Chapter 95
Big Data Analytics in Undergraduate Advertising Curricula: A Global Survey of Higher Education Institutions

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ABSTRACT

The rapid ascent of data-driven advertising practices has allowed advertising professionals to develop highly-targeted and personalized advertising campaigns. The success of data-driven advertising relies on if future professionals are proficient with basics of Big Data analytics. However, past research of undergraduate advertising curricula around the world has shown that higher education institutions tend to fall behind in offering the most up-to-dated training for advertising students. Findings have shown that undergraduate advertising programs have slowly taken advantage of the potential of the data analytics tools and techniques. This trend is observed among higher education institutions around the world. Practical, research, and pedagogical implications are discussed.

INTRODUCTION

Agency's abilities to manage audience's data effectively to identify and target the key market segment is critical to the success of advertising campaigns (Aitken, 2017). However, many advertising professionals are often found to be lacking in maximizing the capability of audience data (cited in Aitken, 2017). According to a 2017 survey by *AdAge* and Neustar, only 23% of its respondents indicate that they are

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presently making the best use of their data management platform (cited in Aitken, 2017). In a recent 2018 CES panel, organized by Deloitte Consulting, to discuss the future of advertising, several panelists have mentioned the importance of delivering relevant advertising to consumers after taking advantage of massive amount of data from consumers' connected devices (Deloitte Development LLC, 2018). New connected technologies (through Internet-of-Things, Over-the-Top, or Artificial Intelligence) have enabled a large amount of consumer data collection (Andrew & Brynjolfsson, 2012; Deloitte Development LLC, 2018). Organizations now are able to increase their performance by using their information flow to its full capacity (Andrew & Brynjolfsson, 2012). As a result, clients would expect more accountability of advertising agencies to deliver more effective advertising campaigns in the future.

The rapid ascent of data-driven advertising has also led some industry pundits to claim it will be "the next frontier" (Rothental, 2017). Data is "[a]dvertising's North Star" (Salesforce, 2018). The advertising industry has displayed "a big crush" on Big Data (Marshall, 2013) that has produced a dedicated topic session ("Big Data") in *AdWeek.com* as well as several professional conferences on related topics such as Big Data, data-driven marketing and advertising, or data analytics (Kaye, 2014; Yang & Kang, 2016). Ranging from brand preference to previous contact and online transaction information, CRM data is employed by 94% of the advertisers to track campaign effectiveness (Columbus, 2018). According to *Digital Advertising 2020* Report by Salesforce Research (2018), 47% of advertisers in North America plan to increase their use of 3rd party data to help them create personalized advertising messages to better target their market segments. The same survey of 900 global advertising leaders also reports that 91% of them have adopted or plan to adopt data management platforms (Salesforce Research, 2018).

Although the advertising industry has been catching up with Big Data analytics in various facets of their professional practices, global higher education institutions in charge of training future talents seem less responsive to challenges and opportunities of Big Data. According to Yang and Kang's (2016) survey of global advertising programs, only a few U.S. universities have incorporated Big Data courses into their advertising curricula in 2015. It is apparent that both international and national advertising programs are slow to react to the challenges and opportunities in the age of increasingly data-driven advertising practices. However, accreditation agencies such as AACSB International (n.d.) have included skills related to big data analytics as an essential area in General Business and Management Knowledge area. ACBSP, another accreditation agency of business programs, also widely discusses the impacts of big data analytics in its annual conference (Pearson, 2014). Furthermore, according to a report by Internet Advertising Bureau (IAB), 50 top-level business executives and thought leaders conclude that predictive analytics and market segmentation tools are ranked as most commonly used information technologies (Kaye, 2015; Winterberry Group, 2015). This is concurred by many industry experts who noticed the lack of talents produced by higher education institutions to meet the demand of Big Data specialists, in spite that the market is expected to reach USD$58.9 billion in 2020 (ITBusinessEdge, 2012; Orihuela, & Bass, 2015; Patrizio, 2015; Yang & Kang, 2016; Zhu, 2017). Advertising educators such as the renowned integrated marketing communications guru, Don Schultz (2014) once pointed out that many advertising and marketing educators are not familiar with these technological advancements, which results in their inabilities to develop more up-to-dated curricula to better prepare their students. Given the growing importance of Big Data for the advertising industry, the objectives of this study intend to provide an up-to-dated assessment of undergraduate advertising curricula among higher education institutions around the world. When compared with a similar curriculum assessment project (Yang & Kang, 2016), this study aims to demonstrate the integration of Big Data analytics courses into undergraduate advertising curricula among global higher education institutions.