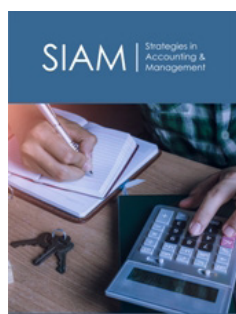# Are Universities Ready to Incorporate Data Analytics into the Accounting Curriculum?

Yuxin Shan*

Assistant Professor of Accounting and Finance, USA

*Corresponding author: Yuxin Shan, Assistant Professor of Accounting and Finance, USA

Introduction

Data analytics plays an important role in all different industries. Companies adapt their routine to data analytics-based strategies to stay on top of the competitive trend. Accounting profession has been turned into a technology-oriented future and will continuously add inputs into the profession transition. When we look forward to the future of audit in the year 2025, employers show strong demand for auditors who can master sophisticated technologies for data gathering and analysis to help companies identify risks, make more accurate predictions and enhancing the transparency of information [1]. Powerful data analytics tools will become mandatory for companies and serve as the springboard for the future of tax by allowing tax departments to use data to manage risks, minimize costs, discover opportunities and refine business decisions [2].

While the accounting industry expresses the enormous demand for graduates with data analytics skills, our next question is if our universities are ready to embrace the data analytics tools and adapt the accounting curriculum to the trend of accounting profession moving toward to a technology-basis practice. To answer this question, a survey of the current involvement of data analytics in the accounting curriculum was disseminated to accounting department chairs in December 2018 [3]. The survey received 150 responses out of 917 emails sent to department chairs using the Hasselback directory as the primary source. The results show that about 90% of respondents believe that data analytics play an important role in accounting and should be incorporated into the accounting curriculums. However, by the end of 2018, only about 32% of respondents state that accounting data analytics courses have been included as part of the accounting curriculum, which exposes the wide gap between the demand of employers on data analytics skills equipped students and the restricted supply of the corresponding accounting program. Among these universities with data analytics course, most of these universities add data analytics to their graduate program and some of the universities integrate data analytics into existing courses, like accounting information systems at the undergraduate level. Meanwhile, respondents bring up their concern about not having sufficient room in their curriculums for a new required course in data analytics but do believe the data analytics should be included at the junior core level as an elective. Though the current supply of the course in data analytics is in short supply, 59.3% of respondents plan to have an accounting data analytics course in the next three to five years. Considering available resources, about 64.1% of respondents plan to provide one standalone course while 20.4% of respondents believe both the junior-level and senior-level courses in data analytics will be added to their current accounting curriculum. For those universities that are not planning to establish a new course for data analytics, they may squeeze data analytics into other core

accounting courses, such as accounting information systems, financial accounting, and audit courses.

To facilitate data analytics being absorbed into the accounting program, the recently published textbook Data Analytics for Accounting Richardson [4] and the upcoming textbook Introduction to Data Analytics for Accounting Richardson [5] enable universities to create both undergraduate and graduate courses in data analytics. These two textbooks demonstrate the data analytics processes, techniques and tools that should be mastered by accounting students. As 2020 Gartner BI Magic Quadrant for Analytics and Business Intelligence Platforms recognized Microsoft and Tableau as leaders in Analytics and Business Intelligence Platforms with the best performance in the completeness of vision and the ability to execute, the above mentioned two textbooks provide click-by click hands-on lab practices using Microsoft Excel and Tableau [6]. Both the instructor and the students can easily solve accounting problems by following the step-by-step examples, using real-world data from Dillard's, Lending Clubs, College Scorecard, the state of Oklahoma and the financial statement from Fortune 100 companies extracted via XBRL. The textbooks help students develop the data analytics mindset by emphasizing the data analytics procedures using the IMPACT model Isson [7] and AMPS model [5].

The textbook Data Analytics for Accounting Richardson [4] which fits well at a graduate-level course reinforces advanced techniques and software that student will apply in their future work to extract, transform, and load through access to remote databases, to answer the business questions through appropriate comprehensive analysis and to communicate analysis results and conclusions using effective and efficient visualization tools in a dynamic environment. This textbook also discussed the implementation of more advanced tools, such as Access (including SQL), IDEA and Weka. The textbook, Introduction to Data Analytics for Accounting Richardson [5] explains each process of the AMPS model (ask the question, master the data, perform the analysis and share the story) in detail throughout the text. This book focuses on building skills with Excel and Tableau by summarizing a great number of analyses in financial accounting and managerial accounting conducted by Excel and Tableau. This book aims to enhance students' critical thinking skills and provides essential examples for descriptive analysis, diagnostic analysis, predictive analysis and prescriptive analysis applied in the accounting field. This book enables universities to establish a junior level accounting course in data analytic with a clear course structure and sufficient lab practice. This book will also be a solid supplemental textbook for core accounting courses, such as financial accounting, managerial accounting, auditing and accounting information systems. To sum up, though only one-third of universities currently provide the data analytics courses in the accounting curriculum, most of the universities have recognized the importance of data analytics and prepared to adapt to their accounting curriculum to the transition of the accounting industry. The available textbooks are expected to fill the gap and help universities accomplish their goal to help their student get ready for their jobs.

References

1. KPMG (2017) Audit 2025: The future is now.

2. EY Americas (2020) Tax administrations are leading digital disruptions, using data analytics as the springboard for the future of tax.

3. Richardson VJ, Shan Y (2019) Data analytics in the accounting curriculum. Advances in Accounting Education: Teaching and Curriculum Innovations 23: 67-79.

4. Richardson VJ, Terrell KL, Teeter RA (2019) Data analytics for accounting. McGraw-Hill, New York, NY, USA.

5. Richardson VJ, Teeter RA, Terrell KL (2020) Introduction to data analytics for accounting. McGraw-Hill, New York, NY, USA.

6. Garner (2020) Magic quadrant for analytics and business intelligence platforms.

7. Isson JP, Hattiott JS (2013) Win with advanced business analytics: Creating business value from your data. Hoboken, NJ, USA.