

# OPTIMAL ATTRIBUTES OF MARKETING GRADUATES FOR RETAIL EMPLOYMENT

Sandra Mottner, Wendy Wilhelm and Terrell Williams, Western Washington University  
College of Business and Economics, Bellingham, WA 98225-9073; 360-650-2403.

## ABSTRACT

Marketing educators need to know the retail industry's interest in students' skills and attributes. Therefore, this research sought to determine the optimal combination of a candidate's level of communication skills, quantitative skills, interpersonal skills, critical thinking skills, technology skills and whether or not they had participated in a retail summer internship. Multinomial logit analysis of the choice data revealed that interpersonal skills and completion of a retail internship are the most important determinants of candidate choice.

## INTRODUCTION

Through management training positions, internships and on-the-job programs the retailing industry is a major employer of new college graduates. Consequently, it is desirable for colleges and marketing and retailing programs, in particular, to understand the needs of retail firms with respect to these positions. Understanding the needs of the retail managers responsible for hiring should aid the marketing educator in better developing the skills demanded by these managers. While this area of inquiry is not new with respect to retailing (Donnellan 1996; Nicholson and Cushman 2000), or marketing in general (Ackerman, Gross and Perner 2003; Yoo and Donthu 2002), it is one that needs to be constantly updated in this dynamic industry and one that will benefit from a new perspective – in particular from an "optimal combination of attributes" perspective. In general, studies have treated attributes one at a time, asking respondents to rate or rank them according to importance. Ratings often lead to halo effects as many or all attributes are rated as important because respondents think they should be important. Rankings do not account for tradeoffs in compensatory decision models.

In reality, job candidates are likely to be evaluated according to a set of qualities and skills, applying a compensatory or non-compensatory decision criterion across all attributes. We need to understand the evaluation process in a multidimensional context. Therefore, this research identifies and examines those skills that marketing educators can influence and that are important to retail managers, in order to support adjustments in marketing curricula to better meet the needs of students and industry.

The research objective was to identify the optimal composition of attributes and trade-offs among those attributes that retail managers make when choosing among college educated applicants. Therefore, a set of skills and characteristics was developed based on a review of the literature and in-depth interviews with retail executives responsible for hiring decisions. The attribute/skill set was reduced to the six determinant attributes through pre-testing. A conjoint experiment was then designed and implemented with a sample of major U.S. retail hiring executives in order to (1) determine the relative importance of each attribute (e.g., strong interpersonal skills and retail internships weigh most heavily in the choice of the optimal candidate), (2) determine the ideal combination of attributes, and (3) identify trade-offs among attributes that executives are willing to accept.

## HIRING ATTRIBUTES

Some quantitative research has been done that outlines the skills and attributes of new hires desired by retailers (Donnellan 1996; Nicholson and Cushman 2000). Donnellan (1996) found that managerial skills are of the greatest importance to retailers. Nicholson and Cushman (2000) looked at a more broadly based set of skills in more detail. They also compared academic and industry findings and generally found that the industry was more interested in, "affective skills such as leadership and decision making" as opposed to the academics who thought that, "more interpersonal affective competencies" (p.366). Other research has looked at the skills and attributes that are desired of marketing students in general. A review of the literature yielded 32 total skills as shown in column 1 of Table 1.

Some of the skills such as flexibility, critical thinking skills, ability to handle real business problems, and creativity were desirable for marketing students in general (Ackerman, Gross and Perner 2003). Ethics was cited as a desirable attribute, although the research did not present this attribute as a perceived need (Yoo and Donthu 2002). Computer/Internet/E-Commerce skills were also mentioned in the literature as desirable skills for marketing graduates (Mitchell and Strauss 2001). The shortcomings of these studies that the present study is designed to overcome include the failure to determine the relative importance of each skill to retailers, identify the

"ideal" skill set a candidate should possess, or determine the trade-offs retailers are willing to make among these skills.

**TABLE 1**  
**LITERATURE SUPPORT FOR**  
**SKILL/ATTRIBUTE SET**

<b>Applicant Characteristic (Attribute)</b>	<b>Literature Support</b>
<b>Technology Skills<sup>1</sup></b> (computer; internet; ecommerce)	Mitchell and Strauss 2001, Nicholson and Cushman 2000
<b>Communication Skills</b> (oral and written)	Nicholson and Cushman 2000, Donnellan 1996
<b>Interpersonal Skills</b>	
Conflict Management Skills	Nicholson and Cushman 2000
Teamwork Ability	Nicholson and Cushman 2000
Management Skills	Donnellan 1996
Leadership Skills	Berman and Evans 2001, Nicholson and Cushman 2000
People Orientation	Levy and Weitz 2000
Customer Service Focus	Nicholson and Cushman 2000
Motivational & Developmental Skills	Nicholson and Cushman 2000
<b>Critical Thinking Skills</b>	Ackerman, Gross and Perner 2003
Business Problem handling skills	Ackerman, Gross and Perner 2003
<b>Quantitative Analysis Skills</b>	
Analytical Skills	Berman and Evans 2001
Accounting & Finance Skills (basics)	Nicholson and Cushman 2000
Mathematical Ability	Nicholson and Cushman 2000
<b>Retail background/work experience</b>	Nicholson and Cushman 2000
Product knowledge	Nicholson and Cushman 2000
<b>Personal Traits/Abilities</b>	
Creativity	Ackerman, Gross and Perner 2003, Berman and Evans 2001
Ethics	Yoo and Donthu 2002
Flexibility	Ackerman, Gross and Perner 2003, Berman and Evans 2001
Job stability	
Risk-Taking	Berman and Evans 2001
Self-Confidence	Nicholson and Cushman 2000
Organization	Berman and Evans 2001
Initiative	Berman and Evans 2001, Nicholson and Cushman 2000
Decisiveness/Decision making Ability	Berman and Evans 2001, Nicholson and Cushman 2000
Passion for retailing	Nicholson and Cushman 2000

College graduates that are new hires for retailers usually fill entry level positions that often include Management Training Programs (Levy and Weitz 2004); graduates of these programs typically move

<sup>1</sup> The items in bold represent category labels that were defined by authors in an attempt to reduce the total number of skills to be included in the conjoint experiment.

into the buying/merchandising or store management career tracks (Rhoads, Swinyard, Geurts and Price 2002). Thus, the present study asks retailers to consider the key skills or applicant attributes they consider when hiring a recent college graduates for their Management Training Program.

## METHODOLOGY

### Conjoint Research Design

Retailers' stated preferences for applicants with different skill sets were evaluated with choice-based conjoint analysis (CBC), an approach that combines experimental design techniques with models of discrete choice to explore how individuals form preferences for or make choices among different "products," or applicants in the present case (Caroll and Green 1995; Louviere et al. 2000). Respondents were presented with pairs of hypothetical applicants that were described as having different levels of certain attributes or skills, and asked to choose the applicant they would hire, a situation that mimics the choice process many HR managers engage in on a regular basis. Applying a logit model to this choice data allows us to assess the relative influence of each skill on the hiring decision and to determine what trade-offs HR managers are willing to make among skills and skill levels. For example, will they hire the individual with outstanding communication skills even though he/she may have minimally acceptable computer/technology skills?

The growing use of CBC by both marketing research academic and practitioners can be partially attributed to the realism of the choice task and studies validating CBC's ability to accurately predict market shares for new products (Louviere et al. 2000; Orme and Heft 1999), but recent advances in web data collection methods and conjoint statistical techniques have also accelerated usage (Deal 2002; McCullough 2002;). In the present study we use a web survey to collect the choice data, and multinomial logit to generate importance weights, or part-worths, for each skill and skill level.<sup>2</sup>

<sup>2</sup> For a more in-depth discussion of stated choice methods such as CBC, see Louviere et al. (2000) and the Technical Paper Series published by Rich Johnson and his colleagues at Sawtooth Software, Inc.: <http://sawtoothsoftware.com/techpap.shtml>. Sawtooth's conjoint and HB software were used to conduct the present study.

## Selection of Skills and Skill Levels

Several methods were used in an iterative manner in order to determine the skills or attributes that HR managers consider when hiring individuals for their retail management training programs. A review of the existing literature generated over thirty-two separate skills and traits that employers look for (Table 1, columns 1 and 2). By narrowing our research focus to "teachable skills", i.e., those student skills over which we as business professors have some control and can foster development of, or the offering of a retail internship (an attribute), we were able to pare the list down to six broad categories (see Table 1, third column). We then developed a survey that was sent to HR managers/college recruiters at six large retailers in the Northwest. Each manager ranked the skills/attributes in terms of their importance when making a decision about hiring recent college graduates for their management training programs. The HR personnel also responded to an open-ended question asking them to identify the six most important factors they consider within this particular hiring context. Findings from this exploratory research confirmed the importance of the six skills/attributes identified from the literature review, and led us to design a preliminary web conjoint survey that included these attributes. Another set of HR managers (3), along with academic colleagues in the HR field (3), beta-tested this instrument, and revisions were made to the attributes and attribute level definitions (and other survey design elements) based on this second round of feedback. The final instrument included six key teachable skills/attributes: (1) oral and written communication skills, (2) critical thinking skills, (3) technology/computer skills, (4) interpersonal skills, (5) quantitative analysis skills and (6) experience-based skills such as an internship.

Each skill, or attribute, had three levels: acceptable, good and outstanding. This asymmetric scale was employed because pre-tests showed that an individual with an unacceptable level on any of these skills would be quickly eliminated from the applicant pool by HR managers; this study focuses on how managers select one individual from among a pool of *qualified* applicants, all of whom met the minimum acceptable standards.

**TABLE 2**  
**Development of Skill/Attribute Set**

Applicant Characteristic (Attribute)	Literature Review/ Exploratory Research N=6	Pretest of Conjoint Tasks w/HR man. & academics (web survey; n= 6)	Final Instrument
<b>Technology Skills<sup>3</sup></b> (computer; internet; ecommerce)	X	X	X
<b>Communication Skills</b> (oral and written)	X	X	X
<b>Interpersonal Skills</b>		X	X
Conflict Management Skills	X		
Teamwork Ability	X		
Management Skills	X		
Leadership Skills	X		
People Orientation	X		
Customer Service Focus	X		
Motivational & Developmental Skills	X		
<b>Critical Thinking Skills</b>	X	X	X
Business Problem handling skills	X		
<b>Quantitative Analysis Skills</b>		X	X
Analytical Skills	X		
Accounting & Finance Skills (basics)	X		
Mathematical Ability	X		
<b>Retail background/work experience</b>	X	X	X
Product knowledge	X		
<b>Personal Traits/Abilities</b>			
Creativity	X		
Ethics	X		
Flexibility	X		
Job stability	X		
Risk-Taking	X		
Self-Confidence	X		
Organization	X		
Initiative	X		
Decisiveness/Decision making Ability	X		
Passion for retailing	X		

<sup>3</sup> The items in bold represent category labels that were defined by authors in an attempt to reduce the total number of skills to be included in the conjoint experiment.

Three levels were used for five of the six skills in order to realistically capture the range each could encompass (from acceptable to outstanding) and to effect a balanced experimental design.<sup>4</sup> The attributes and attribute levels are displayed and defined more fully in Table 3.

**TABLE 3**  
**Skills/Skill Levels in Conjoint Experiment**

Skills/Attributes	Expanded Definition/Examples (when provided to respondents)	Skill/Attribute Levels
Oral & Written Communication Skills	No other information provided	Acceptable, good, outstanding
Quantitative Skills	Mathematical skills; knowledge of accounting and/or finance	Acceptable, good, outstanding
Interpersonal Skills	People orientation; teamwork and conflict management abilities; customer orientation	Acceptable, good, outstanding
Critical Thinking Skills	Ability to handle real business problems; make reasoned decisions and plans based on available information	Acceptable, good, outstanding
Technology Skills	Competency with key computer software and the Internet	Acceptable, good, outstanding
Experience-based Skills	Summer internship with a major retailer	Yes, No

### Experimental Design and Dependent Measure

The descriptions of the hypothetical applicants were developed using a fractional factorial randomized experimental design and allowing for some skill level overlap. For example, a respondent might compare two applicants who both had "good" communication skills, but differed with respect to their ability to undertake quantitative analyses. There were fifty unique sets of choice tasks and all applicants were described on every attribute (a full profile approach).

Each respondent completed twelve paired comparisons or choice tasks (see Figure 1 for an example of a choice task). Two of the choice tasks were fixed (i.e., the skill levels remained unchanged across all respondents), while the remaining ten tasks

<sup>4</sup> An unequal number of attribute levels can result in a "number of levels effect" in which those attributes with fewer levels are spuriously given less importance (Wittink, Huber, Zandan and Johnson 1992). One skill – retail internship experience – could realistically take only two values, yes or no.

were randomized. One fixed choice task was placed first in the questionnaire and acted as a practice question; this data was not used in later analyses. The second fixed task was placed sixth in the series of choice tasks and served as a "hold out" task in order to assess the predictive validity of the logit model. As displayed in Figure 1, each pair of hypothetical applicants was presented side by side, and respondents were asked to choose the one they would hire if . . . "you have narrowed the applicant field down to these two recent college graduates, and you need to hire someone immediately for a position in one of your management training programs." The presentation order of the skills was randomized to minimize the effect of any potential confounds due to order effects.

**FIGURE 1**  
**Example of Choice Task**

You have narrowed the applicant field down to these two recent college graduates, and you need to hire someone immediately for a position in one of your management training programs. Which applicant would you prefer to hire?

Applicant Characteristics:	Applicant Characteristics:
Retail internship: No	Retail internship: No
Acceptable quantitative analysis skills	Outstanding quantitative analysis skills
Acceptable critical thinking skills	Outstanding critical thinking skills
Outstanding oral and written communication skills	Acceptable oral and written communication skills
Acceptable technology/computer skills	Outstanding technology/computer skills
Outstanding interpersonal skills	Acceptable interpersonal skills
<input type="checkbox"/>	<input type="checkbox"/>

Choose by clicking on one of the buttons above.

Given this randomized experimental design (balanced overlap), the number of questionnaire versions (50), the number of concepts per task (2) and the number of choice tasks (500), a priori estimates of the standard errors associated with each attribute level or main effect were made using ordinary least squares (OLS). These error terms were compared to the standard errors one would expect in an "ideal" situation where the experimental design is precisely orthogonal. This procedure allows us to calculate the precision with which the part-worths for each attribute/skill and level can be estimated, i.e., the efficiency of the design relative to an orthogonal design (where 100% represents orthogonal design). The design used in the present study had a statistical efficiency for each attribute level that

Three levels were used for five of the six skills in order to realistically capture the range each could encompass (from acceptable to outstanding) and to effect a balanced experimental design.<sup>4</sup> The attributes and attribute levels are displayed and defined more fully in Table 3.

**TABLE 3**  
**Skills/Skill Levels in Conjoint Experiment**

Skills/Attributes	Expanded Definition/Examples (when provided to respondents)	Skill/Attribute Levels
Oral & Written Communication Skills	No other information provided	Acceptable, good, outstanding
Quantitative Skills	Mathematical skills; knowledge of accounting and/or finance	Acceptable, good, outstanding
Interpersonal Skills	People orientation; teamwork and conflict management abilities; customer orientation	Acceptable, good, outstanding
Critical Thinking Skills	Ability to handle real business problems; make reasoned decisions and plans based on available information	Acceptable, good, outstanding
Technology Skills	Competency with key computer software and the Internet	Acceptable, good, outstanding
Experience-based Skills	Summer internship with a major retailer	Yes, No

### Experimental Design and Dependent Measure

The descriptions of the hypothetical applicants were developed using a fractional factorial randomized experimental design and allowing for some skill level overlap. For example, a respondent might compare two applicants who both had "good" communication skills, but differed with respect to their ability to undertake quantitative analyses. There were fifty unique sets of choice tasks and all applicants were described on every attribute (a full profile approach).

Each respondent completed twelve paired comparisons or choice tasks (see Figure 1 for an example of a choice task). Two of the choice tasks were fixed (i.e., the skill levels remained unchanged across all respondents), while the remaining ten tasks

<sup>4</sup> An unequal number of attribute levels can result in a "number of levels effect" in which those attributes with fewer levels are spuriously given less importance (Wittink, Huber, Zandan and Johnson 1992). One skill – retail internship experience – could realistically take only two values, yes or no.

were randomized. One fixed choice task was placed first in the questionnaire and acted as a practice question; this data was not used in later analyses. The second fixed task was placed sixth in the series of choice tasks and served as a "hold out" task in order to assess the predictive validity of the logit model. As displayed in Figure 1, each pair of hypothetical applicants was presented side by side, and respondents were asked to choose the one they would hire if . . . "you have narrowed the applicant field down to these two recent college graduates, and you need to hire someone immediately for a position in one of your management training programs." The presentation order of the skills was randomized to minimize the effect of any potential confounds due to order effects.

**FIGURE 1**  
**Example of Choice Task**

You have narrowed the applicant field down to these two recent college graduates, and you need to hire someone immediately for a position in one of your management training programs. Which applicant would you prefer to hire?

Applicant Characteristics:	Applicant Characteristics:
Retail internship: No	Retail internship: No
Acceptable quantitative analysis skills	Outstanding quantitative analysis skills
Acceptable critical thinking skills	Outstanding critical thinking skills
Outstanding oral and written communication skills	Acceptable oral and written communication skills
Acceptable technology/computer skills	Outstanding technology/computer skills
Outstanding interpersonal skills	Acceptable interpersonal skills
<input type="checkbox"/>	<input type="checkbox"/>

Choose by clicking on one of the buttons above.

Given this randomized experimental design (balanced overlap), the number of questionnaire versions (50), the number of concepts per task (2) and the number of choice tasks (500), a priori estimates of the standard errors associated with each attribute level or main effect were made using ordinary least squares (OLS). These error terms were compared to the standard errors one would expect in an "ideal" situation where the experimental design is precisely orthogonal. This procedure allows us to calculate the precision with which the part-worths for each attribute/skill and level can be estimated, i.e., the efficiency of the design relative to an orthogonal design (where 100% represents orthogonal design). The design used in the present study had a statistical efficiency for each attribute level that

ranged from 94% to 99% relative to a generalized orthogonal design. The variability among the standard error terms for each main effect was also low (.07-.10), which indicates that the design is not compromised by any heterogeneity of variance problems.

### Other Constructs Measured

After completing the conjoint section of the survey, respondents answered ten questions about their retail employer (revenues, retail type, number of stores), themselves (career path, education) and about the number and type of college students they typically hired for into entry level management training programs (which majors, how many).

### Procedure and Sample

The web survey began with a statement of the overall purpose of the study and contained several screens of specific instructions prior to the start of the choice tasks. Respondents were asked to assume that there was a pressing need to hire a college graduate immediately to fill a position in one of their management training programs. They were also told to assume that the applicants they were about to evaluate were all qualified individuals and members of the final candidate pool. The choice tasks came next, followed by the ten non-conjoint questions described above under "Other Constructs Measured." The survey concluded with an open-ended question asking them to list any additional skill requirements not mentioned in the survey and inviting them to contact the researchers with any questions or comments.

## RESULTS

### Sample Characteristics

All data were collected over ten weeks during the fall of 2003. Of the 122 HR managers that were contacted 62 agreed to take the survey. Of that number, 26 Human Resources Managers or Vice Presidents completed the initial survey. While this response rate is consistent with the levels commonly achieved in studies involving busy executives (Berry 1983; Hall and Williams 1998; McLeod and Rogers 1985; Mentzer, Schuster and Roberts 1987) further efforts were made to increase the sample size. A mailing of 869 letters was sent to the Human Resource Managers of the top national retailers as identified by "Reference USA". Of this mailing 34 letters were returned and 3 firms formally declined participation. A follow-up postcard was sent two weeks after the letters were sent. The sample size

increased to 33 respondents each from different firms.

As Table 4 indicates, respondents represent a variety of national and regional retailers with reported annual revenues of anywhere from \$500 million or less (50% the firms) to \$1,500 billion or more (21%). Thus, the sample appears to capture the heterogeneity that exists within the retail industry as a whole.

**TABLE 4**  
**Profile of the Retailer Sample (N=33)**

Characteristic	Profile
Retailer Type	Specialty Store (24%) Department Store (21%) Category Specialist (18%) Food Retailer (15%)
Geographic Dispersal	National (31%) Multi-State (28%) One City (17%)
Number of Stores	Mean # of stores = 583 (S.D. = 1408) Range = 1-5,700
Annual Firm Revenue	\$500 million or less (48%) \$501 million - \$1,499 billion (31%) \$1,500 billion or more (21%)
# of College Graduates Hired Annually for management training programs	Average = 36 graduates (S.D. = 65) Range = 1-300
College Major of those Hired (check all that apply)	General Business (59%) Marketing (56%) Retailing/Fashion Merchandising (33%) Communications (22%) Liberal Arts (19%) Acctng/Finance (11%)
Career Path of HR Manager (respondent; check all that apply)	HR operational management (41%) Store Management (33%) Merchandising Management (19%) Non-HR operational management (15%)
HR Manager Educational Background (respondent)	College Degree, Business (59%) College Degree, Non-Business (22%) Post-College Degree (15%) No College Degree (4%)

### Analysis of Conjoint Data: Logit Model

Multinomial logit analysis (MNL) was used to analyze the choice data. Logit was chosen because the form of the dependent and independent variables is categorical. Like multiple regression and discriminant analysis, logit seeks "weights" for attribute levels (or for combinations of them, if interactions are included in addition to main effects) that maximize the likelihood of the observed pattern of respondent choices, using probabilities derived from these weights.<sup>5</sup> Those weights are analogous to

<sup>5</sup> Sawtooth Software's choice-based conjoint (CBC) software was used to conduct the logit and simulation analyses. The logit analysis of the choice data produced no statistically significant two-way interaction terms, so all

"preference scores" or "part-worth utilities" in conjoint analysis and are computed so that when the weights corresponding to the attribute levels in each concept are added up the sums for each concept are related to respondents' choices among concepts (see Ben-Akiva *et al.* 1985; Johnson 1996).

### Relative Attribute Importance

The part worth utilities derived from the logit analysis for each applicant skill attribute were used to calculate the relative importance of each when selecting among applicants (see Table 5). The relative importance of an attribute indicates how much difference a particular attribute can make in the total utility of a "product," such as an applicant; the difference is the range in the attribute's utility values (see note below Table 5). When choosing among applicants for a retail management training program, an applicant's interpersonal skills have the greatest influence on the hiring decision, with a relative importance of 25%, followed by whether or not he/she has had a retail internship (19%) and possesses good communications and critical thinking skills (18% and 17%, respectively). We can also say that information about whether an applicant has had a retail internship is approximately three fourths as important in influencing the hiring decision as information about an applicant's interpersonal skills (importances are ratio data). Finally, skills related to an applicant's competency with quantitative analyses or technology/computers do not have a statistically significant effect on the hiring decision.

**TABLE 5**  
Relative Attribute Importances

Attribute	Relative Importances*	Chi-square (p value)
Interpersonal Skills	25%	27.72 (< .01)
Retail Internship (yes/no)	19%	24.55 (< .01)
Communication Skills	18%	14.32 (< .01)
Critical Thinking Skills	17%	14.34 (< .01)
Quantitative Analysis Skills	12%	5.91 (n.s.)
Technology Skills	9%	3.76 (n.s.)

\* NOTE: The relative importance of each attribute was calculated by computing the difference between the largest and smallest part-worth for each attribute, summing the differences, and normalizing to 100.

further analyses were conducted with the main effects model.

### Attribute Level Importance and the Ideal Applicant

Table 6 contains the average utility values for each attribute level. The most preferred applicant (the one with the greatest total utility) is, not surprisingly, one that has participated in a retail internship and has outstanding interpersonal skills, communication skills, etc. Trade-offs among attribute levels can be calculated from the average utilities presented in Table 5 (see note below Table 6). A more readily interpretable approach to the question of trade-offs, however, uses these part-worth utilities to simulate specific "market conditions" in which the retail manager chooses from a given set of applicant configurations, or "products." Such simulations produce share of preference data for the set of applicants specified, where share of preference is defined as what percent of HR managers (respondents) would prefer or choose each applicant, given the set of applicants specified. In this study, share of preference data was obtained using Sawtooth Software's Market Simulator with a randomized first choice simulation method.

**TABLE 6**  
Ranking of Attribute Levels Based on Average Utility Values

Course Attribute (average utility value)	Rank		
	1	2	3
Interpersonal Skills (utility value)	Outstanding (82.26)	Good (-11.09)	Acceptable (-77.17)
Retail Internship (utility value)	Outstanding (82.26)	Good (-11.09)	Acceptable (-77.17)
Retail Internship (utility value)	Outstanding (82.26)	Good (-11.09)	Acceptable (-77.17)
Retail Internship (utility value)	Outstanding (82.26)	Good (-11.09)	Acceptable (-77.17)
Retail Internship (utility value)	Outstanding (82.26)	Good (-11.09)	Acceptable (-77.17)
Retail Internship (utility value)	Outstanding (82.26)	Good (-11.09)	Acceptable (-77.17)

NOTE: Values are arbitrarily scaled to sum to 0 within each attribute, so some utilities must receive a negative value. This does not mean that this level is unattractive; it does mean that attributes with positive utilities are preferred over those with negative utilities. Utilities are interval data; we can say that the increase in preference from an applicant who has acceptable interpersonal skills to one who has outstanding interpersonal skills is *more than* the increase in preference from an applicant who has acceptable communication skills to one who has outstanding skills in this area. However we cannot directly compare values between

attributes to say that two different attribute levels with the same utility value (e.g., outstanding technology skills and internship experience) are equally preferred.

Table 7 presents the shares of preference for three hypothetical applicants with different skill sets. All else being equal, HR managers are about four times as likely (61% versus 14%) to hire an applicant possessing outstanding interpersonal skills, as opposed to one who only has "good" interpersonal skills. Further, managers are about three times as likely (61% versus 20%) to hire an applicant who has participated in a retail internship, versus one who has not, assuming no other attribute level differences among the applicants. Consistent with the relative attribute importance weights displayed in Table 5, an applicant with "outstanding" interpersonal skills, but without a retail internship, is preferred over an individual who has "good" interpersonal skills but has participated in an internship (20% versus 14%, respectively). Finally, all else being equal, HR managers are about twelve times more likely (61% versus 5%) to hire the ideal candidate with "outstanding" interpersonal skills and internship experience, compared to one who has neither an internship nor excellent interpersonal abilities.

**TABLE 7**  
**SHARES OF PREFERENCE FOR HYPOTHETICAL APPLICANT "PRODUCTS"**

Applicant Attributes	Applicant "Products"			
	Ideal	Ideal But No Internship	Ideal But only "Good" Interpersonal skills	No Internship + "Good" Interpersonal Skills
Interpersonal Skills:	Outstanding	Outstanding	Good	Good
Retail Internship:	Yes	No	Yes	No
Communication Skills:	Outstanding	Outstanding	Outstanding	Outstanding
Critical Thinking Skills:	Outstanding	Outstanding	Outstanding	Outstanding
Quantitative Skills:	Outstanding	Outstanding	Outstanding	Outstanding
Technology Skills:	Outstanding	Outstanding	Outstanding	Outstanding
<b>Share of Preference*</b>	<b>61%</b>	<b>20%</b>	<b>14%</b>	<b>5%</b>

\* Share of Preference represents that percent of the respondents who would prefer or choose each applicant "product", assuming these are the only three choices available. Shares of preference are ratio data. **DISCUSSION**

## Conclusions and Implications

There appears to be value in looking at the skills retail managers seek from new college graduate hires in the multidimensional context afforded by conjoint analysis. There seem to be definite tradeoffs among the desire for what would be considered significant skills for the potential hires. Interpersonal skills are important, but they become almost unbeatable when combined with retail internship experience. The degree to which the candidates possessed the skills was also important. Outstanding interpersonal skills seemed to compensate for relative deficiencies in other skill areas, for example. A candidate either had an internship or did not, so there was no relative level advantage, but the internship experience was very important. The real value of the internship showed up more strongly when combined with higher performance in the more important skills. When put into the mix with other skills, quantitative and technology skills become much less important, suggesting a compensatory choice model for some factors. However, it is apparent that both internship experience and interpersonal skills were clear favorites among the respondents with communication and critical thinking skills somewhat less important.

From the perspective of educating students to be more valuable as retail hires, it is apparent that we should focus heavily on encouraging the internship. At our school we have a strong internship program. One instructor has full responsibility for managing all marketing internships and is credited with one course in the teaching load over the academic year. Students may count the internship as one of the four electives they complete in the marketing major. This model may work well for other schools seeking to bolster this aspect of their curricula. Interpersonal and communication skills are also highly valued. These skills are built in our curriculum through class team assignments including the oral and written presentation of Marketing and IMC plans. In addition, all students are required to complete at least one "communication focus" class that emphasizes *individual* communication skill building through role plays, written cases, presentations, and reports.

## Limitations and Future Research

The most significant study limitation concerns the small number of retail managers that actually responded to our survey, in spite of the fact that many were contacted more than once via different media. Although we did obtain a fairly representative sample of HR managers in the retail industry, the absolute number of responses was low (33), limiting



the external validity of our study findings. As an exploratory study using a novel approach (conjoint modeling), the research presented here has some merit; however, an important next step is to replicate the study with a larger, and equally representative, sample of HR retail managers from Fortune 500 retail firms. Given the difficulty we had in persuading members of our sample frame to respond to our survey -- in spite of the time and effort we put forth to ensure an adequate response rate -- our initial task will be to explore alternative approaches to sampling and data collection.

Ethical attributes and organizational skills were not specifically covered in the exploratory interviews and subsequently not included in the final survey. It would be helpful in enlarging the study to examine these two variables. Further, while this study focused on teachable attributes, the issue of personal characteristics of the applicant is not included in the attributes. The choice-based model of research used in this study precludes a large number of variables, however further research could explore an enlarged model.

More generally, there is a need for further research that examines the decision process by which our marketing graduates are chosen for entry level marketing positions. Can we make the assumption that the attributes, and the trade-offs between attributes and attribute levels, identified in this research as important for retail management positions are also the determinant attributes for brand management or ad agency entry level positions? Perhaps the desirable attributes or skills themselves are the same, but the trade-offs (elasticities) among attributes/levels are different. Further, there may well be an evolutionary process at work, whereby expectations regarding skills and skill levels change over time. Conjoint analysis, involving as it does a relatively realistic task (full profile choice among hypothetical candidates) and the ability to obtain trade-off data, offers a theoretically sound and externally valid approach to the systematic exploration of these issues.

## REFERENCES

- Ackerman, David S., Barbara L. Gross, and Lars Perner. 2003. Instructor, student, and employer perceptions on preparing marketing students for changing business landscapes. *Journal of Marketing Education* 25 (1): 46-56.
- Ben-Akiva, Moshe, and Steven R. Lerman. 1985. *Discrete choice analysis: theory and application to travel demand*. Cambridge MA: The MIT Press.
- Berman, Barry, and Joel Evans. 2001. *Retail Management: A Strategic Approach*. Upper Saddle River, NJ: Prentice Hall.
- Berry, D. 1983. How marketers use microcomputers -- now and in the future. *Business Marketing* 68 (12): 47-51.
- Broadbridge, Adelina. 2003. Student perceptions of retailing as a destination career. *International Journal of Retail & Distribution Management* 31 (6): 298-309.
- Carroll, J. Douglas, and Paul E. Green. 1995. Psychometric methods in marketing research: Part 1, conjoint analysis. *Journal of Marketing Research* 32 (November): 385-391.
- Chonko, Lawrence B. and James A. Roberts. 1996. An innovative introduction to business courses: Marketing the skills that marketing majors (and others) as business majors will need for success. *Marketing Education Review*. 6 (3): 53-71.
- Deal, Ken. 2002. Get your conjoint online, in several flavors. *Marketing Research* Winter: 44-45.
- Donnellan, John. 1996. Educational requirements for management level positions in major retail organizations. *Clothing and Textiles Research Journal*. 14 (1): 16-21.
- Good, Linda K. and Ann E. Fairhurst. 1999. Met expectations during role transitions of retail executive trainees. *International Journal of Retail & Distribution Management* 27 (9): 350-361.
- Hall, Pamela L. and Terrell G. Williams. 1998. Marketing/finance Executives Personal and Business Value Perspectives: Implications for Market-Focused Management. *International Journal of Value-Based Management* 95: 125-157.
- Hart, Cathy, Amanda Harrington, John Arnold and John Loan-Clarke. 1999. Retailer and student perceptions of competence development.

*Journal of Retail & Distribution Management*  
27 (9): 362-373.

*Journal of Marketing Education* 23 (2): 91-102.

Johnson, Richard. 1996. Getting the Most out of CBC: Part I and Part 2. *Sawtooth Software Technical Papers*. Retrieved 14 August 2002 from <http://www.sawtoothsoftware.com>.

Nicholson, Amanda and Linda Cushman. 2000. Developing successful employees: Perceptions of industry leaders and academicians. *Education & Training* 6: 366-371

Levy, Michael and Barton A. Weitz. 2004. *Retailing Management*. New York, NY: McGraw-Hill/Irwin.

Orme, Bryan K. and Michael A. Heft. 1999. Predicting actual sales with CBC: how capturing heterogeneity improves results. Sawtooth Software Research Paper Series. Available at: <http://www.sawtoothsoftware.com/download/techap/predict.pdf>

Louviere, Jordan D., David A. Hensher, and Joffre D. Swait (eds.). 2000. *Stated Choice Methods: Analysis and Application*. Cambridge: Cambridge University Press.

McCloud, Raymond, Jr. and John C. Rogers. 1985. Marketing information systems: Their current status in Fortune 500 Companies. *Journal of Management Information Systems* 1 (4): 57-75

Rhoads, Gary K., William R. Swinyard, Michael D. Geurts and William D. Price. 2002. Retailing as a career: A comparative study of marketers. *Journal of Retailing* 78: 71-76.

McCullough, Dick. 2002. A user's guide to conjoint analysis. *Marketing Research* (Summer): 19-23.

Wittink, Dick R., Joel Huber, Peter Zandan, and Richard M. Johnson. 1992. The number of levels effect in conjoint: where does it come from and can it be eliminated? Proceedings of the 1992 Sawtooth Software Conference. Available at: <http://www.sawtoothsoftware.com/download/techap/noleveff.pdf>

Mentzer, J. T., C. Schuster, and D. J. Roberts. 1987. Microcomputers versus mainframe usage by marketing professionals. *Journal of the Academy of Marketing Science* 15 (2): 1-9

Yoo, Boonghee and Naveen Donthu. 2002. The effects of marketing education and individual cultural values on marketing ethics of students. *Journal of Marketing Education* 24 (2): 92-103.

Mitchell, Ted and Judy Strauss. 2001. Practitioner and academic recommendations for Internet marketing and e-Commerce curricula.