Teaching Marketing Analytics Across A Spectrum Of Student Readiness: Techniques For Success

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Background and Brief Review of the Literature

Many more universities have become interested in offering marketing analytics at both the undergraduate and graduate levels. There are several reasons why the marketing educational paradigm is shifting towards incorporating marketing analytics into the curriculum. Most prominent among them is the reality that most organizations are utilizing data to make business decisions. It follows that graduates who are trained in analytics and how to approach marketing problems from an analytical angle are becoming more attractive to employers. Increasingly, when hiring for entry-level marketing positions, employers are now requiring potential employees to be competent in specific technical skills; such requirements have been steadily increasing and suggest that more than a third of entry level marketing positions have some aspect of analytics or data mining (Schlee and Harich 2010). In effect, marketing analytics courses can bridge the gap between the classroom and practice by offering students important skills in analyzing information in order to predict customer needs, grow market-share and increase the firm's profitability (D'Auria, 2006).

A cursory review of the literature shows that there has been scant examination of the pedagogy associated specifically with teaching marketing analytics. With that said, the notion of active learning applied to the marketing classroom can be said to predict success in a general sense (Young, 2002). Ultimately though, the emergence of Big Data has cast a wide shadow over the 21st century marketing classroom and instructors are grappling with the myriad skills and competencies required to prepare students in this area (Weinberg, Davis, & Berger, 2013). Adding another layer of complexity to the issue is the notion that marketing analytics courses included both offline and online customer data and activities, incrementally expanding the universe of data gathering and application tools necessary to cover in a given course (Stone, 2014).

Teaching Challenges

Marketing analytics requires the collection and measurement of marketing data to efficiently analyze marketing performance with the ultimate goal of optimizing marketing resources and customer value. Teaching such a course requires covering econometric models, statistical analysis, and using statistical programs. Additionally, some courses may require programming skills.

While the interest in offering marketing analytics has increased, there are certain inherent challenges that may arise from incorporating such courses into the marketing curriculum. One of the biggest challenges associated with teaching marketing analytics is adjusting to the wide range of student ability and interest in such a course. Marketing is a unique discipline in the sense that it covers a wide breadth of subject material. As a result, this has attracted a wide range of students coming from a diverse background with unique skill sets. For example, the skill set required to excel at a sales competition is vastly different from the skill set needed to excel in an analytics course. While of course, many students will be able to bridge these differences and excel across a wide spectrum of coursework, it is critical to be aware that not all students will be able to easily do this.

Given the wide range of student interests and abilities that the field of marketing attracts, it is not surprising that some students may feel apprehensive about taking a course in marketing analytics. Conversely, our experience has shown that a significant number of students enroll in a marketing analytics course due to their perception of its importance. Such a range of student abilities coupled with strong student interest can add an additional layer of complexity to successfully teaching such a course. In the next section, we discuss potential solutions to help offset some of these challenges.

Techniques for Success

One key way to be able to offer marketing analytics to a wide range of students is to incorporate an active learning approach into the curriculum. Such active learning techniques have the ability to help reduce student apprehension while increasing the likelihood of favorable student outcomes.

We propose engaging students in reciprocal peer-to-peer knowledge sharing exercises as a potential approach to effectively managing the inherent challenges associated with teaching marketing analytics across a wide range of student ability. Reciprocal peer-to-peer knowledge sharing is a teaching method that challenges students to exercise responsibility in the areas of knowledge acquisition, knowledge synthesis, and knowledge demonstration. From a pedagogical perspective, reciprocal peer-to-peer knowledge sharing represents a formalized approach to encourage and facilitate collaborative learning interactions among students. This form of simultaneous learning approach has been shown to enhance student learning outcomes by encouraging critical thinking and providing a supportive environment in which students can actively learn from and with one another (McKeachie and Svinicki, 2014; Boud, Cohen, & Sampson, 2014). According to Neal Whitman's 1988 report *Peer Teaching: To Teach is To Learn Twice*, the success of peer teaching environments is grounded in the fact that students interact as both a teacher and a learner and as such gain a deeper understanding of the material.

Sample Activity: Reciprocal Peer-to-Peer Knowledge Sharing for a Data Supported Case Analysis

Learning Objective

To enhance learning outcomes of marketing analytics coursework and encourage students of varying levels of aptitude and skill to think more critically about data related topics through the use of reciprocal peer-to-peer knowledge sharing. *Instructions*

Step 1: All students are assigned the same case study to read and summarize outside of class.

• Students are also required to record detailed notes as well as rate their learning experience based on the various sections of the case—ranking from 1 to 5 (where 1 indicates little comprehension of the topic and 5 indicates full comprehension of the topic)

Step 2: Make the case-related dataset accessible to the entire class and provide a brief overview of its contents and function.

Step 3: Students are assigned to groups of 2-4. These groups will then be asked to analyze a specific portion of a dataset in order to answer assigned questions related to the case.

- Student groups are encouraged to become 'peer experts' for the assigned portion of the dataset and are made accountable for conveying their acquired knowledge to the class in a demonstration-based presentation.
- Student groups establish group norms (e.g., members can negotiate ground rules, specify responsibilities, and set expectations), review the provided dataset, compare their individual notes from the assigned reading, and determine how to best synthesize the information in order to clearly present it back to the class.

Step 5: Student groups present the information for their assigned section of the case (as the 'peer experts' of the assigned material) to the entire class.

Step 6: After the assignment concludes, students will re-assess their learning experience by once again rating the various sections of the assignment—ranking from 1 to 5 (where 1 indicates little comprehension of the topic and 5 indicates full comprehension of the topic). This information will also assist the professor in tailoring review discussions.

Outcome

By the end of this activity, each student will have contributed to and benefited from an in-depth analysis of all of the key aspects of the case. More specifically, the reciprocal peer-teaching approach will have facilitated a deeper learning experience for all students—regardless of ability. This is largely due to the shared accountability and teaching responsibilities between the students. Additionally, students will have had the opportunity to assess their personal learning experience and identify potential peers for follow-up inquiries.

Discussion

When teaching material to a diverse state of student readiness for a marketing analytics class, it is critical to design the course appropriately and with relevant content to maximize student success. As discussed above, active learning engagement can result in increased student learning. However, with learning material requiring a higher level of cognitive investment, it may be advisable to apply a different initial approach. When material is new and unfamiliar to students, allowing them time to first process the new material quietly and contemplatively may be preferable to an applied activity; such an activity may interfere with cognitive processing (Sweller and Chandler 1994). Furthermore, research suggests that students are able to learn more when instructors provide examples that are concrete and relatable. When students in introductory research classes were introduced to material focused on substantive issues focusing on interesting social problems, learning increased (Bridges et al. 1998; Markham 1991).

Additionally worth considering is the issue of data literacy as a foundation to marketing analytics pedagogy. Data literacy, or the ability to find and interpret data in order to draw conclusions in an ethical way is predicated upon a complex skill set that incorporates finding organizing and interpreting appropriate raw data as well as communicating it (Carlson, Fosmire, Miller, & Nelson, 2011). Students in marketing analytics courses are apt to have varying degrees of readiness with regards to research and data gathering, statistical analysis and data communication. Incorporating instruction that encourages students to gather and massage data as well as communicate its importance represents a critical foundation for such courses generally. Taking a data literacy approach to marketing analytics classes by incorporating instruction in data gathering, modeling and visualization can be an important step in leveling the playing field and improving student readiness by developing core competencies required for success in learning analytics (Calzada Prado, & Marzal, 2013).

Conclusion

Any marketing department can successfully incorporate marketing analytics into their curriculum regardless of student ability. We believe an active learning centric marketing analytics course is the key to appealing to a wide range of students. When implementing an active learning approach, a few general guidelines can help to encourage content mastery. Marketing analytics is a course that can range dramatically in its depth of technical material. Therefore, it is absolutely critical to select appropriate material based on your students' ability level. Additionally, having students with a wide range of ability can make this challenging. If you are in such a situation, we suggest selecting material that will appeal to 80 percent of your classroom. Our experience is that there may be a few students who will require tremendous outside instruction and/or resources.

Additionally, be mindful of how much material is being covered at one time. While some of this material may seem easy or familiar to us, most students have not seen this material. Some instructors may feel that they must cover all of the material, including all of the technical nuances associated with each methodology. While we definitely do not want to discourage such a thorough approach to pedagogy, we strongly caution that instructors make an honest assessment of student ability. Also, some topics may require more than one week to effectively cover. Reviewing the material frequently and even posting

online videos that students can access repeatedly can be useful for student mastery. While our focus has been on teaching a marketing analytics course, this active learning framework is suitable for a wide range of marketing courses. We believe that by utilizing an active learning approach incorporating some of the specific classroom techniques highlighted above, marketing analytics can be accessable for all students.

References

- Boud, D., Cohen, R., & Sampson, J. (Eds.). (2014). *Peer learning in higher education: Learning from and with each other*. Routledge.
- Bridges, G. S., Gillmore, G. M., Pershing, J. L., & Bates, K. A. (1998). Teaching quantitative research methods: A quasi-experimental analysis. *Teaching sociology*, 14-28.
- Calzada Prado, J., & Marzal, M. Á. (2013). Incorporating data literacy into information literacy programs: Core competencies and contents. *Libri*, 63(2), 123-134.
- Carlson, J., Fosmire, M., Miller, C. C., & Nelson, M. S. (2011). Determining data information literacy needs: A study of students and research faculty. *portal: Libraries and the Academy*, *11*(2), 629-657.
- D'Auria Stanton, A. (2006). Bridging the academic/practitioner divide in marketing: An undergraduate course in data mining. *Marketing Intelligence & Planning*, 24(3), 233-244.
- Lopez, E. (2004). McKeachie's Teaching Tips: Strategies, Research, and Theory for College and University Teachers (review). *The Review of Higher Education*, 27(2), 283-284.
- Markham, W. T. (1991). Research methods in the introductory course: To be or not to be?. *Teaching sociology*, 464-471.
- Schlee, R. P., & Harich, K. R. (2010). Knowledge and skill requirements for marketing jobs in the 21st century. *Journal of Marketing Education*.
- Stone, M. (2014). Building digital skills through training. *Journal of Direct, Data and Digital Marketing Practice*, *16*(1), 3-14.
- Sweller, J., & Chandler, P. (1994). Why some material is difficult to learn. *Cognition and instruction*, *12*(3), 185-233.
- Weinberg, B., Davis, L., & Berger, P. (2013). Perspectives on big data. *Journal of Marketing Analytics*, 1(4), 187-201.
- Whitman, N. A., & Fife, J. D. (1988). Peer Teaching: To Teach Is To Learn Twice. ASHE-ERIC Higher Education Report No. 4, 1988. ASHE-ERIC Higher Education Reports, The George Washington University, One Dupont Circle, Suite 630, Dept. RC, Washington, DC 20036-1183.
- Young, M. R. (2002). Experiential learning= hands-on+ minds-on. *Marketing Education Review*, 12(1), 43-51.