book Company, 1988). Cited in J. C. Lockhart and R. E. Stablein, "Spanning the Academy—Practice Divide with Doctoral Education in Business," *Higher Education Research & Development* 21, no. 2 (2002), p. 191–202.

Our research has shown that the points raised in this quotation do not entirely stand true in today's business doctoral education landscape. Many pockets of innovation, experimentation, and adaptation exist, which collectively yield a surprising amount of diversity in doctoral education models worldwide.

Yet for the majority of programs, barriers to innovation can seem significant. They range from faculty members' value of tradition and limited perspectives of alternative models to the high costs of delivering doctoral education and the related perceived high cost of failure.

By enhancing awareness of alternative program models, this task force has sought to reduce discomfort with variety in doctoral education design and delivery methods. The AACSB 2013 Business Accreditation Standards reflect revisions intended in part to encourage schools to create distinctive missions and to engage in experimentation and strategic innovation. The preamble to the standards states,

. . . [A]ccreditation standards and processes should not impede experimentation or entrepreneurial pursuits; the standards must recognize that innovation involves both the potential for success and the risk of failure. Therefore, when assessing any success or failure, it is key to recognize the importance of experimentation and place a priority on strategic innovation. If innovations are well-developed, rational, and well-planned, negative outcomes should not inhibit a positive accreditation review. Negative outcomes are of concern only when they seriously and negatively affect the ability of the business school to continue to fulfill its mission.⁹⁵

Schools that place a high value on quality must be the ones leading innovation, as they will set a bar to which others will aspire. AACSB should challenge its accredited schools to help lead exploration of innovative program missions and models, and should help to make such innovation more possible. Deans and program directors should provide incentives to faculty to encourage innovation that is consistent with their school's mission. This initiative is important to expanding/enhancing doctoral education within institutions that already have programs in place, and to introducing doctoral programs at institutions currently without a doctoral program.

We foresee greater experimentation in many areas, particularly with regard to innovative program missions and models. Innovations especially critical at the industry level are those that enhance sustainability, relevance, and access. In all cases, innovations should clearly align with the purpose and intended outcomes of the doctoral program. Exploration of more innovative ways of structuring, running, and delivering a doctoral program should not be motivated by the sake of just being "innovative," but rather driven by an objective to improve the quality, reach, and relevance of business doctoral education. We encourage AACSB Accreditation reviewers, when faced with unfamiliar models of doctoral education, to keep alignment with these objectives in mind.

Some areas in which we challenge schools to consider experimentation and innovation are as follows:

1. Programs aimed at different applicant pools. This may include applicants with nonacademic career aspirations, different professional and academic backgrounds, different age groups (e.g., those who have recently completed their undergraduate studies, as well as those transitioning into academia at an older age), and so on.
2. Opportunities to shift the cost of doctoral education to enrolled students. This may involve structuring programs or developing new programs (e.g., executive doctorate) that are convenient

⁹⁵ AACSB International, Eligibility Procedures and Accreditation Standards for Business Accreditation, 2013, www.aacsb.edu/accreditation/business/standards/2013/2013-business-standards.pdf, p. 2.

for working professionals to complete with the expectation that these students are able to pay for their degree completely. Some of these programs may be designed with the expectation that graduates will have careers in industry rather than in academia.

3. Different dissertation forms. In most institutions, the dissertation has traditionally taken the form of a “monograph” or a single bound piece of work. Some programs allow for a “cumulative” format made up of a set of related articles under one “umbrella” paper. Some programs allow the student to choose the type of format their dissertation may take. With some programs expecting publication activity prior to completion of the program, some schools are experimenting with less-traditional formats to accelerate students’ publishing activity. Depending on the program’s purpose, certain dissertation forms may be more appropriate than others.
4. Variation from full-time, residential delivery format. The student profile is changing across different levels of education. Many students enter degree programs at an older age or with other responsibilities, for example, family commitments, full-time jobs, inability to relocate, and so forth. At many business schools, a doctoral program is a rigorous, full-time study and research program. Some programs may consider experimenting with different delivery formats that may accommodate these emerging aspiring student populations.
5. Interdisciplinary programs. Business makes use of the knowledge and research produced from a variety of disciplines. Business education prepares individuals to be able to manage, operate, and run companies that are often built on the work of other disciplines, for example, bio-medicine, pharmaceutical, engineering, and others.
6. Consortia models. Shared seminar courses can present an initial step for collaboration in program delivery, and may be facilitated by advancements in the use of educational technologies. Consortia also may “outsource” the responsibilities of specific areas of skill development, for example, teaching skills, or may utilize the strengths at a different institution.
7. Dual supervisory arrangements involving a second supervisor at another institution. Introducing dual or multi-supervisory arrangements within certain doctoral programs can present advantages to schools, particularly those with younger doctoral programs or faculty that seek to strengthen their capacity to offer doctoral-level education. It can also present opportunities to schools currently without a doctoral program, but seeking to implement one, as such an arrangement can help “mentor” the school in delivering doctoral education one day on its own. Such arrangements can be especially meaningful to schools within emerging markets.
8. Collaboration focused on enhancing options for language of delivery/interaction, as well as foreign language development. Such a practice can expand the potential applicant pool to more non-English-speaking countries and different markets, as well as encourage more international business research covering diverse, yet relevant, research areas. Language training may also be beneficial for supporting some candidates’ future publication and career goals.
9. Strengthening linkage with industry (e.g., to create additional channels for industry funding, collaborative research, etc.). Schools should try to identify companies that may benefit from hiring graduates from their doctoral programs for staff of managerial positions and that may benefit from the results of the research conducted as a part of the doctoral program. Schools should explore

collaboration with these companies that may include financial sponsorship of students or of the program more broadly.

10. Using online channels to offer high-quality doctoral seminars. Determine how (or if) providing online education within certain parts of the program (e.g., seminars) can result in attracting more highly qualified students, as well as underrepresented student groups, without diminishing the quality of the program. Can online channels also increase existing students' access to quality training, peer networks, and expertise?
11. Offer quality doctoral-level knowledge and skill training in modules that can be pursued independently of, or as part of, a doctoral degree program. Not everyone who can benefit from enhanced research skills needs the entire doctoral training experience. By making certain components of doctoral level training more accessible through non-degree options (or through shorter programs, such as the Masters of Research, that might serve as a stepping stone into a doctoral program), we particularly see opportunities to increase the rate at which schools in some markets can build the necessary faculty expertise to support higher levels of engagement with research and, ultimately, to offer doctoral education.

RECOMMENDATIONS TO AACSB

The recommendations that follow are intended to enhance the perceived value and credibility of a broader range of career outcomes and research expectations. They also are intended to support schools' development of mission-appropriate programs or program portfolios.

While directed at AACSB, we call for and expect other organizations with an interest in serving or supporting business doctoral education also to consider how these recommendations might be relevant to their missions. We call for AACSB to play a role in encouraging greater levels of engagement by appropriate organizations.

1. Define and uphold standards of quality through a comprehensive accreditation model.

As an accrediting body and organization whose mission is to advance quality management education worldwide, AACSB has a responsibility to uphold high standards of quality in doctoral education. It should apply a comprehensive accreditation model and standards that work for different types of doctoral programs.

But quality standards for many of the emergent forms of doctoral education are not as well defined, at least globally. The AACSB 2013 Business Accreditation Standards' distinction between programs that emphasize "foundational discipline-based research" and those that emphasize "rigorous research for application to practice" is a step in this direction. Organizations in some regional contexts, such as the Association of Business Schools (ABS) in the United Kingdom, have developed guidelines of quality specifically for professional doctoral programs in management.⁹⁶

We suspect that more guidance will ultimately be helpful, but we caution against the establishment of classifications that are too rigid or prescriptive. As discussed in our section on Purpose, both intended career outcomes and research focus are likely to fall on continua, rather than into buckets. Although they may comprise the majority models, an applied research focus should not necessarily correlate with a professional career path; nor should a basic research focus necessarily correlate with an academic career path.

Specifically, we recommend the following:

- a. AACSB Accreditation committees and peer review teams should reinforce the link between AACSB Accreditation and the mission of a school in the context of doctoral-level education. AACSB should assure that individuals involved in the initial accreditation and the continuous improvement review process (e.g., administration of schools, peer review teams, mentors, and relevant committees) are aware of Standard 1 [Mission, Impact and Innovation] as applied to doctoral programs.⁹⁷
- b. Accreditation reviews should explicitly encourage schools with doctoral programs to think strategically about the most appropriate characteristics and outcomes for its doctoral program(s). Schools should be encouraged to use AACSB and other resources to better understand the breadth of doctoral programs in existence.

⁹⁶ Association of Business Schools, "Guidelines for the Doctor of Business Administration (DBA) (2005)."

⁹⁷ AACSB International, Eligibility Procedures and Accreditation Standards for Business Accreditation, 2013, www.aacsb.edu/accreditation/business/standards/2013/2013-business-standards.pdf, p. 14-16.

- c. AACSB should assure that individuals involved in the initial accreditation and the continuous improvement review process (e.g., administration of schools, peer review teams, mentors, and relevant committees) are aware of Standard 9 [Curriculum Content] as applied to doctoral programs. This standard's basis for judgment explicitly distinguishes between expectations for doctorates that emphasize "foundational discipline-based research" and those that emphasize "rigorous research for application to practice."⁹⁸

2. Encourage continuous improvement and adherence to standards of quality through educational offerings.

A need exists to assist doctoral programs worldwide with continuous improvement objectives related to effectiveness, efficiency, and overall high quality. AACSB should consider what resources it could offer to support business schools in developing mission-appropriate programs or program portfolios.

Specifically, we recommend the following:

- a. AACSB should create a repository of information about doctoral programs, particularly non-traditional programs, to serve as a resource for deans and program directors who may wish to use these examples in the evolution of existing programs or development of new programs. Profiles of many programs that were developed to support this task force's review of existing doctoral education models will serve as a useful foundation for this effort.
- b. AACSB should utilize its professional development offerings (including conferences, seminars, and webinars) as a means of highlighting the range of successful program types and of drawing attention to innovations and effective practices.

3. Expand efforts to collect, analyze, and disseminate data concerning business doctoral programs.

Throughout our research, we were continually challenged by limitations to the availability of data concerning doctoral programs. Several sources of very rich data exist, but the data represent a small (often regional) subset of the institutions globally that offer doctoral education. AACSB's DataDirect database contains data on the largest and most global set of business doctoral degree-granting institutions, but the data on those institutions' programs are limited only to a few variables, including number of students admitted, number enrolled, and number of degrees conferred.

For our research, we relied on the review of numerous articles and reports, extensive scanning of schools' websites, many hours of interviews, and a survey of business doctoral program directors. While these efforts were useful for our current project, they will do little to set a foundation for monitoring ongoing trends in the design, delivery, and outcomes of business doctoral education.

Such information is important to understand what is happening. The information also will be important in informing doctoral program directors of the range of programs available, to enhance awareness of emerging models and of effective practices, thereby enabling benchmarking.

Specifically, we recommend the following:

- a. AACSB should undertake systematic data collection on doctoral programs to better understand the industry. This data collection should expand existing data to include more information on

⁹⁸ Ibid, p. 30-32.

program characteristics of interest to doctoral education consumers, as well as to business school administrators who may use it for benchmarking purposes. Data concerning the career paths of program graduates, and particularly the role they play in faculty models globally as well as industry positions, are of interest.

- b. AACSB should collect data on the single most important defining characteristic of a doctoral program: the dissertation requirement, in order to be better able, in the future, to shift the discussion on quality from a focus on inputs more toward one focused on outcomes. Of interest is to what extent the printed, monolithic dissertation is still the norm and what alternatives exist. AACSB should specifically try to determine the extent to which digital enhancements or alternatives to the traditional dissertation are in use.

4. Enhance the perceived value and credibility of a broader range of career outcomes and research expectations.

Globally, numerous factors contribute to the diversity of doctoral education models, including perspectives on the role of doctoral education, institutional structures, academic traditions, and various other contextual factors. Other diversity is more deliberate; this is the result of planned program characteristics in response to a specific perceived need. For example, a school in the process of developing a doctoral program may choose to offer a professional doctoral program versus a more traditional, academic doctoral program due to the types of demand within the school's location or based on the research interests and experience backgrounds of applicants.

We agree with the tenet expressed through the European University Association's Ten Basic Principles that "the rich diversity of doctoral programmes in Europe . . . is a strength which has to be underpinned by quality and sound practice."⁹⁹ Globally, many opportunities exist for increased diversity to continue to strengthen the ability of doctoral education to achieve desired outcomes.

Specifically, we recommend the following:

- a. AACSB should reinforce the linkage between the four faculty qualification categories of the 2013 AACSB Accreditation Standards to different types of doctoral programs. Through seminars and informational sessions about the new faculty qualifications, AACSB should stress the connection of those categories to the findings of this task force as well as to the findings of the Impact of Research Task Force and Exploratory Study. Messages should encourage schools to refine reward/incentive systems, including connection to tenure processes and publication activity, and their degree of alignment with different types of doctoral training.
- b. AACSB should seek collaborations with schools that offer programs aimed at working professionals, such as through the Executive DBA Council (EDBAC), and with organizations such as the Society for Human Resources Management (SHRM) that focus on companies' human resource strategies. The aim should be to better understand the demand for doctoral education among working professionals, and to better understand how companies are using, or could be using, employees with the knowledge and skills developed through business doctoral education. Gaining a better understanding of regional differences also will be important.
- c. AACSB should devote attention to a broad range of career outcomes and research expectations in informational resources aimed at students, employers, and other stakeholders. The aim should be

⁹⁹ European University Association, Bologna Seminar on "Doctoral Programmes for the European Knowledge Society."

to increase awareness of potential students to academic career opportunities as well as to industrial and professional career opportunities.

5. Assist schools in marketing and differentiating their programs, and assist other stakeholders in selecting among available options.

We recognize concern about shortages of doctoral-qualified faculty at least in certain regions and fields.

Increasing the supply of programs and of program participants is one way to address this shortage.

Consistent with the above recommendation aimed at increasing awareness among those in business schools of potential variability in doctoral programs, a need also exists to help the consumers of doctoral education understand that variability and the range of career paths open to graduates of these programs.

A great deal of information is available to potential applicants to the MBA from many commercial sources and MBA rankings in the popular press. Few similar resources exist for business doctorates. Additionally, potential applicants often have incorrect perceptions of business doctorates.¹⁰⁰ We believe AACSB, as an authority on quality management education, has the potential to offer rich and credible information to prospective students.

On AACSB's student website, BestBizSchools.com, one of the most popular searches has been for AACSB-accredited doctoral programs. Although searchable information on undergraduate and MBA programs is widely available, AACSB's BestBizSchools.com is the only real, comprehensive source of information about doctoral programs in business, globally. Making similar information accessible to potential students could also benefit AACSB members with doctoral programs of business by bringing more exposure and awareness of the types of programs they offer.

Specifically, we recommend the following:

- a. AACSB should enhance existing online resources directed to students in order to promote enrollment in business doctorates and to help potential students find an accredited program well matched to their needs. This resource should include traditional PhD programs and also executive doctorates, professional doctorates, etc. as well as information about various career paths that might be pursued with a doctoral degree (as noted in recommendation 4c). AACSB should educate potential students about the opportunities and benefits of pursuing a doctoral degree.
- b. AACSB should explore means of drawing attention to business school faculty and their research, particularly faculty involved in doctoral education, as a means of both supporting students' choice of doctoral programs and helping to enhance the value and visibility of business school research in its various forms.
- c. AACSB should, to the extent possible, use its influence to move terminology used to describe different models of doctoral education in a direction of coherence, in order to support an environment that offers clarity for students, schools, and businesses about the opportunities available. The current use of different nomenclature tends to be confusing and at times misleading, creating a problem in understanding what titles actually mean. The risk is that labels will guide choices of potential students (and their future employers) rather than a thorough review of the doctoral program's characteristics. While linkage with career paths may be difficult due to the fact that graduates may ultimately choose a path different from that intended, the task force

¹⁰⁰ See, for example, Beta Gamma Sigma, Myths and Facts about Doctoral Studies, updated 2007, www.betagammalsigma.org/exchange/summer04/mythsandfacts.htm.

recommends that the PhD designation be used for programs with a heavier basic/foundational research focus, and the DBA for programs with a heavier applied/translational research focus. Both should be used only for programs that incorporate rigorous research training and expect the creation of an original, substantive research contribution, as judged by a group of peers.

6. Actively support the important need to increase doctoral education capacity and quality in underserved regions.

AACSB's mission is to advance management education worldwide, and a recent interest is doing so in emerging economies. Often these economies have few faculty members with doctorates and lack the research traditions that would allow them to create meaningful doctoral programs. However, interest in building more scholarly management education is high among these regions, something that AACSB cares deeply about.

Some current and past programs have worked with building faculty capacity, for example, Tulane Latin American Faculty Development PhD Program, experienced that working faculty in Latin American business schools can advance their careers with doctoral-level research degree training, while retaining their teaching positions. Nonetheless, significant opportunity remains for the developed world to be more proactive in helping to educate these economies in ways consistent with what the task force describes as being quality doctoral education, even if it does not ultimately result in granting the doctoral degree. The current model in which Northern America and Europe continue to host a disproportionate share of the world's doctoral students is one that not only may prove to be unsustainable, but also likely limits the ability of individuals worldwide to achieve their full potential through a doctoral education.

Specifically, we recommend the following:

- a. AACSB should play a more active role in encouraging the expansion of access to doctoral education, including ongoing faculty development in the form of doctoral education and more targeted skill development, in underserved regions.
- b. AACSB should better support supervisory models, particularly collaborative models, that will help expand doctoral education in emerging economies. The organization can do so by highlighting best practices of existing models of doctoral education on its website, but with greater emphasis on innovation regarding doctoral supervision and collaboration. AACSB also should support the efforts of other organizations, such as the Global Business School Network (GBSN), to increase access to doctoral education through innovative delivery models. Furthermore, AACSB should engage in open communication with schools interested in exploring such models, to enable them to pursue this form of innovation without risk to their accreditation status.
- c. AACSB should provide necessary resources, data, research, and information about doctoral education delivery in specific regions, especially those that are underserved. Schools may be more willing to implement such partnerships and programs once they are better informed of the current situation of doctoral education in a specific location.

APPENDIX: FIVE SAMPLE BUSINESS DOCTORAL PROGRAM MODELS

Sample Program A

Program A is a PhD in Business program that is a full-time, in-residence program positioned for students who aim to become academic scholars and future business school faculty.

Along with their online applications, applicants to the program are required to have a bachelor's degree or equivalent, three letters of recommendation, a statement of purpose, official transcripts, GRE/GMAT scores, and IELTS and TOEFL scores (if applicable).

Students typically complete the program in five years. Students take courses in the first two years of the program, including a Research Methods course in both years. Students must pass a comprehensive examination on the core knowledge of their discipline in order to become a PhD candidate and begin work on their dissertation. The examination includes both written and oral components.

The PhD program includes an apprenticeship component in which students learn to conduct research side-by-side with their thesis supervisor. PhD candidates are required to teach three sections throughout their time in the program, as well as engage in teaching skills development workshops.

Admitted students receive a financial package that includes a full tuition waiver, a stipend, individual health and dental insurance, and coverage of mandatory student health center fees. The total financial support provided is approximately 60,000–70,000 USD per year, depending on a student's course load.

Faculty advisors work with students to secure a post at a university that is a good fit for the individual's academic interests and professional goals. Graduates of Program A have joined the faculties of some of the most globally prestigious colleges and universities. Many of the program's graduates have shown productive research publication records at their institutions and earned tenure and other career achievement awards.

Sample Program B

Program B is a DBA Program and is a three-year, part-time research-based program positioned for senior executives looking to apply relevant knowledge and research skills to contemporary business problems in their industry or workplace.

In addition to their online application, candidates to the DBA program are required to have an MBA or master's degree in a relevant field, at least 10 years of managerial experience in business, an updated CV, transcripts from previous degrees, IELTS and TOEFL scores (if applicable), and a research proposal, which should demonstrate high potential for high performance capability in applied business and interdisciplinary research. Candidates also are expected to maintain their full-time jobs throughout the duration of the program and apply their workplace needs and issues to their research.

The program is run in an executive education format, to better accommodate the availability of the students, many of whom are CEOs, board chairs, or other senior executives of large firms. Students attend intensive four-day weekend courses once a month. The course portion of the program includes three core courses on applied research methods and workshops to develop their qualitative and quantitative research skills. Early in the program, students are assigned a mentor who works with the student to develop a research focus before beginning the dissertation phase.

The dissertation portion of the program primarily consists of individual research, under the supervision of a fully qualified faculty member who brings a broad range of expertise to the student's research topic. The DBA thesis should exhibit substantial evidence of original scholarship of high standard and be applicable to practice. Candidates defend their thesis to a committee composed of the business school's faculty.

The majority of students receive partial funding from their companies to attend the program, but some are entirely self-funded. Rarely does a company fund the entire cost of the program. Financial aid is available to students who qualify.

Upon graduation, the majority of students maintain their positions with their employers. Some students voice interest in eventually pursuing an academic career, or taking on an adjunct faculty position.

Sample Program C

Program C is a PhD Program in Management that is a dual-track doctoral program in which students can choose to pursue the standard, part-time track intended for those who are already working in a company or intend to have a professional career; or the expanded, full-time track intended for those planning to pursue an academic career.

To be admitted to the program, candidates must hold a master's degree in a related field. Students also must submit a research theme so the school can identify a suitable research supervisor.

Both tracks have a "coursework stage" and a "research stage" followed by the dissertation; however, full-time students are required to complete more courses and electives (10 courses vs. six courses) in the coursework stage of the program. The research stage and its requirements are the same for both types of students. After the coursework stage, students work with their supervisor in submitting their research proposal, after which they can begin the research stage.

Students are matched with a supervisor whose research interests and expertise align with those of the students. Students have the option of presenting their thesis in either a single-bound book, or through a collection of three essays that are integrated.

On average, students complete the program in four years. Students who wish to pursue an academic career continue their studies with the habilitation, which entails an additional five years of study and research. The post-doctoral certification allows the individual to supervise research activities and be called a professor.

The PhD Program in Management is a fee-based program. Some students fund their studies through employment as research associates at the school; others receive financial support from their employers, while still others may receive public research funding.

Sample Program D

Program D is a joint PhD program in business administration delivered jointly by three schools located in the same city. The program educates and prepares students to become successful researchers on issues and topics related to management. With the pooling and sharing of resources of the three business schools, students have access to over 200 faculty members qualified to supervise, as well as to each of the school's facilities, amenities, and other resources that enhance the students' doctoral experience.

In addition to the online application, applicants must submit a statement of purpose explaining their interest in the program, a CV, official transcripts, three letters of recommendation, GRE/GMAT scores, and IELTS and TOEFL scores (if applicable).

Students are not required to have a master's degree or background in business. For these students, foundational business courses are available. All students are required to take a Research Methods Seminar as well as a Teaching Methods Seminar (delivered by Education Department faculty); the remaining seminars depend on the student's area of specialization. All participating schools share responsibility for delivering seminars on subjects in which they may have more expertise. For example, School 1 specializes more in operations, while School 2 specializes more in human resources. Once students have completed their seminar requirements and passed the qualifying examination, they begin work on their dissertation under the direction of their main supervisor. The student's thesis committee is composed of faculty members from each of the three schools, and students can choose a supervisor from any school.

Students defend their dissertation to their thesis committee. Graduates receive a PhD degree awarded by their home institution. Students are expected to complete the program in five years. Student admitted into the program are guaranteed funding opportunities.

Delivering the PhD program in a joint format has presented advantages for both the business schools and students. The joint delivery alleviates many of the costs associated with running a doctoral program (critical mass of faculty and expertise, fewer students, funding and stipends, library resources, etc.). Students are exposed to a larger network of faculty and other researchers.

Graduates of the program go on to secure business faculty positions at reputable institutions worldwide.

Sample Program E

Program E is a DBA program that has been offered for over 15 years at Business School 1. After five years of partnering with Business School 2 at the undergraduate and master's levels, Business School 1 decided to explore ways to make the international partnership more strategic and expand it to the doctoral level. Business School 2 serves an emerging economy and does not currently offer a doctoral program of its own.

The School 1–School 2 DBA Program is positioned for working business professionals, and is delivered part-time over three years.

School 1 faculty travel to School 2 to deliver one of the two one-week taught blocks. The student's supervision team is comprised of the Principal Supervisor from School 1 and the local, Second Supervisor from School 2. The Principal Supervisor has monthly contact with the student (by email, telephone, video conference, etc.). Every six months students meet in person with both their Principal and Second Supervisors. Second Supervisors are included on all the correspondence between the students and their Principal Supervisor. Students must also participate and present their research at an Annual Doctoral Conference held at School 1.

Students defend their thesis in person at School 1. The DBA degree is awarded on behalf of School 1. The distance delivery format of the program allows for School 2 to increase its capacity, until it can be in the position to offer a doctoral program of its own and award the degree. The benefits to School 1 are less strain and drain on supervisory capacity by sharing roles and responsibilities, as well as assistance with internationalization of its faculty networks and research activities.

The dual supervisor model (one local and one international) allows for input to local context-specific knowledge about professional practice-related matters. Students are also exposed to local and international networks of researchers. The program also allows for students to disseminate their research results on a professional field relevant to their local context, where little research presently exists.

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