Content and Method in the Teaching of Marketing Research Revisited

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ABSTRACT

This paper presents the findings from a survey of marketing research faculty. The study finds SPSS is the most used statistical software, that cross tabulation, single, independent, and dependent t-tests, and ANOVA are among the most important statistical tools according to respondents. Bivariate and multiple regression are also considered relatively important.

Keywords: Marketing Research Pedagogy, Teaching Marketing Research

INTRODUCTION

The field of marketing research has seen much development over the past fifty years. Adaption of methodologies borrowed from other disciplines including the social and behavioral sciences, physical sciences, business administration and economics have generated a broader understanding of marketing concepts and improved techniques for solving marketing problems. Combined with the sophistication of both hardware and software used for data collection, data analysis, reporting and data presentation, marketing researchers are equipped with a new kind of marketing toolbox. With the evolution of marketing research tools comes the need for improved pedagogical approaches to training students.

Lazer and Kelley (1960) suggested that marketing students and practitioners should take an interdisciplinary approach to add insight to the ways of thinking about marketing problems. In a seminal piece on the topic, Heidingsfield suggested there are two types of marketing researchers. The first implies the training of a marketing research technician, whose training is similar to that of a statistician. A marketing research technician would make little contribution except for his techniques of measurement – collecting and tabulating data, and summarizing the findings (Heidingsfield 1947).

The second type of training Heidingsfield discusses is that of a marketing research economist, who will also use techniques of statistical measurement, but will further possess an understanding of the fields of marketing and economics. This type of training tends to produce marketing researchers who can make "constructive recommendations based upon the results of his research" (Heidingsfield 1947). Unfortunately, the pedagogical approach to teaching statistics in business schools often conflicts with the way statistics are used in decision making in business environments and has left students without the skills needed to apply the methods effectively (Maleyeff and Kaminsky 2002).

Data from the Third International Mathematics and Science Study (TIMSS) has been used to document the level of quantitative literacy in the US. The results of this data suggest that students' understanding of the nature of mathematics is below average. Their ability to apply mathematical content to everyday situations is also weak. However, US students do have awareness and appreciation for the usefulness of mathematics and view the subject as being favorable (Wilkins 2000). Quantitative literacy is defined as having an everyday understanding of mathematics. More specifically, quantitative literacy includes having knowledge of mathematics that enables one to understand the nature, development, and social impact of its applications. In addition, quantitative literacy includes one's reasoning capabilities and confidence to function in a quantitative situation. Knowledge of everyday mathematics, or quantitative literacy, is a vital part of life in the 21st century, as one will undoubtedly be faced with mathematical problems both at work and during daily activities (Wilkins 2000). This is especially true in a marketing research environment in which statistical analysis is necessary for decision-making.

Furthermore, this type of reasoning plays a role in one's ability to take an open-ended question and turn it into something solvable. From a business perspective, employers are looking for marketing professionals who have developed the ability to identify problems, analyze and interpret data, and make relevant decisions – simply stated, solve real-world problems (Wilkins 2000).

As a result of advancements in the industry and the increased complexity of today's business challenges, nearly all business school marketing departments in the United States

require undergraduate marketing majors to complete a course in marketing research prior to graduation. Success in this course relies largely on a students' ability to apply data analysis techniques to practical business applications. These skills are often learned in earlier courses such as business statistics, but many instructors believe that students do not retain an understanding of statistics that is transferable to marketing and other functional areas (Nonis and Hudson 1999).

Marketing research is generally taught as an applications course as opposed to statistics which is taught as a mechanics course. Statistics courses generally provide knowledge and then challenge us to apply that knowledge in an effort to solve a problem correctly. The focus of a marketing research course varies greatly from that of a statistics course. In marketing research, the goal is to use a correct answer to solve a unique business challenge (Nonis and Hudson 1999).

Industry in the United States, and worldwide, is making heavy use of databases and database marketing. Large investments of time and money have been made by corporations to develop and collect information with the primary use being for marketing purposes. Although industry is heavily involved in using or attempting to use databases to make data driven decisions, academia has not yet caught up with the industry practice of database research as it relates to the marketing research discipline (Orsini 2002). An examination of several current editions of introductory marketing textbooks indicates that they have begun to include mention of database research. The existence of large databases has allowed the precise segmentation and targeting of those more likely to make purchases of specific types of products, thus direct marketing has been among the leaders of database research methods (McDonald 1998). The current editions of marketing research textbooks, and business research textbooks, have typically begun to contain discussions of databases and database research in their sections on decision support systems, or secondary data, where their previous editions did not (Orsini 2002).

The College of Business at a mid-sized Midwestern state university undertook an initiative to dramatically change the undergraduate business curriculum. The changes involved included adding a second statistics course to the requirements for all majors within the College of Business. For the Marketing Department this meant that we needed to re-examine some aspects of our curriculum, particularly a Marketing Analysis course and a Marketing Research course.

Because students would now be exposed to single, dependent, and independent t-tests, ANOVA, cross tabulation with Chi Square tests, and multiple regression in the statistics sequence we needed to consider how this might impact the content that we include in the marketing courses mentioned above. As a part of our curricular review we wanted to see what was being done at other schools in the Marketing Research course and what faculties at other institutions see as important content for this course. We also wanted to re-evaluate texts with specific interest in their coverage of statistical topics and determine what technologies were being utilized. The use of technology in the classroom often allows students to focus on interpretation of results while traditional number crunching leads to better understanding of the analysis (Spinelli 2001).

This paper investigates current pedagogical approaches to teaching Marketing Research in an attempt to illustrate how the content and teaching of the subject has evolved over the past decades. The authors were especially interested in determining whether or not current marketing students were being trained to be marketing research technicians or marketing research economists.

METHODOLOGY

A mail survey research project was conducted to investigate certain aspects of what faculties are doing with relation to the teaching of Marketing Research. The sampling frame used for a faculty survey related to the teaching of marketing was a list of Marketing Research professors obtained from the Prentice Hall *Marketing Faculty Directory 2002-2003*, compiled by James Hasselback. Faculties were selected if they indicated an interest area in Marketing Research or a related area. This resulted in the selection of 423 faculties. Due to faulty addresses 14 were returned as undeliverable. Recipients who did not teach marketing research were asked to pass the survey on to someone in their department who did teach this course.

We received responses from 147 faculties, a response rate of 35.9% (based on the 409 mailed and not returned for having an incorrect address). Based on the initial mailing of 423, the response rate would be 34.8%. Responses came from professors representing 42 states. The state with the most responses was Ohio with 14 followed by Texas with 13. Thus, there was good geographic dispersion in the sample of 147.

Table 1. General characteristics of the 147 survey respondents.

Characteristic	Sample Results
Respondent's Gender	Female - 23.1% Mean age = 46.6 * Mean Years Teaching Marketing Research = 11.8 * Male - 76.9% Mean age = 52.6 * Mean Years Teaching Marketing Research = 17.5 *
Respondent's Education Level	Both Genders: Masters Degree - 2% Females - 5.9%; Males - 0.9% Both Genders: Doctoral Degree - 98% Females - 94.1%; Males - 99.1%
Level of Courses Taught (Some respondents taught at multiple levels)	Both Genders: Undergraduate - 90.5 % Females - 97.1%; Males - 88.5% Both Genders: Masters Level - 42.9% Females - 20.6%; Males - 49.6% Both Genders: Doctoral - 8.2% Females - 0.0%; Males - 10.6%

* Differences in age and number of years teaching marketing research between genders are significant at $\alpha = .05$.

Among the respondents there were more males than females, ages ranged from 29 to 77 with a mean age of 51.3, and the majority of the sample had a doctoral degree. The number of years teaching Marketing Research ranged from 0 to 35 with a mean of 16.2. Most professors taught undergraduate classes, some taught masters level classes, and a few taught doctoral level classes. Typical class sizes for undergraduate classes ranged from 3 to 75 students with a mean of 32.7, masters classes ranged from 1 to 45 students with a mean of 23.4, and doctoral level classes ranged from 4 to 30 students per class with a mean of 10.1. Most schools require

Marketing Research for an undergraduate major (85%), and the number of students on the campuses represented ranged from 1,000 to 70,000 with a mean of 13,961.5 students. Table 1 contains an overview of the demographic characteristics of the sample.

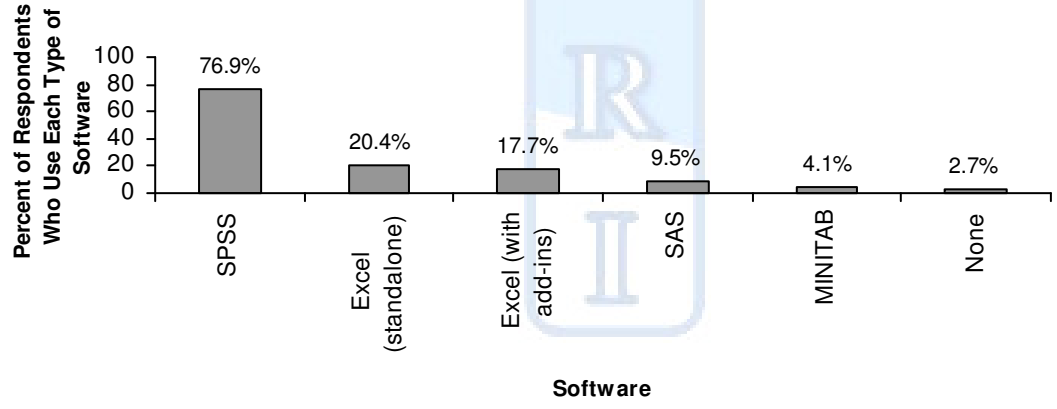
FINDINGS

Software Use. Respondents were asked to indicate which software products they have students use for statistical analysis. Figure 1 summarizes our findings in this regard. SPSS is used more often than any other software. SPSS is widely used in the marketing research industry and has, for some time, been offered in a student version which may be why we see it used so much more than other software in the teaching of marketing research.

SPSS is followed by Excel, either as stand-alone software or with add-ins. Excel is a relatively standard spreadsheet that most students have on their personal computers as part of a software bundle and it is commonly used in businesses, which may be why we see it used frequently in teaching marketing research. However, wide use of native Excel may be a cause for concern given the errors that have been documented in Excel's statistical routines. (McCullough, 2005 and 2006) The use of Excel add-ins may not be of as much concern but it might be wise to verify correctness of such add-ins by comparing results to those found in statistical software such as SPSS, SAS, or MiniTab. The latter two statistical packages were also mentioned by our respondents.

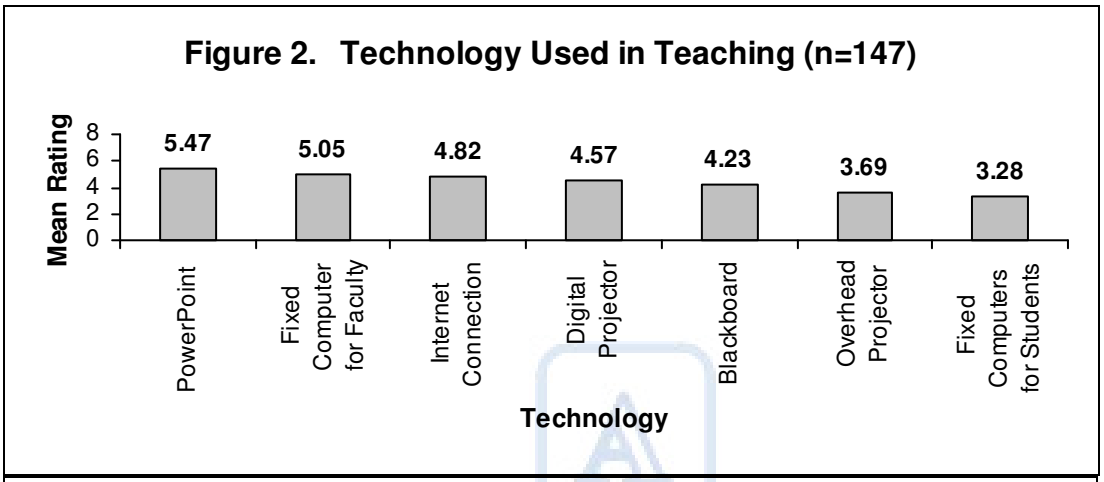
Only 2.7% of respondents indicated that they did not use any software for statistical analysis when teaching marketing research. The total of the percentages shown in Figure 1 add to over 100% because many faculty indicated use of more than one type of software.

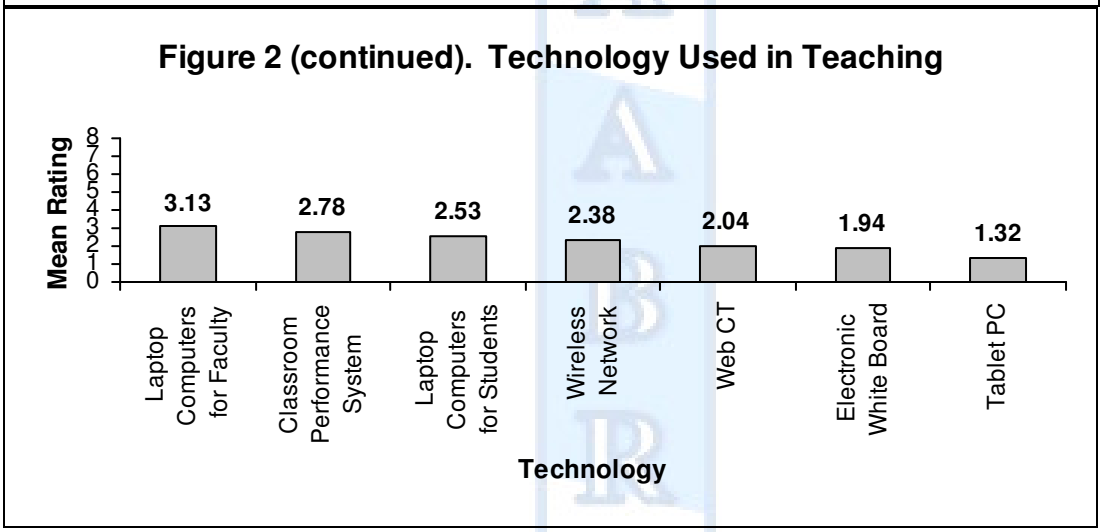
Figure 1. Types of Software Used for Statistical Analysis (n=147)



Use of Teaching Technologies. A list of various technologies was provided, and respondents were asked to indicate how frequently each was used based on a scale of 1 to 7 with 1 being very infrequently to 7 being very frequently. As shown in Figure 2, PowerPoint is the most frequently used followed by fixed computers for the faculty, Internet connection, and digital projectors. We suspect that a follow-up survey would show increased use of laptop computers by both faculty and students, based on anecdotal observations at our own campus. In general, women are using technology in teaching more so than men. Women are significantly higher ($\alpha = 0.05$) in the frequency of use of a Classroom Performance System, Fixed Computers

for Students, and Web CT. One reason women may be using more technology than men could be that they are in general younger and thus may be more inclined to adopt new technologies.





* Percent answering either "Frequently" or "Very Frequently" (6 or 7 on a 1 to 7 scale)

Use of Statistical Tools. Respondents were asked to indicate, on a scale of 1-7 with 1 being not important and 7 being important, the importance they placed on each of 31 statistical methods in their teaching of marketing research (not in their own research). In the questionnaire the statistical tools were arrayed in alphabetic order as shown in Appendix A.

Table 2 contains a summary of the importance ratings for various statistical tools ordered from the highest mean evaluation to the lowest mean evaluation. Cross tabulations, hypothesis testing, Chi-square tests, and grouped t-tests were rated among the most important methods used in teaching. These methods are commonly used in marketing and mathematics classes. Multiple regression is also taught in many classes. Students should have a general understanding of some of these methods before they are exposed to them in their marketing research classes because these concepts are taught in basic mathematics classes. They are also used in businesses. These methods are easier for students to grasp compared to other methods such as ANOVA or MANOVA. Some of the methods that are not as important to professors are Automatic Interaction Detector Analysis, Neural Networks, and Log Linear Models. These methods tend to be more complex and not taught as much in the classroom.

In general, there is little difference between the amount of importance men and women place on different statistical methods used in teaching. The only significant difference is when rating Conjoint Analysis. Men appear to use this method more often than women.

Table 2. Importance of Various Statistical Tools: Ordered by Mean Importance Score from Most to Least Important

	n	Mean	Std. Deviation	% Answering Important or Very Important
Cross tabulations	140	6.18	1.52	80.7
Hypothesis testing	139	6.10	1.49	80.6
Chi-Square tests	141	5.94	1.49	74.4
Grouped (independent sample) t-tests	137	5.88	1.63	75.9
Pearson correlation	137	5.50	1.81	63.5
Single sample t-tests	136	5.34	2.04	61.7
F-tests	134	5.19	2.10	58.9
ANOVA	138	5.03	1.93	47.8
Univariate tests of significance	129	4.98	2.22	55.0
Bivariate linear regression analysis	134	4.83	2.02	45.5
Z-tests	136	4.79	2.17	48.5
Paired (dependent sample) t-tests	137	4.74	2.07	46.0
Multiple regression analysis	139	4.42	2.23	41.0
Multivariate analysis	131	3.44	2.15	18.3
Spearman rank correlation	133	3.34	2.16	18.8
Factor analysis	137	3.23	1.91	14.6
Stepwise multiple regression	129	3.22	2.21	20.2
Cluster analysis	136	2.86	1.91	12.5
Rank sum tests	132	2.71	2.02	12.1
Discriminate analysis	135	2.67	1.71	6.7
Conjoint analysis	134	2.57	1.73	6.0
Kruskal-Wallis	132	2.38	1.80	7.6
Kolmogorov-Smirnov	131	2.23	1.62	5.4
Manova	133	2.23	1.58	3.8
Wilcoxon matched pairs test	128	2.12	1.68	6.2
Mann-Whitney	131	2.00	1.62	6.2
Cramer's V	129	1.91	1.56	5.4
Correspondence analysis	128	1.79	1.37	3.9
Log linear models	129	1.74	1.42	5.5
Neural networks	129	1.49	1.15	2.4
Automatic interaction detector analysis	124	1.31	.77	0.0

* 25.0%	23.3%	17.4%	17.3%	14.1%	12.4%	4.8%

Qualitative Findings. Perhaps the most interesting results from our survey were in the responses to the open-ended question, "If you could make one change to how you teach marketing research or the materials you use what would that change be?" Most respondents had more than one change to offer and one respondent had a four-page response. Due to the great response to this question, it is important to include these findings.

Several respondents referred to the need to have more time (including an additional course or extending to a second semester) and many sought smaller class sizes. There were also numerous comments about textbooks including the need for less expensive textbooks; textbooks that are easier to understand and provide real world data-driven cases and examples; more "research" oriented textbooks instead of technique; and textbooks incorporating the most current version of SPSS, relational databases, CRM, and emphasis on qualitative techniques .

Many respondents felt the need for more practice with data using computer labs; more analysis and interpretation of results for better recommendations; and emphasis on the practical application of marketing research. Better preparation of students during their statistics class prerequisite or the addition of a prerequisite statistics class so that more time could be spent on the interpretation and application was also mentioned.

A few of the respondents specifically suggested that there be two courses offered within Marketing Research, one with emphasis on theory and technique for students interested in statistics and the other focused on training to be marketing managers. From these responses, it appears that Heidingsfield's discussion regarding the two types of marketing research training is still being debated six decades later.

CONCLUDING COMMENTS AND FUTURE RESEARCH

We have examined some of the marketing research texts to consider the statistical coverage. To date we have only done this by looking for terms identified in the index of each text. For this reason the findings to date are very tentative. However, in case they are of interest to readers of this paper we are including a summary of what we have found in Appendix B.

Based on our findings, there is a need for further examination of the pedagogical approach to teaching marketing research. It appears that faculty are not satisfied with the textbooks and tools currently being offered. Additionally, administrators should evaluate class sizes, course offerings and access to computers and technology to further enhance the training and education of future marketing researchers and marketing managers.

Further investigation of the importance given to Conjoint Analysis by men more than women is warranted but beyond the scope of this initial exploratory study. The finding that women are more frequent users of certain technologies should be examined. Future research should also consider the possible correlation between amount of budget spent on marketing of research software to university and actual adoption and usage of these products within marketing research classes.

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Appendix A

Cover Letter and Questionnaire

Dear Marketing Professor,

As part of my assignment for the current semester I am investigating certain aspects of what other schools are doing with relation to the teaching of Marketing Research. Your name was selected from the Prentice Hall *Marketing Faculty Directory 2002 - 2003*, compiled by James Hasselback. If you do not teach marketing research would you please pass this on to one of your colleagues who does?

Your participation will help us identify what other schools are currently doing and will be helpful as we evaluate our curriculum and prepare custom materials for our courses. This questionnaire is being sent to a relatively small sample of people who teach Marketing Research so ***your input is especially important***. It is designed so that you can complete the survey in just a few minutes.

Your responses will be ***strictly confidential and anonymous***. You need not identify yourself or your school. Please find enclosed a postage-paid business reply envelope for your convenience. We look forward to receiving your completed questionnaire. Thank you very much for your time and information.

Sincerely,

PS. If you would like a summary of the findings enclose a business card (or other card with a mailing address) with your questionnaire. I will have someone from our clerical staff open returns and remove such cards before I see the questionnaire.

1. Please indicate which software you have students use for statistical analysis. (Check all that apply)
   ____ Excel (standalone)
   ____ Excel (with add-ins)
   ____ MINITAB
   ____ SAS
   ____ SPSS
   ____ None
   ____ Other Please specify _____

2. Please indicate how frequently you use the following in your teaching using a 1 to 7 scale with 1 being very infrequently to 7 for very frequently. Circle 8 for not applicable.

	Very Infrequently						Very Frequently	
Blackboard	1	2	3	4	5	6	7	8
Classroom performance system	1	2	3	4	5	6	7	8
Digital Projector (eg. Visualizer)	1	2	3	4	5	6	7	8
Electronic white board	1	2	3	4	5	6	7	8
Fixed computer for faculty	1	2	3	4	5	6	7	8
Fixed computers for students	1	2	3	4	5	6	7	8
Internet connection	1	2	3	4	5	6	7	8
Laptop computer for faculty	1	2	3	4	5	6	7	8
Laptop computers for students	1	2	3	4	5	6	7	8
Overhead projector	1	2	3	4	5	6	7	8
PowerPoint	1	2	3	4	5	6	7	8
Tablet PC	1	2	3	4	5	6	7	8
Web CT	1	2	3	4	5	6	7	8
Wireless network	1	2	3	4	5	6	7	8
Other: Please specify _____	1	2	3	4	5	6	7	8

3. If you use a laptop in class is it…
1. Your personal laptop
2. A laptop provided by the department or the college
3. Not applicable; do not use a laptop in class

4. On a scale of 1 to 7, with 1 being not important and 7 being very important, please indicate how important the following statistical methods are in your teaching of marketing research course(s). Please indicate the course level you have in mind as you answer this question – answer for the **one** level you teach the most often. **Check only one level.**

   ____ Bachelor
   ____ Masters
   ____ Doctorate

	Not Important						Very Important
Automatic Interaction Detector Analysis	1	2	3	4	5	6	7
ANOVA	1	2	3	4	5	6	7
Bivariate linear regression analysis	1	2	3	4	5	6	7
Chi-Square tests	1	2	3	4	5	6	7
Cluster analysis	1	2	3	4	5	6	7
Conjoint analysis	1	2	3	4	5	6	7
Correspondence analysis	1	2	3	4	5	6	7
Cramer's V	1	2	3	4	5	6	7
Cross tabulations	1	2	3	4	5	6	7
Discriminate analysis	1	2	3	4	5	6	7
Factor analysis	1	2	3	4	5	6	7
F-tests	1	2	3	4	5	6	7
Grouped t-tests (independent sample)	1	2	3	4	5	6	7
Hypothesis testing	1	2	3	4	5	6	7
Kruskal-Wallis	1	2	3	4	5	6	7
Kolmogorov-Smirnov	1	2	3	4	5	6	7
Log linear models	1	2	3	4	5	6	7
Mann-Whitney	1	2	3	4	5	6	7
MANOVA	1	2	3	4	5	6	7
Multiple regression analysis	1	2	3	4	5	6	7
Multivariate analysis	1	2	3	4	5	6	7
Neural networks	1	2	3	4	5	6	7
Paired t-tests (dependent sample)	1	2	3	4	5	6	7
Pearson correlation	1	2	3	4	5	6	7
Rank sum tests	1	2	3	4	5	6	7
Single sample t-tests	1	2	3	4	5	6	7
Spearman rank correlation	1	2	3	4	5	6	7
Stepwise multiple regression	1	2	3	4	5	6	7
Univariate tests of significance	1	2	3	4	5	6	7
Wilcoxon matched pairs test	1	2	3	4	5	6	7
Z-tests	1	2	3	4	5	6	7
Other: Please specify _____	1	2	3	4	5	6	7

5. Are you…
   1. Male
   2. Female

6. What is your current age?
_____

7. What is your highest level of education completed?
    1. Bachelor's Degree
    2. Master's Degree
    3. Doctoral Degree

8. For how many years have you been teaching marketing research?
_____

9. Please indicate the level of course(s) you teach in marketing research and the typical class size for each level you teach.

Undergrad	Yes	No	Typical Class Size _____		
Masters			Yes	No	Typical Class Size _____
Doctorate	Yes	No	Typical Class Size _____		

10. Is a marketing research course required for undergraduate majors at your school?
    ____ Yes ____ No

11. Approximately how many students attend classes on the campus where you teach most often? _____

12. If you could make one change to how you teach marketing research or the materials you use, what would that change be?

Thank You for Your Participation

Appendix B

Initial Review of Statistical Coverage in Marketing Research Texts (Based on the index of each text, not a review of actual content)

Author Copyright Topics	*Burns & Bush 2006*	*Churchill & Iacobucci 2005*	*Churchill & Brown 2004*	*Cooper & Schindler 2006*	*Malhotra 2002*	*Sudman & Blair 1998*	*Hair, Bush & Ortinau 2000*	*Tull & Hawkins 1990*	*Dillon, Madden & Firtle 1987*	*McDaniel & Gates 2006*	*Zikmund (2nd Ed) 2003*	*Zikmund (8th Ed) 2003*	*Lehmann, Gupta & Steckel 1998*	*McDaniel & Gates 2002*	*Kumar, Aaker & Day 2002*
Automatic Interaction Detector Analysis				Yes		Yes			Yes				Yes		
ANOVA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bivariate linear regression analysis	Yes		Yes	Yes	Yes	Yes	Yes			Yes	Yes			Yes	Yes
Chi-Square tests	Yes	Yes	Yes	Yes	Yes	Yes			Yes		Yes	Yes	Yes	Yes	Yes
Cluster Analysis		Yes		Yes		Yes	Yes	Yes	Yes			Yes	Yes	Yes	
Conjoint Analysis		Yes	Yes			Yes	Yes	Yes	Yes				Yes	Yes	
Correspondence Analysis		Yes		Yes				Yes					Yes		
Cramer's V			Yes	Yes	Yes										
Crosstabulations	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Discriminant Analysis		Yes				Yes	Yes	Yes	Yes			Yes	Yes		
Factor Analysis		Yes		Yes		Yes	Yes	Yes	Yes			Yes	Yes	Yes	
F-tests				Yes	Yes		Yes					Yes	Yes	Yes	
Grouped t-tests (independent sample)	Yes		Yes									Yes			
Hypothesis testing	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes

AUTHOR COPY-RIGHT *TOPICS*	*Bush & Burns 2006*	*Churchill & Iacobucci 2005*	*Churchill & Brown 2004*	*Cooper & Schindler 2006*	*Malhotra 2002*	*Sudman & Blair 1998*	*Hair, Bush & Ortinau 2000*	*Tull & Hawkins 1990*	*Dillon, Madden & Firtle 1987*	*McDaniel & Gates 2006*	*Zikmund (2nd Ed) 2003*	*Zikmund (8th Ed) 2003*	*Lehmann, Gupta & Steckel 1998*	*McDaniel & Gates 2002*	*Kumar, Aaker & Day 2002*
Kruskal-Wallis				Yes				Yes				Yes			
Kolmogorov-Smirnov		Yes	Yes	Yes				Yes						Yes	
Log linear models		Yes				Yes							Yes		Yes
Mann-Whitney				Yes				Yes				Yes			
MANOVA				Yes		Yes									
Multiple regression	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes			Yes
Multivariate analysis		Yes	Yes	Yes	Yes	Yes	Yes				Yes	Yes		Yes	
Neural Networks	Yes	Yes								Yes	Yes	Yes	Yes	Yes	
Paired t-tests (dependent sample)			Yes												
Pearson correlation	Yes	Yes	Yes	Yes	Yes		Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Rank sum tests												Yes			
Spearman rank correlation		Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Stepwise multiple regression	Yes					Yes									Yes
Univariate tests of significance		Yes		Yes	Yes	Yes									
Wilcoxon matched pairs test				Yes				Yes				Yes			
Z-tests	Yes	Yes	Yes	Yes	Yes		Yes				Yes	Yes		Yes	Yes