

## COMPREHENSIVE EXAMINATIONS IN MARKETING

Daniel J. Brown, Oregon State University, Corvallis  
William G. Browne, Oregon State University, Corvallis

### INTRODUCTION

Many Marketing faculty have wondered about the overall student performance and the factors related to achievement in college Marketing curriculums. Faculty have wanted to measure the scholarly advancement students have made from the start of their Marketing major through its completion. They also have wanted to know of factors such as general academic performance, exam preparation, and personal characteristics that contribute to test score performance.

Last year Oregon State University's marketing area required that all senior Marketing majors take a comprehensive exam midway through their capstone Marketing course. This exam was based on material provided in the introductory course taken during the junior year.

The study presented below was developed with the goal of exploring many of the factors that will have to be considered in responding to the above needs and challenges.

### BACKGROUND

Oregon State University has about 180 undergraduate business students graduating each year with a concentration in Marketing, one of the largest in the School of Business. As at many schools, the students take an introductory course during their junior year as a prerequisite to their concentration (major) courses during their senior year. The concentration requires senior students: to start with Marketing Management, take 2-3 electives, and complete their concentration with a capstone course in either Marketing Policy or Marketing Research. At least 18 quarter hours in senior Marketing courses must be completed for graduation in Marketing.

A number of the OSU faculty have wondered if the senior students retain much of the material in the introductory course. Furthermore, the faculty teaching the capstone courses wondered if the students retain much of the material covered in the Marketing Management or elective courses. The faculty teaching the capstone courses jointly developed a comprehensive exam that was administered to the students in the capstone courses during the Spring of 1982.

Material for the exam was taken from the introductory course with minor extensions into the Marketing Management and elective courses. The exam questions had previously been tested by the author(s) of the introductory text test banks. Performance on the test showed that there was high reliability or internal consistency in the exam.

### FACTORS RELATED TO COMPREHENSIVE PERFORMANCE

The second stage of the exam process was the completion of a questionnaire which measured the student's background. The faculty wanted to discover the factors that might be related to high and low performance on the exam.

These factors were categorized into three groups. The first group was related to academic measures and included items such as: overall GPA, scholarship awards,

number of marketing courses, minor (OSU students are required to take a 28 credit technical minor), years spent at Oregon State University, and length of time spent in the business and marketing curriculums. The second group was related to exam measures including items such as: test anxiety and preparation time. The last group designated by personal characteristics included items such as social affiliations, student political participation, hours employed each week, living accommodations, type of residence, and proportion of college expenses the student earned. All Marketing students who graduated Spring term took the exam, a total of 160.

Where possible the data was verified with student records. The exam scores were then merged with the corresponding questionnaire responses. Once the data base was completed, SPSS was used to run crosstabulations on all the variables using the comprehensive exam score as the dependent variable. Raw exam scores were used to construct a regression model to test relationships between background and test performance. Exam scores were standardized for use in a crosstabulation analysis using the Chi Square Significance tests.

### RESULTS

Individual exam scores ranged from 52 to 99 on the 56-question comprehensive exam. The average score was 80.3 which was slightly higher than expected. The background data on the students yielded a general profile that is displayed in Table 1. The rest of the results are discussed below.

The background data was combined with the test data to obtain an analysis of possible relationships between background and test performance.

As expected, grade point average (GPA) was highly significant. If students had performed well in their previous collegiate courses, they normally scored high on the exam; and if they had low GPA, they tended to score low on the exam.

There was a strong relationship between test performance and having an elected office on campus. Students who held elected offices in student government and/or social groups tended to score better than those who had not held elected offices.

Type of student residence also appeared to have a significant association with the corresponding test scores. Students living in the dormitories and Greeks had, on the average, better test scores. On the average, those who rented scored lower. (It should be noted, however, that a small group of the renters scored very high.) Students living at home had average test scores.

The last variable to have significance in the Chi Square test was number of Marketing courses. It appeared that there was a small but positive relationship between the number of Marketing courses and test performance. The marginal relationship would support one of the goals in developing the exam. The exam goal was to test concepts and material from the principles course that were independent of material stressed in advanced marketing courses.

TABLE 1  
Demographic Characteristics

Variable	Percentages
Years attended	55.6% attended the university 4 years.
First university major	Business, 66%; science or engi- neering, 14%; social science, 1%; other, 19%
Current major	Marketing, 98%; general business, 2%; other, 2%
Number of Marketing courses	2-3 courses, 16%; 4 courses, 18%; 5 courses, 48%; 6 courses, 14%; 6 courses or more, 4%
Minor area	Business, 63%; science or engi- neering, 16%; other (forestry, food science, home economics, etc.), 15%
Oregon high school graduate	87% graduated from an Oregon school
Percentage of college expenses paid for by the student	0-15, 17.5%; 16-35, 18.1%; 36- 55, 26%; 56-75, 17%; 76-100, 20%
Scholarship	24% of the students were assisted by some form of a scholarship
Social organization membership	52% of the students belonged to no social organization. Of the remaining 48% most belonged either to a fraternity or a sorority
Residence	Rent, 70%; dormitory, 5.6%; fra- ternity or sorority, 17.5%; other, 4%
Extracurricular activities	None, 31.3%; 1 activity, 22.5%; 2 activities, 26.9%; 3-4 activ- ities, 11.2%; 5+ activities, 8.1%
Hours employed	None, 37.5%; 1-5 hours, 19.4%; 11-20 hours, 16.2%; 20+ hours, 15%
Sex	54.4% were male (n=87). 45.6% were female (n=73)
Transfer status	65.5% had originally begun their university education at the same institution. 33.1% were transfer students from other institutions.
Elected to campus office	13.1%
Hours/study for the COMP	None, 16.9%; 1-4 hours, 55.6%; 5-9 hours, 23.8%; 10+ hours, 3.7%
Reported anxiety	High, 6.3%; moderate, 39.4%; low, 26.2%; almost no anxiety, 7.5%
Percentage in each grade category	A, 15%; B, 43.8%; C, 30.6%; D, 9.4%, F, 1.2%

A stepwise linear regression was used to relate the back-  
ground variables with the test score. The results in-  
cluded two independent variables, GPA and number of Mar-  
keting courses. The regression results are represented  
in the following equation. (Numbers in parenthesis  
represent probability levels for t tests.)

$$\text{Test Score} = 50 + 9.8(\text{GPA}) + 1.8 (\text{No. of Mktg. courses})$$

(.0001)      (.004)

No other variables were significant in the model. Thirty-  
two percent of the test score variance was explained  
( $R^2 = .32$ ) using the two variables.

#### DISCUSSION AND CONCLUSIONS

The research discussed above is in its embryonic form.  
The test will be repeated this year. Initial results  
are interesting since they, for the most part, comple-  
ment a faculty member's intuition concerning background  
and test performance. As the background questionnaires  
are refined with non-significant variables deleted and  
other possibly more meaningful variables added, the level  
of understanding should improve. Also there should be  
improvement as the measurement scales are refined.

At this stage the reader should be considering the pos-  
sible extensions of the use of a comprehensive exam.  
There may be benefit from the exam in monitoring the  
competencies of graduating Marketing students on an  
annual basis. Substantial changes in the competencies  
from one year to the next could reflect changes in the  
quality of students majoring in Marketing and/or changes  
in quality of the curriculum or instruction. The focus  
would be directed to internal curriculum and improvements.

Another use of the exam may be to measure the effective-  
ness of one Marketing program versus another. If the  
exam results for one school in a group of schools admin-  
istering the exam were constantly above or below the  
average (generated by a group of schools), the faculty  
might want to review their Marketing curriculum.

Potential employers may be interested in the exam  
scores of prospective employees coming from the Market-  
ing program. Currently a few of the larger employers  
test the students on their own during the interviewing  
process. The comprehensive Marketing exam could re-  
place parts of the employer's test.

The test may serve as a base for future uses in the  
Marketing profession. For example, professionals, aca-  
demics, and practitioners, have speculated on the need  
for testing, certifying and/or licensing personnel em-  
ployed in certain functions (marketing research, ad-  
vertising, publicity, sales management, etc.). Many  
of these same professionals have toyed with the idea of  
requiring some standardized training for individuals  
employed in certain aspects of Marketing. Many execu-  
tives and employers have also considered and sometimes  
used testing to screen Marketing applicants. Often  
the testing evaluated academic performance and meas-  
ured personality characteristics that employers asso-  
ciated with career success in Marketing. The comprehen-  
sive exam discussed in this paper may be expanded and  
refined to meet some of these potential needs.