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BUSINESS SIMULATION IN THE POLICY COURSE A SURVEY OF AMERICAN ASSEMBLY OF COLLEGIATE SCHOOLS OF BUSINESS

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ABSTRACT

This paper attempts to provide information relative to the use of computer simulations in the Business Policy course and to assess its perceived relative merit as an approach to teaching the course. A survey population of the 692 colleges and universities that form the membership of the American Association of Collegiate Schools of Business yielded 358 responses which were dichotomized along the basis of using or not using a computer simulation in the Policy course. Forty-one percent of the sample employed a simulation. Results of data analysis suggest a leaning toward a combination of lecture, simulation and case methods as the best approach to teaching business policy. This is true even among those reporting that they use no simulation at the present time.

INTRODUCTION

In many colleges and universities, business games have come to play an important role in the education of future business leaders. With the advent of microcomputers and their attendant interactive software, the facility of use of computer-aided simulations has increased. Since 1964, the business policy course has been notable for its adoption of business games. Business Policy, typically, has emphasized two general pedagogical approaches: case studies and/or management gaming. While the subject matter of this survey is not unique, its magnitude, relative to the specific use of simulation in the Business Policy course perhaps is. Dale and Klasson [1] surveyed American Collegiate Schools of Business to determine the extent to which gaming was used generally at the undergraduate and graduate levels. Wolfe [2] focused on teaching effectiveness of games in collegiate business courses. Wolfe and Guth [3] evaluated the effectiveness of the case method versus the simulation approach to the Business Policy course. This survey however was undertaken to assess perceived relative merit of teaching methodologies within the Business Policy course in light of micro-computer developments.

METHOD

To obtain the information reported in this paper, a survey questionnaire was addressed to the 692 colleges and universities which form the membership of the American Association of Collegiate Schools of Business. A total of 358 replies was received. Instructions to each responding school of business stipulated that questionnaires be filled out by instructors of business policy. The survey instrument consisted of a combination of questions that were categorical, open-ended and semantic differential in nature. Respondents were asked to check one response per question or statement where applicable.

Information was sought relative to (1) methods of teaching business policy, (2) use of computer aided simulations and (3) perception of students in response to simulations. Data were subjected to frequency and chi-square analysis using the Statistical Package for the Social Science

RESULTS AND ANALYSIS

One hundred forty-seven respondents indicated that they employed some type of computer simulation in their policy class, while 211 used some other method. Results are portrayed comparatively using chi-square where applicable. To facilitate the flow of presentation, the two groups will be designated NOSIM and HAVSIM indicating instances where no simulation was employed and instances where simulation was employed respectively. The groups are examined on a statement by statement basis.

Statement 1.

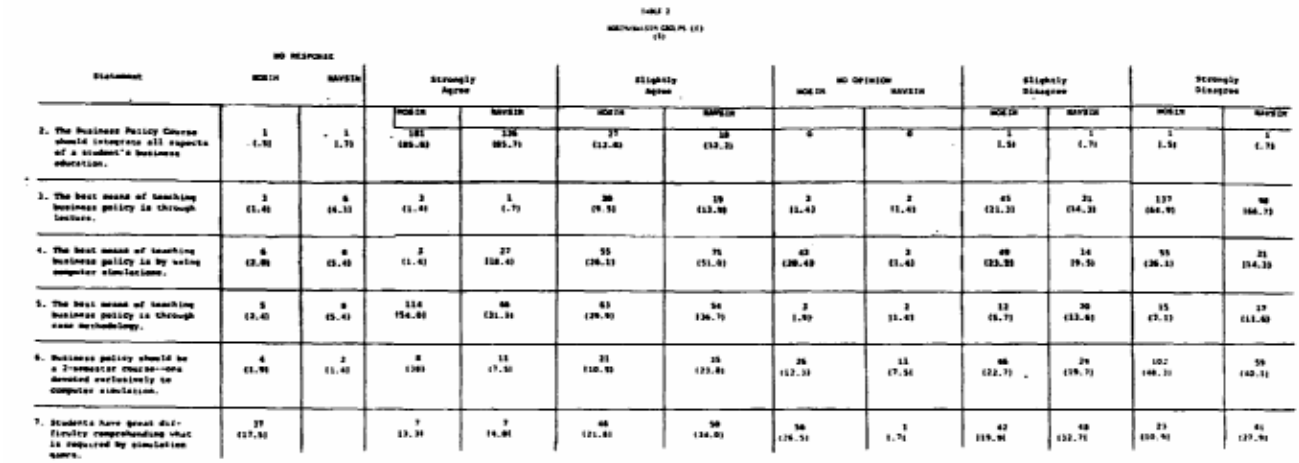
Business Policy is taught the last semester of the senior year.

Of the 204 NOSIM respondents, 167 or 81.9 percent said "yes" the course is taught during the last semester, while 37 or 18.1 percent said "no". Comparatively, the HAVSIM group had 111 or 78 percent responding "yes" and 31 or 21.8 percent responding "no". The balance for each group, 7 for NOSIM and 5 for HAVSIM, did not respond to this statement. There was no significant difference between the groups. Indications are that the policy course, is as generally viewed, a capstone course to be taken after maximum exposure to other business courses.

TABLE 1

Senior Year Semester (f)
(%)

	Last Sem.	1st Sem.	Raw Total
HAVSIM	111 (78.2)	31 (21.8)	142 (41)
NOSIM	167 (81.9)	37 (18.1)	204 (59)
Col. Total	278 (80.3)	68 (19.7)	348 (100)



Results for statements 2 through 7 are to be found in Table 2.

Statement 2.

The business policy course should integrate all aspects of a student's business education.

The groups responded almost identically with almost unanimous agreement (see Table 2). The magnitude of agreement supports again the idea that the policy course is capstone in nature.

Statement 3.

The best means of teaching business policy is through lecture.

The general consensus among the respondents of both NOSIM and HAVSIM groups was that this is not true. Eighty-six of the NOSIM group disagree, while 81 percent of the HAVSIM group disagree. Approximately the same percentage of both groups disagree strongly (64.9 and 66.7 respectively).

Statement 4.

The best means of teaching business policy is by using computer simulation.

Surprisingly, of those respondents who supposedly use no simulation, only 49.3 percent representing 104 respondents disagreed with this statement. Conceivably, if a few of those respondents having no opinion were converted to think well of simulations; this NOSIM group could be majority pro-simulation. Contrariwise, there did not appear to be such ambivalence among the HAVSIM group. Sixty-nine percent agreed that simulation was, in fact, the best way to teach business policy. The difference between the two groups on this statement is nonetheless statistically significant, however.

Statement 5.

The best means of teaching business policy is through case methodology.

A majority of both NOSIM and HAVSIM groups were in agreement with this statement (83.9 and 68 percent respectively). However, the groups were sufficiently different so as to constitute statistical significance. The method of choice for the NOSIM group appeared to be case method since 54 percent or 114 respondents agreed strongly with this statement.

Statement 6.

Business policy should be a 2-semester course--one semester for text material and one semester devoted exclusively to computer simulation.

Of the NOSIM group, 150 or 71 percent disagreed; and 102 of the 150 disagreed strongly. The HAVSIM group also disagreed to a great extent with 88 or 59.8 percent disagreeing. The NOSIM group disagreed to a significantly greater extent than the HAVSIM group.

Statement 7.

Students have great difficulty comprehending what is required by simulation games.

Since the NOSIM group purportedly does not use a simulation, the 118 opinions representing 55.9 percent of the respondents can only be assumed to result from previous experience or conjecture. Understandably, 26.5 percent of the respondents indicated "no opinion" and 17.5 percent gave no response. Of the HAVSIM group 89 or 60.6 percent disagreed with the statement. As might be expected, very little strong agreement with this statement was evidenced among the HAVSIM group. A significant difference exist between the HAVSIM and NOSIM group if for no other reason than that the NOSIM group should have given little or no response.

Statement 8.

There is no one best way to teach business policy.

On the whole, both the NOSIM and HAVSIM groups appeared to believe this statement to be true (see Table 3). No significant difference existed

TABLE 3

Is There One Best Methodology? (f)
(%)

	Yes	No	Row Total
HAVSIM	11 (7.6)	134 (92.4)	145 (41.2)
NOSIM	21 (10.1)	186 (89.9)	207 (58.8)
Col.	32 (9.1)	320 (90.9)	352 (100)

between the groups. However, these same respondents were asked to indicate which combination of methods they believed to be the most effective in teaching business policy. The results, as portrayed in Table 4, provided some rather interesting results.

In the NOSIM group, 91 respondents or 48.9 percent picked a combination which included simulation, in addition to lecture and case methodology.

TABLE 4

Best Combinations (f)
(%)

	Case-Sim	Lect-Sim	Lect-Case	Lect-Case-Sim	Raw Total
HAVSIM	27 (19.1)	5 (3.5)	3 (2.1)	106 (75.2)	141 (43.1)
NOSIM	12 (6.5)	0	83 (44.6)	91 (48.9)	186 (56.9)
Col.	39 (11.9)	5 (1.5)	86 (26.3)	197 (60.2)	327 (100)

Groups are significantly different.

As Table 4 indicates, this is the largest proportion of the NOSIM group responding to this particular inquiry. Curiously, (in light of the response to "Statement 3") the HAVSIM group overwhelmingly selected the same combination with 106 or 75.2 percent of its respondents selecting the lecture-case-simulation (LCS) combination. As might have been predicted, significantly more of the HAVSIM group made the LCS choice.

To contrast what respondents believed to be most effective in teaching business policy with what they actually employed, they were asked to indicate which method or combination of methods was or were currently being used. Table 5 shows that 176 respondents or 89.3 percent of the NOSIM group actually used the lecture-case combination when teaching business policy. There was a statistically significant difference, however, within the NOSIM group between what was considered the best combination of methodologies and methodologies actually used.

TABLE 5

Actual Combinations (f)
(%)

	Case-Sim	Lect-Sim	Lect-Case	Lect-Case-Sim	Raw Total
HAVSIM	24 (16.9)	6 (4.2)	8 (5.6)	104 (73.2)	142 (41.9)
NOSIM	4 (2.0)	2 (1.0)	176 (89.3)	15 (7.6)	197 (58.1)
Col. Total	28 (8.3)	8 (2.4)	184 (54.3)	119 (35.1)	339 (100)

The HAVSIM group remained consistent comparatively, on a best methodology vs actual methodology basis; results were 106 or 75.2 percent and 104 or 73.2 percent respectively for the LCS combination.

HAVSIM GROUP

Several responses were solicited from the HAVSIM group only. Though some in the NOSIM group provided responses, these responses will not be addressed in this paper.

Question 1.

Which one of the following options pertains to your class?

	(f)	%
a. Simulation used the 1st half of the course only.	2	1.4
b. Simulation used the 2nd half of the course only.	31	21.1
c. Simulation used in the 1st and 2nd half of the course.	104	70.7

Question 2.

In general, what percentages of student's grade is based upon his/her work relative to the simulation?

	(f)	%
a. 5 - 10	11	7.5
b. 10 - 20	41	27.9
c. 20 - 30	56	38.1
d. 30 - 40	14	9.5
e. 40 - 50	12	8.2
f. more	9	6.1

Question 3.

What is student response to computer simulation?

	(f)	%
Highly favorable	77	52.4
Moderately favorable	67	45.6
Moderately unfavorable	2	1.4
No Response	1	.7

A review of the results of the first 2 questions above indicates that for the most part, simulations are carried on throughout the semester; and that for the most part, student effort relative to the simulation is worth 30% of a grade or less. Question 3 reinforces the idea that students enjoy working with computer situations.

DISCUSSIONS AND CONCLUSIONS

The business policy course is perceived generally as a capstone course. Generally, respondents believe that there is no one best way to teach the course. Of those who don't employ a simulation, which represents a majority of those responding, the method of choice includes a combination of lecture and case. However, data indicates that within the NOSIM group there is a conflict between what they believe and what they actually do. There is good indication that if given

the right opportunity or incentive, this group might well choose a combination which includes simulations.

While the HAVSIM group appeared to have a strong affinity for the case method, it is for the most part consistent in its belief in the effectiveness of simulation and its actual use of simulation. The implication is that once simulation is used, its value becomes apparent.

APPENDIX

Computer Simulations Used by HAVSIM Respondents

Note: Respondents were asked to provide name and publisher of simulation in use.

		(f)
1.	BML Business Public	1
2.	Privately Developed Simulation	10
3.	Executive Games (Henshaw & Jackson)	23
4.	Management Simulation (Houghton-Mifflin Co.)	1
5.	Imaginit (Richard Borton)	4
6.	Situation Analyst (Iredin)	1
7.	Harvard/V.B.C. Management Simulation	1
8.	The Business Strategy and Policy Game (Eldredge & Bates)	7
9.	Business Management Lab (B.P.I.)	9
10.	Manager (Houghton-Mifflin)	2
11.	Micromatic (Houghton-Mifflin)	3
12.	Marketing in Action (Irwin)	1
13.	The Business Policy Game (Prentice-Hall)	1
17.	Tempomatic (Thompson & Strickland)	25
18.	BUSPOL (William G. Brown)	1
19.	Stratsim	1
20.	INTOP	13
21.	Executive Simulation (Kendall/Hunt)	2
22.	The Multinational Game (BPI)	1
21.	Executive Simulation (Kendall/Hunt)	1
22.	Business Policy Game (Richard Cotter)	1
23.	Business Policy Simulation (Burgess Pub.)	1
24.	TYCOON (Ames Tuck School, Dartmouth)	1

Note: Not all respondents provided this information.

REFERENCES

[1] Dale, A. G. & Klasson, C. R. "Business Gaming, A Survey of American Collegiate Schools of Business", (Austin: Bureau of Business Research, University of Texas, 1964).

[2] Wolfe, J. "The Teaching Effectiveness of Games in Collegiate Business Courses", Simulation and Games Vol. 16 No. 3, 1985.

[3] Wolfe, J. & Guth G. R. "The Case Approach versus Gaming in the Teaching of Business Policy: An Experimental Evaluation", The Journal of Business, Vol. 48, 1975.