# Developments in Business Simulation & Experiential Exercises, Volume 13, 1986
## TEACHING REEVALUATION OF SALESPERSONS THROUGH THE USE OF A SIMULATION GAME

Gordon Gray, Arthur Andersen, Oklahoma City
James W. Gentry, Oklahoma State University
L. Lee Manzer, Oklahoma State University

## ABSTRACT

Gaming approaches to the teaching of salesperson evaluation are reviewed briefly, and a need for a more specific tool is discussed. SPREE (Sales Person Review and Evaluation Exercise), a new game developed to meet this need, is discussed. The game allows the player to access up to 28 items for each salesperson in the areas of personal data, territory conditions, expense records, margins, effort, and sales history. The students rate the salesperson on the expenses, behavior, and performance dimensions, and then make recommendations for further steps such as termination or additional training. Feedback is provided to the students in the form of comparisons of their ratings with those of a board of "experts."

## INTRODUCTION

Sales management has become more sophisticated as better planning and evaluation tools have been developed and as technology increases have made it easier to monitor sales inputs and outcomes. To aid the process of sales management, commercial software has become relatively common. A list [8] of some of that software is shown in Figure 1. Obviously there are a number of sales functions covered by these packages. An instructor could spend a small fortune on packages if s/he wanted to introduce students to state-of-the-art software in all areas of sales management. There are at least two other approaches to introducing students to sales management software.

One would be to use a relatively complex simulation game that deals with a variety of topics. Boone, Kurtz and Braden [1] developed an early sales management game which emphasized sales territory and budget allocation decisions. A more recent game by Day and Dalrymple [3] offers a far broader scope, covering personnel selection, personnel transfers, retraining, severance, territory assignment and sales forecasting decisions. Both games provide the opportunity to introduce students to an integrated view of sales management, but it would appear that the latter game offers a broader perspective.

FIGURE 1
COMMERCIAL SALES MANAGEMENT PACKAGES*

| Package Name | Cost | Supplier | Location | Application |
|---|---|---|---|---|
| CARES (Computer-Aided Requirements Evaluation System) | $179 | CYMECH, Inc. | Pittsburgh | increases salespeople's performances through enhanced product knowledge |
| Prospect Organizer | $395 | Dow Jones Information Series | Princeton | helps trade prospects from initial leads through allocations to sales territories |
| The Sales Manager | $579 | Market Power Computer Innovations, Inc. | Rough & Ready, California | trades and reports on customers, prospects, expenses, sales analysis, personnel, quotas, commissions and planning |
| Sales Planner | $450 | Mastersoft, Inc. | Phoenix | produces all clients of sales plan including staffing, quotas, revenue, and unit sales |
| Sales Planner | $295 | National Microwave | Irvine, CA | generalization of expense and sales reports and sales analyses |
| Stranger Sales Model | $495 | W. M. Stranger | Summit, NJ | product orders/sales expense/revenue based |
| Sales CTRL | $299 | Computer Task Group, Inc. | Buffalo | sales management integrates file storage, list and report generation, word processing and telemarketing |
| Client/Prospect Sales Management System | $995 | Digital Solutions Group, Inc. | Gulfport, MS | data-base tracking for professional sales firms |
| Know Your Client | 92.95 | Execuware, Inc. | Winston-Salem | permits user to create and retrieve information on thousands of clients |
| Sales Prompt | $495 | Infacs Corp. | Leonia, NJ | contains product information for use during selling and training |

*Source: Marketing News (March 15, 1985), "Software for Marketing & Marketing Research," pp. 39-52.

An alternative approach would be to emphasize specific topics as instructors may find the broad scope games to be too general and the commercial packages too expensive. Therefore, instructors may resort to more specific experimental exercises or games to deal with one particular sales management task. One such sub-area is that of salesperson evaluation, which is covered in nearly all sales management texts. A typical coverage (for example, see [4]) discusses the dimensions to be evaluated, alternative evaluation procedures, and problems associated with the process. An experimental exercise would seem to be an excellent way of introducing the student to the complexity of the evaluation process and to the nature of the problems that can arise if the process is not handled systematically.

Bowie [2] discussed a sales person evaluation exercise in which the following information was presented in a matrix format for each of six salespersons for five products: sales, percent change from last year's sales, territory potential, and the salesperson's share of the potential market in the territory. This exercise does introduce students to the scope of the evaluation problem. However, the approach was criticized [5] for not encouraging sufficient rigor in the evaluation process. First, it emphasized sales results solely. Pickett [11] recently proposed and tested a model of sales performance with three dimensions: behaviors (effort), results, and profitability (expenses). Further, he attempted to distinguish the organizational sales performance from that of the individual salesperson. In light of this and most other recent research in the sales management area, the emphasis on sales results alone seems unjustified. Second, the relatively superficial nature of the tasks in the Bowie [2] exercise lends itself to common decision making errors such as the fundamental attribution error (in which sales managers blame the individual rather than the situation for the negative nature of the results) and the failure to note possible regression effects (where a change toward the mean sales level really should have been anticipated given an extreme performance the previous year). The discussion of the matrix approach used in the exercise did not indicate any recognition of the need to be aware of such biases in order to avoid them to the extent possible.

This paper discusses a greatly expanded version of the approach advocated by Bowie [4]. A simulation game, the Sales Person Review and Evaluation Exercise (SPREE) was developed to allow the student to carry out the following activities:

1) Be exposed to the large number of items that should be considered in the systematic evaluation of a salesperson's performance;

2) Evaluate the salesperson on the effort, expenses, and results dimensions and have the option of recommending further steps such as termination or additional training;

3) Receive feedback as to the quality of those ratings (based upon a comparison with the "true" ratings supplied by a board of "experts).

The Sales Person Review and Evaluation Exercise (SPREE)

The student is told s/he is a sales manager for a high-tech manufacturing firm whose primary product is a small business computer. The average order is about $2000. The student is asked to evaluate salespersons one at a time; the number evaluated per sitting is up to the student. The game runs on the IBM PC.

First the student is presented with basic data on the salesperson, as shown in Figure 2. This information is very similar in scope to that presented in the Bowie [2] exercise.

FIGURE 2
BASIC DATA FOR THE SALESPERSON

|  | Salesperson | Company Average |
|---|---|---|
| Sales This Year | $ xxx,xxx | $ 805,000 |
| Sales Last Year | $ xxx,xxx | $ 725,000 |
| Territory Sales Potential | $ x,xxx,xxx | $ 2,012,500 |
| Sales/Potential | .xx | .40 |

The student is then presented with a menu of additional information available. The 28 items are listed in Figure 3. These items constitute a fairly comprehensive list of the factors which influence the evaluative dimensions. The student is asked to select the number corresponding to the item in which s/he is interested. In most cases, a numeric response is given both for this salesperson and for the average salesperson, but some of the responses are non-numeric. For example, one response to item #25 (training) is "this person attends seminars, training sessions, and demonstrations to gain information for improving performance." The student may access as many, or as few, of the 28 items as they desire. The amount of time required to access all 28 items is quite excessive; the intent is to stimulate the need to accumulate information from various sources, some of which might be relatively

FIGURE 3
ADDITIONAL DATA AVAILABLE

| A. PERSONAL | D. PROFIT AND COST |
|---|---|
| 1. Marital Status | 16. Margins |
| 2. Age |  |
| 3. Education | E. BEHAVIOR AND PERFORMANCE |
| 4. Children |  |
| 5. Income | 17. Time Worked |
| 6. Possible Drug/Alcohol Problem | 18. Sales Success |
|  | 19. Order Size |
|  | 20. Preparation Time |
|  | 21. Experience |
| B. THE TERRITORY | 22. Major Accounts |
|  | 23. New Accounts |
| 7. Competitors | 24. Customer Relations |
| 8. Economic Condition | 25. Training |
|  | 26. Reports |
| 9. Change in Sales Potential | 27. Records |
| 10. Travel Time Between Customers | F. SALES HISTORY |
| 11. Company Support | 28. Sales for Last Five Years |
| C. EXPENSES |  |
| 12. Travel |  |
| 13. Food and Lodging |  |
| 14. Entertainment |  |
| 15. Office |  |

inaccessible. Some of the items (many of the personal characteristics, for example) are largely irrelevant.

once the student feels that s/he has obtained sufficient information, s/he evaluates the salesperson by ranking each person on the three categories:
expenses, behavior, and results. The scale used is as follows:

```
80 - 100    Excellent
60 - 79     Good
40 - 59     Average
20 - 39     Fair
 0 - 19     Poor
```

Next the student is given the option of recommending up to two of the steps listed below:

1) Dismissal
2) Careful monitoring of performance
3) Additional training
4) Cited for poor behavior
5) Drug/alcohol counseling
6) Marital counseling
7) Financial counseling

The computer then presents a comparison of the student's evaluations and recommendations with those from the computer. Actually, the computer ratings represent the average ratings from the six people ("experts") involved in the game development. Given the variance in the experts'" ratings, it is difficult for the instructor to place too much weight on the magnitude of the discrepancies between the students' ratings and the "experts'" ratings. Last, the student receives a short description of the salesperson. For example, one description is consistently poor performer, but works hard--could need training."

Before evaluating the next salesperson, the student has the option to re-investigate the one just evaluated further in order to see any items which should have been investigated initially but were possibly overlooked. When the student is through with that salesperson, s/he has the option of evaluating another or ending the game. While there are only 17 unique salesperson profiles available in the current version of the game, the student never sees exactly the same figures as all numbers are randomly adjusted slightly. Thus, while it may be possible to get the same salesperson twice in a row, the variation in sales levels, order size, etc. are sufficient to give the illusion of evaluating a different person.

Once the option to end the game is chosen, an overall summary is printed giving the mean student evaluation and the mean computer evaluations for the three dimensions, and then the mean absolute deviations for the three dimensions. The number of salespersons evaluated and a summary of the items investigated are also printed. A comparison of the student's and the computer's mean ratings will indicate if there is a consistent bias to overrate or underrate the salespersons. The mean absolute deviations provide a better measure of the student's accuracy. Again, this 'accuracy" measure is somewhat questionable due to the high variance in the "expert" ratings of the salespersons.

The intent of the game is one of exposure: the student is exposed to a large number of dimensions that are related to salesperson performance and to possible problem areas occurring in the evaluation process. The intent is not one of evaluating the student's prowess in this area of sales

management. Accordingly, we encourage the instructor to disregard for the most part the computer feedback on the student's ratings. Instead, we encourage the instructor to reward effort (the number of salespersons evaluated, the number of relevant variables used to evaluate, etc.) or, more strongly, to have the student write a game summary which will be graded. In the game summary, the student should be able to distinguish those items which are more important (sales history, territory economic conditions, level of competition, time worked, calls made, sales level, etc.) from those of much less importance (age, education, income, etc.). Also, they should acknowledge that the behavior and results ratings seem to be more straightforward than the expense ratings. For example, while it is easy to rate high expense levels negatively, it is also logical to rate low expense levels poorly if the sales level is low. The student should also be asked to make recommendations as to how the game could be improved operationally and/or substantively. The substantive recommendations, in particular, give the instructor a good chance to evaluate the student's ability to translate the material learned in the class and from the text into an applied setting. Hopefully, they can point out types of information that are not available and could well be of use.

## CONCLUSIONS

This paper has discussed SPREE, a new simulation game designed to introduce students to the complexity of salesperson evaluation. The game takes advantage of many of the features of the micro computer. It is interactive, allowing the student to have the one- on-one experience that they have become used to through video games. Moreover, it provides the student with feedback as to how s/he is doing and allows the student to look back and see what was missed.

We encourage you to play the game yourself in the ABSEL game room where copies and operating instructions for SPREE are available.

## REFERENCES

[1] Boone, Louis E., David L. Kurtz, and Joseph L. Braden (1978), The Sales Management Game., Tulsa: Petroleum Publishing Co., 2nd edition.

[2] Bowie, James G. (1984), "Sales/Marketing Management Teaching Tool," Journal of Marketing Education, Fall, 21-24.

[3] Day, Ralph L. and Douglas J. Dalrymple (1985), Sales Management Simulation, New York: John Wiley & Sons.

[4] Futrell, Charles (1981), Sales Management: Behavior, Practice and Cases, Hinsdale, IL: The Dryden Press.

[5] Gentry, James W., John C. Mowen, and L. Lee Manzer (1985), "The Need for a More Systematic Sales Management Evaluation Exercise,' unpublished Working Paper, College of Business Administration, Oklahoma State University.

[6] Glueck, William F. (1982), Personnel, Plano, TX: Business Publications, Inc.

[7] Kahneman, Daniel and Amos Tversky (1973), "On the Psychology of Prediction,' Psychological Review, 80 237-251.

[8]    Marketing News (19S5), "Software for Marketing & Marketing Research," March 15, 39-52.

[9]    Mowen, John C., Stephen W. Brown, and Donald W. Jackson, Jr. (1981), "Cognitive Biases in Sales Management Evaluations," Journal of Personal Selling and Sales Management, 1 (Fall/Winter), 8 3-88.

[10]   Mowen, John C., Janet E. Keith, Stephen W. Brown and Donald W. Jackson, Jr. (1985), "Utilize Effort and Task Difficulty Information in Evaluating Salespeople," Journal of Marketing Research, 22 (May), 185-191.

[11]   Pickett, Gregory M. (1985), "Towards a Theory of Salesperson Performance: An Empirical Investigation of Its Dimensionality and Measurements" Unpublished Doctoral Dissertation, Oklahoma State University.

[12]   Ryans, Adrian B. and Charles B. Weinberg (1979), "Territory Sales Response," Journal of Marketing Research, 16, 453-465.