The Integration of Microcomputers Into the Research Component of a Marketing Principles Class

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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 cutting 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 (Dibay 1986, Miller 1985, Ursic and Hegstrom 1985, Gifford and Gifford 1984, and Fritzschme 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>
<thead>
<tr>
<th>Topic</th>
<th>Hypothesized Difference</th>
<th>Mean Difference (t)</th>
<th>T-Value</th>
<th>Probability (One-Tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro-Computers</td>
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<td>1.834</td>
<td>0.055</td>
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<td>Computer Software Applications</td>
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<td>0.032</td>
<td>0.563</td>
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<tr>
<td>Marketing Research</td>
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<td>0.362</td>
<td>0.330</td>
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<tr>
<td>Use of Micro-Computers in Data Analysis</td>
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<td>0.085</td>
<td>0.403</td>
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<td>Computer Applications in Marketing Research</td>
<td>0000</td>
<td>0.007</td>
<td>0.076</td>
<td>0.445</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Career Attitude Toward</th>
<th>Hypothesized Difference</th>
<th>Mean Difference (t)</th>
<th>T-Value</th>
<th>Probability (One-Tailed)</th>
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<tbody>
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<td>Computer Applications</td>
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<td>0.074</td>
<td>0.076</td>
<td>0.445</td>
</tr>
<tr>
<td>Data Analysis</td>
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<td>0.009</td>
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<tr>
<td>Investment Counseling</td>
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<td>-0.979</td>
<td>-1.82</td>
<td>0.035</td>
</tr>
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</table>

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 professional 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 cohort 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


