

# AAA Confers on Technology Education

University courses in data analytics are not tailored to the accounting profession, according to a PwC spokesperson who addressed the American Accounting Association's September 7-8 conference on "Accounting IS Big Data." Although there are strong data analytics programs at a number of universities, the key issue is that data scientists don't understand accounting, the firm believes. PwC emphasized that the skill set for tax professionals is changing from being able to operate basic spreadsheets to the ability to perform predictive analytics, tax planning, tax modeling and automation (robotics), data mining, artificial intelligence and machine learning.

## Six Key Skills for the Tax Professional of the Future

*KPMG Outlines Required Skills for Tax Professionals at AAA Conference*

1. Strong knowledge of tax law, process and procedure
2. Innovative and quick learning with strong communication and collaboration skills
3. Broad knowledge of the tax function and its relationship to organizational strategy and goals
4. Functional knowledge of a variety of self-service D&A technologies
5. Understanding data theory, structure and sources of data
6. Understanding of financial statements and financial and management accounting procedures



NASBA Technical Director Nigyar Mamedova reported that both PwC and KPMG updated the educators on trends in big data and analytics for tax professionals. She noted: "There are digital and automation tools like Datawatch and Aletrix which are used more often to extract, transform and load large sets of data. Tools like Tableau and Qlikview allow tax professionals to perform visualization on large data sets. These tools are interactive, as opposed to Excel which is more static."

The PwC tax innovation leader highlighted that his team has been trying to recruit experienced professionals with backgrounds in accounting, tax and data analytics, and this has been a challenging task since there is a lack talent in the market. PwC has trained 4,000 tax professionals and 42 client companies on Tableau and Altrix.

A panel of educators discussed latest updates on university programs in data analytics. North Carolina State University, well known for its strong data science program, created an executive committee to evaluate skills required for future accountants. The goal is to develop students who can connect with data scientists, understand how data can be extracted and analyzed, and ask data scientists the right questions. The university created a committee with representatives from across the campus in different disciplines (including technology, statistics, accounting, etc.) to develop a framework for their offerings. The university decided to revamp the program in statistics with the help of the IT department, and the school is now offering courses to undergraduate students on business analytics, information systems management, and economics and business statistics. At the master's level the university is now offering a Tax Analytics and Technology Certificate, which was developed by a hired industry expert. The university is currently also collaborating with two of the Big 4 firms to pilot these modules, and has spent approximately \$250,000 to develop new programs in data analytics.

The University of Illinois at Urbana-Champaign created a data analytics program from scratch. Currently, two undergraduate data analytics courses are under consideration by the university for all majors. The university has formed a successful partnership through the University of Illinois Deloitte Foundation for Data Analytics. The department head was a catalyst for change and worked with a well-qualified advisory committee, which realized that the university needed to develop new courses for their students. The university hired an external consultant to create new courses, which resulted in new courses being offered in the accounting department covering tools and applications.

KPMG has trained faculty members at Villanova University to conduct courses on data models, analysis and visualization, as well as data mining. The courses developed and introduced on campuses by KPMG to result in an MBA in data analytics will be discussed by Roger O'Donnell, KPMG Global Head of Audit Data and Analytics, at NASBA's 2017 Annual Meeting.

For more information gathered at the AAA conference, contact Technical Director Nigyar Mamedova at [nmamedova@nasba.org](mailto:nmamedova@nasba.org).

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