THE INTEGRATION OF MICROCOMPUTERS INTO THE RESEARCH COMPONENT OF A MARKETING PRINCIPLES CLASS

Thomas J. Steele, University of Montana, Missoula
Warren L. Schwendig, Idaho State University, Pocatello
David L. Kurtz, Seattle University, Seattle

ABSTRACT

Integrating computers into the curriculum has been an objective of the marketing discipline for years. This paper outlines an experiment conducted in the marketing research component of a principles of marketing class. The experiment produced results that conflict with some of the conventional wisdom in this area.

Marketing professors strive to be at the leading edge pedagogically. In keeping with this tradition there has been considerable effort in the past two decades to integrate computers into the marketing curriculum. Most recently this trend has focused on microcomputers (Dlabay 1986, Miller 1985, Ursic and Hegstom 1985, Gifford and Gifford 1984, and Fritzsche 1982).

OVERVIEW OF THE STUDY

This paper describes an experiment conducted in the marketing research component of a principles of marketing course. The primary motive was to assess the viability of the microcomputer as a teaching tool. A secondary motive was to determine if the integration of microcomputers would attract increased marketing majors. The outcome of this experiment was sufficiently alarming that the authors felt the experience might be worth sharing with fellow marketing educators.

In addition to the aforementioned motives for engaging in this effort there were also several instructional objectives. A ruse billed as a bonafide research project would allow students to see a study initially from the consumer's point of view and subsequently from the perspective of the researcher. This exercise would provide a lead-in for a discussion of the problem statement, data requirements, various alternative data sources, and questionnaire design. Then the microcomputer and limelight projector dimension of the experiment, which is described in the next section, could be introduced. Since all students in the introduction to marketing course were required to have completed six semester hours of statistics it was felt that this approach would also afford an opportunity to review some of the inferential material in an applied fashion. In fact, the design of the ruse questionnaire was manipulated so as to ensure some statistically significant results. This allowed the researchers to relate the statistical analysis back to such things as market segmentation and general marketing strategy.

METHODOLOGY

Two separate questionnaires were administered (one of them twice) to all students enrolled in the principles of marketing course. Questionnaire #1 (Appendix I) was administered first and only once. This was to be the source of the data for a later in-class microcomputer/data analysis demonstration. Much of this instrument dealt with toothpaste packaged in pump-type dispensers. At the time of the study such dispensers were new to the marketplace and it was anticipated that many students would not be aware of this packaging innovation. The intent was to give an air of authenticity to the survey since a number of such dispensers were brought into the classroom. As can be seen in Appendix I, bipolar scales were used to tap attitude dimensions toward this package type. The instrument also checked awareness, usage, and purchaser and product innovator tendencies.

Beer was also introduced into the instrument as a second product to be evaluated. It should be remembered that the intention was merely to create a data set to which students could relate in order to facilitate the classroom demonstration.

The second questionnaire, as shown in Appendix II, was administered twice. The first time it was done in conjunction with the first questionnaire. Students were told that the second questionnaire was part of an unrelated study and that they were simply participating in a pretest. Students were requested to complete the survey, take it home and think about its structure and flow, and then bring it back to the next class period. Considerable effort was expended to give the second questionnaire the appearance of legitimacy. The actual intent was to create a pre- and post-measurement to assess the impact of the in-class microcomputer/research/statistics demonstration.

Following the class period in which the two questionnaires were first administered, the results from the phony product were coded and then punched into a statistical software package. Sample routines were then run to prepare for the demonstration in the next class period.

During the subsequent meetings of the principles class, the topics previously mentioned were presented and student input solicited. The actual hardware involved consisted simply of a Compaq personal computer, a limelight projector, and a projection screen.

Following the demonstration students were given a second copy of the second questionnaire and were required to complete it without referring back to their first copies. Both passes of the second questionnaire were then stapled together for each respondent providing the desired pre- and post-measures.

In all, three sections of the principles course were used in the study. By the time the study was completed, there was considerable attrition as is to be expected. For example, some students failed to attend the second session, others forgot to bring the first copy of the second questionnaire to the second class, and some questionnaires were incomplete or otherwise unusable. The final sample size was 54.

FINDINGS

The first items investigated were the perceived information states as registered by respondents. Of the seventeen topics on page one of the "Curriculum and Career" questionnaire only five were actually being studied. The rest were there largely as a disguise. Those of interest were microcomputers, computer software applications, marketing research, the use of microcomputers in data analysis and computer applications in marketing research. Table 1 shows the results of dependent t-tests performed on the data.

TABLE 1

Analysis of Perceived Information States

Topic	Hypothesized Difference	Mean Difference ($\bar{d}$)	T-Value	Probability (One-Tailed)
Micro-Computers	.0000	+.2407	1.6374	.0537
Computer Software Applications	.0000	+.3148	2.1450	.0183
Marketing Research	.0000	+.1296	.8662	.1951
Use of Micro-Computers in Data Analysis	.0000	+.0185	.0859	.4659
Computer Applications in Marketing Research	.0000	+.4074	2.2843	.0132

It should be noted that the variables were entered into the software package such that pre-measures were subtracted from post-measures. In all cases the mean differences were positive indicating higher perceived information states subsequent to the classroom demonstration. However, while the first item (microcomputers) came close, there were only two of these (computer software applications and computer applications in marketing research) which actually were significant at the 0.5 level or better.

These results were somewhat disheartening; but, the real shock came when the numbers were analyzed relevant to the second motive of the study: recruiting marketing majors. These results are shown in Table 2.

In every area mentioned which involved a quantitative emphasis and/or computers, student attitudes toward careers therein actually declined! Two of these areas, including marketing research, were statistically significant at the 0.05 level and two others barely missed. Interestingly, in the area of banking there was essentially no change although finance teachers might find the negative mean somewhat disquieting. The sixth career area, personnel management, showed an amazing increase in student attitude.

TABLE 2

Analysis of Student Attitudes Toward Careers

Career Attitude Toward:	Hypothesized difference	Mean Difference ($\bar{d}$)	T-Value	Probability (One-Tailed)
Personnel Management	.0000	4.8889	5.72	.000
Banking	.0000	-0.1667	-0.29	.3865
Marketing Research	.0000	-1.2222	-1.92	.0300
Computerized Data Management and Analysis	.0000	-1.3704	-1.62	.0560
Tax Accounting	.0000	-2.0185	-2.43	.0090
Investment Counseling	.0000	-0.9074	-1.62	.0555

DISCUSSION

There are probably some legitimate explanations for the results of this study.

Viewed from a marketer's perspective, the introductory course serves multiple segments. Clearly there are business students who intend to major in marketing. There are also business students with other intentions as well as business students with no firm intentions at all. One could conceivably consider these latter persons to be shoppers or perhaps brand switchers. Then there are non-business students seeking a minor. Another potential subset might consist of persons such as art or music majors who envision themselves opening a shop or gallery some day. Not to be overlooked either is the completely and totally undecided student. This segment could well be the richest and most productive to cultivate in terms of recruiting majors. A final group was the small business segment. Cutting across all these segments are persons who, previous to coursework and professiorial best efforts notwithstanding, remain frustrated if not downright terrorized by computers.

It has been obvious for years that computers have become permanent facets of everyone's daily life. Therefore, the authors feel that it would be irresponsible not to promote computer literacy in marketing majors. However, this study provides a new perspective regarding when and where this should happen. The matter is by no means closed to debate. It can now be reasonably argued that introductory marketing should emphasize something other than computers, leaving this to a later course with a more mature and single-minded coterie of students. The marketing research course itself would be a logical spot.

In order to be simultaneously introductory for majors and terminal for non-majors, the authors feel that the beginning marketing course should provide a comprehensive view of marketing emphasizing the following: 1) a broad view of the marketing functions within the marketing environment, 2) introduction to terminology and concepts (including research, segmentation and consumer behavior), 3) introduction to the marketing mix elements, 4) introduction to the nature and range of marketing problems and opportunities, 5) introduction to the broad array of analyses useful in the solution of marketing problems, 6) intro-

duction to the societal dimensions of marketing, 7) development of critical and systematic thinking with respect to marketing issues, and lastly, 8) cultivation of favorable attitudes toward the entire marketing process.

Questionnaires (Appendix I and II) are available upon request.

REFERENCES

Dlbay, Les R., (1986), "Teachers Can Adapt Software to Classroom Needs," MarketingNews, July 18.

Fritzsche, David J., (1982), "Using Micro-computers for Data Collection in Research Classes," Journal of Marketing Education (Spring), 70-71.

Gifford, John B. and Patricia L. Gifford (1984), "Micro-Computers in Teaching Retail Merchandise Management: Applied Spreadsheet Software," Journal of Marketing Education (Spring), 50-51.

Good, Robert E. (1979), "Student Reactions to Micro-Computers: Suggestions for More Effective Use," Journal of Marketing Education (November), 82-88.

Grimm, Jim L., Steven J. Skinner and O. C. Ferrell (1979), "Computer-Assisted Instruction for the Basic Marketing Course: A Student Evaluation," Journal of Marketing Education (April), 63-70.

Henke, John W., Jr. (1985), "Bringing Reality to the Introductory Marketing Student," Journal of Marketing Education (Fall), 59-71.

McKinnon, Gary F., Scott M. Smith and Milton E. Smith (1985), "The Diffusion of Personal Computers Among Business School Faculty: A Longitudinal Study of Attitudes, Expectations and Uses," Journal of Marketing Education (Fall), 1-6.

Mentzer, John T., James E. Cox and H. Lee Meadow (1983), "The Use of Computer-Based Marketing Cases in Introductory and Advanced Marketing Management Courses," Journal of Marketing Education (Summer), 2-12.

Miller, Fred (1985), "Integrating the Personal Computer into the Marketing Curriculum: A Programmatic Outline," Journal of Marketing Education (Fall), 7-11.

Sherwood, Charles S. and Richard C. Nordstrom (1986), "Computer Competencies for Marketing: Are Universities Doing Their Job?" Journal of Marketing Education (Spring), 55-60.

Ursic, Michael and Craig Hegstom (1985), "The View of Marketing Recruiters, Alumni, and Students About Curriculum and Course Structure," Journal of Marketing Education (Summer), 21-27.