

# Chapter 11

## Integrating Big Data Analytics into Advertising Curriculum: Opportunities and Challenges in an International Context

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### ABSTRACT

*With the assistance of new computing technologies and consumer data collection methods, advertising professionals are capable of generating better targeted advertising campaigns. Big Data analytics are particularly worth noticing and have presented ample opportunities for advertising researchers and practitioners around the world. Although Big Data analytic courses have been offered at major universities, existing advertising curricula have yet to address the opportunities and challenges offered by Big Data. This chapter collects curricular data from major universities around the world to examine what Big Data has posed challenges and opportunities to existing advertising curricula in an international context. Curricula of 186 universities around the world are reviewed to describe the status of integrating these developments into better preparing advertising students for these changes. Findings show that only selected advertising programs in the U.S. have begun to explore the potential of the data analytics tools and techniques. Practical and educational implications are discussed.*

### INTRODUCTION

With the assistance of new technologies and consumer data collection methods, organizations now are able to improve their performance by making the best use of information flow (Andrew & Brynjolfsson, 2012). Andrew and Brynjolfsson (2012) predict that the tools and philosophies of Big Data are likely to challenge what people think of the value of experience, the practice of management, and the nature

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of expertise. They also claim that the challenges and opportunism posed by Big Data can be viewed as “a management revolution” (Andrew & Brynjolfsson, 2012, para 4). Similarly, the advertising industry also has shown “a big crush” on Big Data (Marshall, 2013) that has generated a dedicated topic session (“Big Data”) in *AdWeek.com* as well as professional conferences on Big Data, data-driven marketing and advertising, or data analytics (Kaye, 2014). Although Big Data have rapidly attracted the attention among business researchers and practitioners in recent years (Glass & Callahan, 2014; Ignatius, 2012; Minelli, Chambers, & Dhiraj, 2013), administrators in higher education institutions are slowly catching up with the potential impacts of Big Data in terms of leveraging student information for revenue generation and course planning, and improving pedagogical qualities by teaching relevant and essential skills (AACSB International, n.d.; Pearson, 2014; Soare, 2012). In an accreditation document published by AACSB International (n.d.), skills related to big data analytics have been listed as an essential area in General Business and Management Knowledge area: “Information technology and statistics/quantitative methods impacts on business practices to include data creation, data sharing, data analytics, data mining, data reporting, and storage between and across organizations including related ethical issues” (para 12). Another accreditation agency, ACBSP, widely discussed the impacts of big data analytics in its annual conference (Pearson, 2014). Therefore, companies such as PWC have claimed that data analytics can be viewed as a disruptive innovation for businesses and will have impacts on what constitute essential skills in business education (PWC, 2015). Therefore, Schmarzo (2014) summarizes that higher education institutions can improve students’ performance, engagement, and institution’s performance by integrating the following Big Data-powered applications into their management: student acquisition, student course major selection, student performance effectiveness, student workgroup, student retention, student advocacy, student lifetime value, etc.

Situated within a higher education institution context, international and national advertising programs are comparatively slow to react to the challenges and opportunities presented by Big Data and increasingly data-driven marketing and advertising practices in business. According to a recently published report commissioned by the Internet Advertising Bureau (IAB), among 50 top level business executives and thought leaders, predictive analytics and market segmentation tools are ranked as most commonly used information technologies (Kaye, 2015; Winterberry Group, 2015). Big Data is forecasted to create 4.4 million jobs by 2015 (Gartner, 2012; *ITBusinessEdge*, 2012). The gap between what existing advertising curricula teach and what the industry needs is likely to reduce students’ competitiveness in the job market and to worsen the challenges that Big Data has posed on the missions of higher education institutions.

Although Big Data analytic courses have been offered at major universities around the world (such as UT-Austin, Michigan State University, University of Ottawa in Canada, York University in U.K., etc.), present advertising curricula in major universities have yet to address the opportunities and challenges offered by Big Data. Industry experts have noticed the lack of talents produced by higher education institutions to meet the demand of Big Data specialists (*ITBusinessEdge*, 2012; Orihuela, & Bass, 2015; Patrizio, 2015). Integrated marketing communications guru, Dr. Don Schultz (2014) has offered his analysis of why integrating Big Data into current advertising and marketing research and practice is difficult. These problems include the amount, structure, and length of data as well as the unfamiliarity among many advertising and marketing educators about these technological advancements. The lack of Big Data proficiency among college instructors is likely to affect whether advertising and marketing students are prepared for these challenges. Given the growing importance of Big Data on the advertising industry as well as education, this chapter discusses and examines how Big Data has posed challenges to existing advertising curricula around the world.

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