

Developments in Business Simulation & Experiential Exercises, Volume 12, 1985

USING THE COMPUTER AS A PLANNING AID IN AN APPLIED MARKETING COURSE

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ABSTRACT

Instructors teaching in applied areas, such as marketing planning and strategy, continually look for new techniques that simulate an actual business environment. The case study method is the traditional model used to make the subject matter as professionally realistic as possible.

An applied area that we teach is media planning and strategy. We use the traditional case study method. We remain convinced that no other approach provides as good a learning environment for this complex subject. Students in our course must deal with the many planning variables that make up an advertising media plan. Most of these, such as, the reach and frequency goals of an effective strategy, require a great many mathematical calculations that are, normally in professional settings, handled by computers. The computer, in media planning, has created a mini-Industry devoted to analyzing, restructuring and modeling the information provided by syndicated research companies. These service organizations, such as Telmar, Interactive Marketing Systems (IMS), and Marketronics, are becoming very important to media planners.

We struggled with the task of introducing the use of the computer to our students as a media planning aid, as it might be available in professional settings. We asked the media service companies for help in terms of on-line computer time. The response was that if we were willing to pay like regular clients, they would accommodate us. Of course, the costs involved precluded following this line any further. We then inquired about the possibility of companies helping us set up our own system on microcomputers. The answer was no, because of the protected nature of the simulations used in media modeling.

We then looked at the possibility of finding published software that would provide the models we needed to give our students the hands-on experience that would simulate actual media planning activities. We would be willing to buy the computers to match the software. There was no published software to be found.

The only reasonable alternative left was to buy our own microcomputer and program it ourselves. This has proved to be a highly satisfactory solution. We now have the capacity to tailor-write computer programs to match the specifications of our case studies. Writing programs is hard work, involving long hours, but we feel that we have made a successful start. The students seem to respond well to generating their own marketing data and we may even have added some new interest to an old teaching method. At least the students are using the computer in a similar way that professional media planners would. This alone seems to justify the time and expense involved in the course development process.

For a copy of an example case and the accompanying computer listing, write to:

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The following case is one example we have developed to provide students with as realistic learning experience as possible. The case objectives were to have students buy newspaper space for a client based on specified marketing and media goals and to teach the use of four media planning variables: unduplicated reach², circulations, cost per thousand (CPM)³, and newspaper coverage⁵.

These four terms were defined in textbooks available to students. In laboratory classes, the use of the computer was taught and students were able to generate the information they felt most important in making the marketing decisions. The complete case and computer listing follows. The program was written on a Radio Shack Model III in TRSDOS Basic and can be adapted easily for use on other microcomputers.

DOWNEY SAVINGS AND LOAN NEWSPAPER MEDIA CASE

Downey Savings and Loan, founded in 1945, is a statewide association with 25 offices in Southern California and has 20 offices in the San Francisco Bay Area. Assets are currently \$1.3 billion. The company has been steadily growing and this coming fiscal year management hopes to boost assets by 5 percent.

Currently, Downey has an advertising budget for the Bay Area of \$350,000: 50% radio, 25% direct mail, and 15% outdoor. The advertising budget will be increased to \$400,000 in order to introduce newspapers into the media mix. \$140,000 of the budget will be used strictly for newspapers. The company hopes that this amount will adequately cover the bay area market where the 20 offices are located. The target consumer is similar to Downey's prime competitor, Home Savings and Loan. Downey's Bay Area locations are: East San Jose (3), San Jose (2), San Francisco (2), Oakland (2), Berkeley (1), Palo Alto (2), Hayward (1), Fremont (1), Antioch (1), Walnut Creek (1), Concord (1), Livermore (1), Martinez (1), Milpitas (1), Richmond (1), Sunnyvale (2), San Mateo (2), Redwood City (2), Menlo Park (1), Cupertino (1).

Management has decided that the size of the ads would be the same in each location (½ page or 1050 lines). Downey's sales department has also indicated that the major thrust of business over the years has occurred during the months of September/October, December/ January, March/April, June/July, especially the last and first 10 days between these months, i.e., (20th of September through the 10th of October).

Your Assignment:

Budget the \$140,000 to determine what buys would give the best coverage of each segment of the market. Determine the relative importance of coverage (reach), audience duplication and cost per thousand. Use the computer assistance program to help you make this determination. Include your printouts with the final report. Get a map of the Bay Area and determine where the offices are, relative to media coverage. (Use the most recent Standard Rate and Data Service edition available).

Determine the demographic/psychographic profile of the Downey customer using the Simmons Market Research Bureau data in the library. Use the case study format provided. Other possible sources include U.S. Census Data and Sales and Marketing Management Survey of Buying Power. For Monday, turn in a type written report listing the Bay Area newspapers you would want to consider in the campaign, including circulation, coverage cost per 1D50 lines. This will be used for your computer assisted analysis.

Report Format for Mondays Assignment

Newspaper Circulation Coverage Cost per 1D50 Lines Case Study Format

1. Title

Newspaper Media Plan for (client's name)

2. Map

Include a map of clients marketing region with offices pin pointed. This is a good place to begin so you understand the geographic problems related to covering your market. As you refine and develop your buys, you might color-code areas of map which are covered by certain newspapers.

3. Target Market Define customer profile

4. Style or Technique

Use inductive reasoning. State major points in opening summary. Don't make your plan into a suspense story with a surprise on each succeeding page. Here's one way to present your summary of the plan:

A) Problem Statement: Considering managements goal to increase assets by 5% during the coming year, which newspapers should be used to maximize coverage (reach) and number of insertions in our market areas with _____ annual budget?

B) State objectives and major decisions: Discuss coverage goals. Was budget large enough to make insertions every week in the year? Enough for every month in every market? Did you buy a paper in every market shares?

Be as positive as possible in pointing out the strengths of your planning genius. If you encountered budget limitations, show how you solved the problem.

C) Newspapers selected: List each paper of newspaper group and give rationale for your selections. Give major reasons why you chose the Mercury News, i.e., income, circulation, marketing coverage, etc.

D) Newspapers rejected: Which (if any) major newspaper groups did you reject? List each. Give rationale for decision.

E) Timing: Considerable care and planning should be given here based on the parameters given in the case.

a) When did you advertise? What part of the week? What part of the month?

b) Frequency...how often did you make insertions? Did you skip any month?

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5. Total Expenditure for Each Newspaper

Newspaper Name	Budget Allocated	% of Total
a) Daily Reporter	\$ 00,000	
b)	\$ 00,000	
c)	\$ 00,000	
d)	\$ 00,000	
e)	\$ 00,000	
	\$120,000	100%

6. Price Paid per Individual Ad Based () Lines

Newspaper Name	Morning or Evening	Paper	Sunday Paper
a) Daily Reporter	Morning - \$0000.00		\$0000.00
	Minimal \$ 00.00		Minimal
b) Daily Babble	Morning & Evening Combo		No Buy
	\$0000.00		
	Minimal \$ 00.00		
c) Daily Shadow	Evening - \$0000.00		\$0000.00
	Minimal \$ 00.00		Minimal
d) Daily Tempest	Morning & Evening Combo		\$0000.00
	\$0000.00		Minimal
	Minimal \$ 00.00		

7. Flow Chart

The purpose is to give a graphic description of media buy.

B. Monthly Budget Summary

List monthly summary of newspaper expenditures.

Give information about each paper including:

- A) number of insertions
- B) sub-total of budget allocation year-to-date
- C) percent budget allocation

9. Appendix

Computer summaries⁶

SAMPLE PRINTOUT OF COMPUTER PROGRAM

RICHARD KAGEL 04/04/83 02:32:46
565-B9-7B90

COMPUTER ASSISTED PROJECT FOR DOWNEY SAVINGS AND LOAN CASE

Newspaper	Circ.	Coverage	Cost/per 1050 Lines	CPM
SAMPLE NEWS	35000	34	456.76	13.05
DAILY WIT	3549	35	345.67	97.40
EX POST FACTO	25000	25	356.73	14.27

ESTIMATED UNDUPLICATED REACH:

Unduplicated reach for 3 newspapers in BAY AREA: 67.83

Verified in my presence,

HAL the computer

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2 CLEAR 1000
5 CLS
10 'PROGRAM TO DEVELOP MEDIA BUY INFORMATION FOR
15 'NEWSPAPER, DOWNEY SAVINGS AND LOAN CASE. COMMS.332
20 PRINT" ENTER YOUR FULL NAME: ";
25 INPUT N$: PRINT: PRINT
30 PRINT"ENTER YOUR SOCIAL SECURITY NUMBER: ";
35 INPUT S$
40 X=X+1
45 X$=MID$(N$,X,1)
50 IF X$<>" " THEN 40
55 F$=,OD$(N$,1,X)
60 'F$ IS STUDENT'S FIRST NAME.
65 CLS
70 PRINT "OK, ";F$, " Let's get going. This case
involves newspaper"
75 PRINT "buys for Downey Savings & Loan. As you know,
DS&L is located"
80 PRINT "in smoggy California, and has a number of
granches located"
85 PRINT "throughout the Bay Area. Hopefully you have
already made some"
90 PRINT "decision concerning newspapers you want to
use. Now your job,"
95 PRINT "should you choose to get graded, will be to
choose the news-"
100 PRINT "paper(s) that will give you the most
effective and efficient"
105 PRINT "newspaper media plan. Due to programming
constraints, you will"
110 PRINT "be able to work with a maximum of nine
newspapers."
115 PRINT "This program will, however, help you look at
individual and "
120 PRINT "combined newspaper effectiveness...Under-
stand? Press <ENTER>"
130 PRINT "when you are ready to begin the number
crunching."
140 INPUT A$
200 CLS
205 PRINT@21, "DOWNEY SAVINGS AND LOAN";@B7, "NEWSPAPER
PURCHASES"
207 PRINT @181, "COST per"
210 PRINT@196, "NEWSPAPERS"; @215, "CIRC."; @229,
"COVERAGE"; @244, "1050 LINES"
215 PRINT @259, "-----"; @292, "-----";
@3D7. "-----"
220 N=1
221'
222 GOTO 8000
225 PRINT@9D0, "ENTER NEWSPAPER #";N;" (OR BLANK TO
END): ";
230 INPUT M$(N)
231 IF M$(N)="" THEN 400
232 IF M$(N)<>"ERROR" THEN 235
233 GOSUB 910D
234 GOTO 225
235 PRINT@(N*63)+257+(N-1), M$(N);
238 RETURN
240 PRINT@900, "ENTER ";M$(N);" CIRCULATION: ";
245 INPUT C$(N)
-----
99D0 PRINT@9D0,STRING$(3D," ");@930,STRING$(30," ");
9910 RETURN

END RETURN
260 PRINT@900, "ENTER ";M$(N); " COVERAGE (REACH, %):
;
265 INPUT R$(N)
266 IF R$(N)<>"ERROR" GOTO 270
267 GOSUB 910D
268 GOTO 260
270 PRINT@(N*63)+295+(N-1), R$(N);

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273 RETURN
275 PRINT @900, "ENTER ";M$(N);" COST / 1050 LINES: ";
280 INPUT L$(N)
281 IF L$(N)<>"ERROR" GOTO 285
282 GOSUB 9100
283 GOTO 275
288 RETURN
399 '
400 LPRINT TAB (10),N$;TAB(45),TIME$
405 LPRINT TAB(10),S$
410 LPRINT:LPRINT
412 LPRINT TAB (10) "COMPUTER-ASSISTED PROJECT FOR
DOWNEY SAVINGS AND LOAN CASE":L
413 PRINT:LPRINT
415 LPRINT TAB(55)"COST/per"
420 LPRINT TAB(5) "NEWSPAPER";TAB(25)'CIRC.";TAB(40)
"COVERAGE";TAB(95)"1050 LINES";TAB(70)"CPM"
425 LPRINT TAB(4)"-----";TAB(24)"-----";
TAB(39)"-----";TAB(54)"-----";TAB(69) .
"-----":LPRINT
430 FOR L=1 TO N-1
432 C=(VAL(L$(L))*1000)/(VAL(C$(L)))
435 LPRINT TAB(2);M$(L);TAB(24);C$(L);TAB(42);R$(L);
TAB(57);L$(L);TAB(96B);
440 LPRINT USING "###.##";C
445 NEXT L
450 CLS
500 LPRINT:LPRINT:LPRINT
510 LPRINT TAB(15)"ESTIMATED UNDUPLICATED REACH:"
515 LPRINT:LPRINT
520 FOR L=1 TO N-1
530 R(L)=(VAL(R$(L))/100)
540 NEXT L
550 L=1
555 IF L=N-1 THEN CR=R(1): GOTO 700
560 L=L+1
565 CR=(R(1)+R(2))-(R(1)*R(2))
570 IF L=N-1 THEN 700
575 L=L+1
580 T=CR
585 CR=(T+R(L))-(T*R(L))
590 GOTO 570
700 LPRINT TAB(5)"Unduplicated reach for ";L;" news-
papers in BAY AREA: ";
710 LPRINT USING "###.##";CR*100
720 FOR J=1 to 10
730 LPRINT
740 NEXT J
750 LPRINT TAB(25)"Verified in my presence,"
760 LPRINT:LPRINT TAB(25)"HAL the computer"
800 END
7999 '
8000 'CONTROL FOR DATA ETNRY
8005 GOSUB 9900
8010 GOSUB 225
8015 GOSUB 9900
8020 GOSUB 240
8025 GOSUB 9900
8030 GOSUB 260
8035 GOSUB 9900
8040 GOSUB 275
8045 GOSUB 9900
8050 N=N+1
8055 GOTO 8000
9000 END
9099 '
9100 'ERROR CORRECTION ROUTINE
9105 GOSUB 9900
9110 PRINT@900,"ENTER NUMBER OF ROW: ";:INPUT Y
9120 GOSUB 9900
9125 PRINT@900,"ENTER NUMBER OF COLUMN: ";:INPUT Z
9130 M=N
9135 N=Y
9140 ON Z GOSUB 225,240,260,275
9145 N=M
9150 GOSUB 9900
9155 RETURN

```

¹Jack A. Sissors and Jim Surmanek, Advertising Media Planning, 2nd Ed., (Chicago, Ill.: Crain Books, Inc., 1982), 362.

²Represents, through statistics the probabilities of a percentage of the homes or people with a media vehicle, usually over a four week period.

reach % of vehicle A + (plus) reach % of vehicle B

(-) minus

$$\frac{\text{reach \% of vehicle A} \times (\text{times}) \text{reach \% vehicle B}}{\text{combined reach of vehicles A and B}}$$

From Donald W. Jugenheimer and Peter B. Turk, Advertising Media, (Columbus, Ohio: Grid Publishing, Inc., 1980), 1B4.

³The audience size of a newspaper is commonly measured in terms of the number of copies distributed per issue. This number, which is called circulation, includes all copies delivered to subscribers as well as those bought at newsstands or from other sellers. From Roger D. Wimmer and Joseph R. Dominick, Mass Media Research, An Introduction, (Belmont, CA: Wadsworth Publishing Co., 1983), 305

⁴Cost per Thousand (CPM) is a device for comparing media and is normally calculated on a weighted basis by media planners.

general formula

CPM =
$$\frac{\text{cost} \times (\text{times}) 1,000}{\text{circulation}}$$

From Anthony F. McGann and J. Thomas Russell, Advertising Media, A Managerial Approach, (Homewood, Ill.: Richard D. Irwin, Inc., 1981), 92.

⁵The percentage of persons (or homes) covered by a medium. From Jim Surmanek, Media Planning, A Quick and EASY Guide, (Chicago, Ill.: Cram Books, Inc., 1980), 132.

⁶From case material developed by Dennis Martin, Brigham Young University.