

Build Your Dream (not just Big) Analytics Program

Panel

Shu Schiller (moderator)

Wright State University

shu.schiller@wright.edu

Michael Goul

Arizona State University

Michael.Goul@asu.edu

Lakshmi S. Iyer

University of North Carolina at Greensboro

Lsiyer@uncg.edu

Ramesh Sharda

Oklahoma State University

ramesh.sharda@okstate.edu

David Schrader

Teradata

drdaveschrader@gmail.com

ABSTRACT

This panel focuses on curriculum design and program development and sustainability for business and data analytics programs in higher education. It promotes a discussion in our IS community on the “how-to” questions concerning the various stages of program building and the challenges faced by institutions to construct successful and competitive analytics programs. Four panelists, who have demonstrated outstanding accomplishments in academic and industrial leadership, will share their experiences and vision of the “dream” analytics program. The panel hopes to stimulate a discussion that will engage and encourage the audience to reflect on their own opportunities and challenges of building new curricula in this area.

Keywords

Business analytics, data analytics, curriculum, program development.

INTRODUCTION

In the past few years, there has been an explosion of academic programs on business and data analytics in higher education. A keyword search at Petersons.com generates a count of 125 graduate and 22 undergraduate programs related to business and data analytics. The blossoming of these educational programs is largely due to the recent sky-high popularity of big data and the considerable shortage of analytics expertise worldwide. A recent report shows that one-third of companies are aggressively using analytics across the entire enterprise and two-thirds have appointed a senior leader of data analytics (such as a Chief Data Officer) in the past 18 months (Accenture 2013). Yet, others predict that by 2018, the United States alone may face a 50 to 60% gap in deep analytic talent (McKinsey Global Institute 2014) and big data will need 4.4 million jobs globally by 2015, only one-third of which is expected to be filled (Gartner 2012). Waking up to the massive shortage of data analytics skills, academics across the globe have started to launch educational and training programs in various formats and lengths to produce professionals in analytics and big data, many of which integrate business intelligence and analytics in core business curriculum (Gillon et al. 2014; Wixom et al. 2014). However, the journey of building a “dream” analytics program can be long, chock full of political ramifications and perilous. How can we, as a community learn best practices from each other and together create more opportunities for success? We need opportunities to openly discuss the issues and ramifications.

PANEL OBJECTIVES

The purpose of the panel is to share experiences from several successful analytics programs and to discuss some of the most important and challenging tasks and issues concerning the design, development, and sustainability of business and data analytics programs in higher education. We hope to start and stimulate conversations with the IS community in this area and to help the audience further clarify and evaluate their positions regarding building their “dream” analytics programs. To AMCIS attendees, this panel can be a reference point where shared experiences, advice, guidance, and innovative ideas will inspire their thinking and ongoing practice in this area. In addition, an industry expert from a leading analytics vendor, Teradata, will provide his vision and advice to the IS community on how analytics programs can establish mutually beneficial relationships and partnerships with leading companies who need to hire the students graduating from analytics-centric academic programs.

Specifically, the panel will discuss questions such as (but not limited to): 1) What is the dream model curriculum for analytics; 2) How do you develop and implement a new analytics program; 3) How can you integrate Big Data and related concepts into analytics curriculum; 4) How does one go about establishing and maintaining a win-win relationship with industry partners; and 5) What are some innovative ideas for sustaining a successful program? To relate to the conference theme, the panel will also discuss a few big data analytics class projects on smart sustainability.

PANEL LAYOUT/DESIGN

The total length of the panel will be 90 minutes. The flow and process of the panel are planned as follows.

Introduction (5 min) – Shu Schiller (moderator) will open the panel. She will give an overview of the current analytics programs in higher education, the trend of new programs, and introduce the panelists. Each will then give a short presentation based on his/her unique experiences and expertise in certain areas related to the topic (details below).

New Program Development (8 min) – **Lakshmi S. Iyer** will share her experience of developing a new SAS sponsored Business Analytics concentration in their Master’s program and a Graduate Certificate in Business Analytics program at the University of North Carolina at Greensboro. She will focus on curriculum consideration for business analytics program; the work with SAS to establish a co-sponsored program; and opportunities for students to enhance their business analytics skills such as certificate training programs offered through Teradata University Network.

Model Curriculum and Program Competitiveness (8 min) – **Michael Goul** will discuss his experiences in building business school consensus for a cross-disciplinary MS program in business analytics. He will also discuss processes for gaining necessary approvals university-wide. His department was also successful in gaining approval for a new undergraduate degree in business data analytics to begin in Fall 2014. Designs of curricula for both programs leveraged papers and surveys published by the IS academic community. He will discuss marketing and student services for the two programs. Aligning another MS program in information management and an undergraduate degree program in computer information systems with the two new analytics program requires an ongoing focus on minimizing cannibalization.

Big Data in Curriculum (8 min) – **Ramesh Sharda** will share his experiences and lessons learned on integrating Big Data and related concepts in their graduate analytics curriculum. He will focus on experiences with different big data platforms, available support from software vendors, and selected experiential exercises that can be incorporated in analytics courses. This will also include an introduction to the offerings of various types of teaching materials available through Teradata University Network (TUN).

Partnership with Industry (8 min) – **Dave Schrader** will address some key issues of establishing and maintaining a strong partnership with the industry leaders in data analytics and related areas. He will share an inspiring vision of a “dream” model, what such a partnership entails, and how it can benefit the companies, students, programs, and colleges. In addition, he will share his insights about what companies value in new graduates in this area.

Discussions (20 min). The panel will then move to discussions. The moderator will ask the following questions one at each time and the panelists will take turns to comment:

- What kinds of analytics professionals are needed? How can we produce the right data scientists and analysts?
- How do we ensure an effective leadership (and manage politics) that will lead to a successful analytics program?
- Where and how do our faculty receive training on the latest knowledge of analytics, BI, and big data?
- How can a school maintain a healthy financial structure for analytics programs and centers?

Open Q&A (30 min). At this time, the panel will open to questions from the audience, and there will be a more general discussion of issues important to attendees.

Conclusion (3 min). Shu Schiller (moderator) will ask each panelist to give a take-away (tips, best ideas, etc.) for the panel attendees. Shu Schiller will thank the panelists and conclude the panel.

PANEL PARTICIPANTS

Michael Goul currently serves as Department Chair and Professor of Information Systems at the W. P. Carey School of Business at Arizona State University. He spearheaded the School’s development of the nine-month Master of Science in Business Analytics program that is a collaboration of the W. P. Carey School’s information systems and supply chain management departments. The degree is designed to equip recent college graduates and professionals with quantitative backgrounds for a career in business analytics. In addition, he is administering the launch of the W. P. Carey School’s undergraduate Bachelor of Science in Business Data Analytics degree. With nearly 30 years of experience at the W. P. Carey School, Dr. Goul is passionate about how the explosion of big data and cloud computing and ways the mobile/social web impact the global economy. His recent research interests are predictive analytics, decision support, and services computing.

Dr. Goul served for several years as Executive Director for the Teradata University Network, a global consortium of faculty members dedicated to advancing analytics and big data training in higher education.

Lakshmi Iyer is an Associate Professor and Director of Graduate Programs in the Information Systems and Supply Chain Management Department at the University of North Carolina at Greensboro. Her research interests are in the area of business intelligence, knowledge management, emerging technologies and its organizational impact, and gender gap in computing. Her research work has been published in or forthcoming in *Communications of the AIS*, *Journal of Association for Information Systems*, *European Journal of Information Systems*, *Communications of the ACM*, *Decision Support Systems*, *eService Journal*, *Journal of Electronic Commerce Research*, *International Journal of Business Intelligence Research*, *Information Systems Management*, and others. Dr. Iyer is a Board member of Teradata University Network, Chair of the Special Interest Group in Decision Support Systems (SIGDSS), and served as research track co-chair for BI Congress. She is also involved in community engaged outreach and scholarship that furthers the role of women in IT (wiit.uncg.edu). She is a member of the American Association of University Women (AAUW) and received the Dr. Shirley Hall Award from AAUW Greensboro Branch in April 2011 for exemplary contribution to enrich STEM education for women.

Ramesh Sharda is the interim Vice Dean of the Watson Graduate School of Management, Watson/ConocoPhillips Chair and a Regents Professor of Management Science and Information Systems in the Spears School of Business at Oklahoma State University. He also serves as the Executive Director of the Ph.D. in Business for Executives Program. He has coauthored two textbooks (*Business Intelligence and Analytics: Systems for Decision Support*, 10th edition, Prentice Hall and *Business Intelligence: A Managerial Perspective on Analytics*, 3rd Edition, Prentice Hall). His research has been published in major journals in management science and information systems including *Management Science*, *Operations Research*, *Information Systems Research*, *Decision Support Systems*, *Interfaces*, *INFORMS Journal on Computing*, and many others. He is a member of the editorial boards of journals such as the *Decision Support Systems* and *Information Systems Frontiers*. He is currently serving as the Executive Director of Teradata University Network.

David Schrader is a marketing director at Teradata. He is the leader for the Big Data marketing activities including the Teradata® Unified Data Architecture™ (UDA) initiative, which helps customers and prospects derive more value from Teradata, Teradata Aster, and Hadoop solutions. He has two decades of experience working with Teradata's global three thousand customers to help them use both traditional and big data to create analytical insights and predictive models for strategic and operational intelligence. He holds a Ph.D. in Computer Science from Purdue University, has published in the areas of customer management and pervasive business intelligence, and is a popular worldwide speaker on how companies can gain a competitive edge from using technology. Dr. Schrader is the producer of the famous "Business Scenario Investigations" (BSI), a CSI-like "show" on YouTube that demonstrates how data analytics can solve business problems. As a board member of the Teradata University Network, he is well connected with institutions and universities and spoke multiple times at AIS conferences.

Shu Schiller (moderator) is an Associate Professor of Information Systems in the Raj Soin College of Business at Wright State University. During year 2013-14, she took a Professional Development Leave to work with Teradata on big data and business data analytics. With co-author Dr. Schrader, together they presented the Economics of Big Data and Advanced Data Analytics at the 2013 Teradata Partners Conference. At the inaugural TEDxDayton conference in November 2013, she gave a talk on Beautiful Data and how analytics and visualization can be used to tell stories and to improve communication. In addition to her passion in data analytics, Dr. Schiller also has a strong interest in computer-mediated communication, multimedia in marketing, virtual teams and virtual worlds, and e-textbooks and e-learning. Her recent publications appeared in journals such as the *Journal of Advertising Research*, *Information Systems Management*, *Database Management*, *Small Group Research*, and *Journal of Information Systems Education*.

EQUIPMENT REQUIREMENTS

Projector, computer, and reliable wifi.

REFERENCES

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