

Developments in Business Simulation & Experiential Exercises, Volume 15, 1988

INNOVATION IN MANAGEMENT EDUCATION: THE IMPACT OF THE AACSB

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ABSTRACT

This article reports on an attempt to assess whether the American Assembly of Collegiate Schools of Business (AACSB) encourages innovation in management education. The number of adopters of computerized business simulations and non-computerized experiential learning packages were analyzed to determine institutional status (AACSB accredits, AACSB members, non-AACSB members), institutional size, and institutional support (private or public). The results suggest that, the AACSB does in fact encourage innovation.

INTRODUCTION

The fact that formal business education is only about 100 years old makes it a relatively new addition to university curricula. "Although sore topics such as accounting were taught earlier, the first school devoted entirely to the study of business (the Wharton School) was established at the University of Pennsylvania in 1891" [Business Higher Education Forum, 1985:10]. In this span of less than 100 years the number of institutions granting degrees in business has grown at a rapid rate. Indeed, preliminary statistics reported by the National Center of Educational Statistics (NCES) for the 1980-1981 academic year showed over 1200 institutions granting 199,883 baccalaureate, 57,657 masters, and 855 doctoral degrees in business and management (American Assembly of Collegiate Schools of Business Membership Directory, 1982-83:102]. In percentage terms for the 1980-1981 academic year degrees granted in business and management accounted for 21.3 percent of total baccalaureate degrees; 19.4 percent of masters degrees; and 2.6 percent of doctoral degrees. Thus, in both absolute and relative terms business education has experienced rapid growth in a relatively short period of time.

During this period of rapid growth there have been reports, such as the Pierson et al. Report [1959], and the Gordan and Howell Report [1959], as well as other efforts directed toward improving business education in universities. One of the earliest, longest lasting, and most influential of these efforts was the establishment of the American Assembly of Collegiate Schools of Business (AACSB) in 1916. The mission of the AACSB is set forth in the following quote:

The American Assembly of Collegiate Schools of Business is a not-for-profit corporation of educational institutions, corporations, and other organizations devoted to the promotion and improvement of higher education in business administration and management. Organized in 1916, AACSB is recognized as the sole accrediting agency for baccalaureate and masters degree programs in business administration by the U.S.

Department of Education and by the Council on Postsecondary Accreditation. [AACSB Membership Directory, 1982-83]

One of the major mechanisms the AACSB uses to improve business education in universities is through its accrediting function. The AACSB, through its Accreditation Council, publishes standards which must be met if an institution is to achieve accreditation. The rigor of the standards is evidenced by the fact that the majority of business schools are not accredited by the AACSB.

As of 1982 there were 231 American educational institutions which had obtained AACSB accreditation (34 undergraduate only, 15 masters only, and 182 both undergraduate and masters). In addition, there were 363 American educational institutions which were nonaccredited members of the AACSB. If there were approximately 1200 institutions granting degrees in business and management in 1982 then more than one-half (606 versus 594) of these institutions were not members of the AACSB. Through out this paper when referring to institutional status we will use the terms, accredited, non-accredited member, and non-member to refer to these institutions.

There are seven accreditation standards put forth in the AACSB Accreditation Council Policies, Procedures and Standards manual [1983]. While questions have been raised about each of these standards we are directing our attention only to Standard VII, Educational innovation and Technology which states:

Innovation that furthers the school's objectives and substantially advances the overall high quality of programs is encouraged. Schools are encouraged to develop and test new learning approaches and technologies and to disseminate their results. [AACSB Accreditation Council Policies, Procedures and Standards, 1983: Front page]

As is evident from this quotation the AACSB appears to encourage innovation in all educational areas. It has been suggested, however, that in some instances the accreditation standards may stifle innovation. For example, when speaking of the standard related to a core curriculum in accredited business schools it has been stated:

While this [i.e., the core curriculum] ensures that broadly similar curricula are offered to most students, it may also tend to stifle new initiatives. At the very least, schools tend to use the accreditation standards as an excuse not to develop innovative curricular efforts of their own. [Business Higher Education Forum 1985:15]

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In addition, of the seven standards it is noted that the one dealing with innovation is the last standard presented and that it is the shortest of the seven standards. Institutions may wonder, therefore, how committed the AACSB is to innovation. Thus, accredited institutions may not actively pursue the standard related to innovation.

There may be even less incentive to innovate for nonaccredited member schools which wish to be accredited. Schools seeking accreditation may rigidly adhere to the more quantifiable standards since whether they are met can be readily determined whereas contributions from innovations may be harder to verify. In addition, if the AACSB does tend to emphasize the more quantitative standards and to demphasize innovation in the application of its standards to schools seeking accreditation, as some writers suggest, there may be a disincentive to innovate.

When reviewing business schools for accreditation, the AACSB should be guided by peer judgments of a program's quality instead of continuing to stress that schools meet rather than specific common curricular and resource requirements. Such a change in accreditation emphasis should encourage schools to innovate. [Business - Higher Education Forum, 1985:4, italics added]

Small group research may help to explain why a school seeking accreditation will not innovate. A number of small group studies [see for example, Kelman, 1961 and Blau, 196C] have shown that individuals who aspire to join a group will adhere to group standards even more rigorously than current group members. If we can generalize from small group research to groups seeking to become part of another group and if the perception indicated in the above quotation that to obtain accreditation one must rigorously adhere to the quantitatively specified standards is accurate than we would expect schools which are seeking or planning to seek accreditation to avoid innovation, since innovation is a non-quantitative and relatively minor standard. This perception would be reinforced if one saw a lack of innovation on the part of schools which were already accredited as was suggested earlier as a possibility.

For schools which are non-accredited and not seeking accreditation, and non-member schools of the AACSB the question of innovation would appear to be a matter of choice. There may be an incentive to innovative to differentiate ones product or there may be a disincentive to innovate for fear of appearing different from those who have demonstrated a certain level of competency by becoming accredited.

The basic research question being addressed in this paper is whether the AACSB in fact encourages innovation as would be implied by its accreditation Standard VII. To address this question we needed to select some relatively new educational techniques which would be particularly applicable to business education. The techniques we selected were computerized business simulations, so called management games and non-computerized business related experiential exercises. These pedagogical techniques would

appear to be innovation today for a number of reasons. First, they are relatively new, particularly with respect to easy availability. For example, while computerized business simulations have been around since the American Management Association developed the first practical business simulation in 1957, it was not until the mid-1960's that major publishers began to make computerized business simulations available. The involvement during the 1960's, however, was only on the part of a few publishers and they frequently did not actively promote this innovative pedagogy. Thus, it was not until the 1970's that computerized business simulations were easily available. The same type of observation can be made concerning experiential learning packages (i.e., they have existed for many years but it is only recently that publishers have begun to publish and actively promote packages of experiential learning exercises). Thus, these techniques of pedagogy have only recently become widely available. Second, they have generated controversy and research as to what they teach, how effective they are, how efficient they are, etc. Third, it is only recently that organizations and journals devoted to these forms of pedagogy have come into existence. The Association for Business Simulation and Experiential Learning (ABSEL) and The Organization Behavior Teaching Society (OBTS), for example, are both products of the 1970's. Likewise, the journals Simulations and Games and the Journal of Experiential Learning and Simulation began in 1970 and 1979, respectively. It would appear, therefore, that we can regard computerized business simulations and experiential learning packages as being relatively new and therefore innovative pedagogy today.

THE RESEARCH QUESTION

The major question in which we are interested is whether the AACSB encourages innovation as measured by the number of computerized business simulations and experiential learning packages an institution uses. There are two factors other than AACSB accreditation and membership, however, which we felt warranted investigation because they could influence the number of published computerized business simulations and experiential learning packages an institution might use. First, institutional size could be an influence. Large schools just by virtue of their size will have more faculty and, therefore, more likelihood of using more of these items. Likewise, larger schools will have greater resources to purchase computers and behavioral laboratories which increases the likelihood they will adopt these techniques. Second, whether an institution depends on private or public support may influence the number of items used. Since public institutions have access to a larger resource base in that they receive public funds in addition to private funds, they may be more likely to use these techniques.

Given these three main effects (i.e., institutional status, Institutional size, and institutional support), which are potentially interacting, we deemed it necessary to check for a significant triple interaction effect. Whether or not the triple interaction is significant we would look at the paired interactions, however, our interpretation

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of the main effects would change depending on whether or not the triple and/or paired interactions are significant. The strongest case for a statement that the AACSB encourages innovation would exist if the triple and paired interactions were nonsignificant and the main effect for institutional status (i.e., accredited, member, non-member) were significant with accredited schools using more simulations and experiential exercises than member schools which in turn used more than non-member schools.

METHODOLOGY

To gather data concerning institutional users of published computerized business simulations and experiential learning packages. We contacted 28 publishers who collectively were known to publish 54 computerized business simulations and experiential learning packages. Adoption lists were received from 17 publishers concerning 35 of the computerized business simulations and experiential learning packages. The distribution between experiential learning packages and computerized business simulations is presented in Table 1.

TABLE 1
NUMBER OF PUBLISHERS WRITTEN TO AND HEARD FROM FOR EXPERIENTIAL LEARNING PACKAGES AND COMPUTERIZED BUSINESS SIMULATION

	Publishers Written To		Publishers Heard From	
	#	# of Items	#	# of Items
Experiential Learning Packages	18	27	8	13
Computerized Business Simulations	17	27	13	22
Total	28*	54	17*	35

*These columns do not add to the total number since some of the publishers have both experiential learning packages and computerized business simulations.

The computerized business simulations and experiential learning packages for which information was requested and received are presented in the Appendix. For each of the simulations and experiential learning packages the total number of institutional adopters was determined by counting the number of adopters on the publisher's list for that item. Next, for each of the items, characteristics of the adopters, such as institutional status, institutional size, and institutional support were determined. Institutional size and support (i.e., public or private) was taken from The World Almanac and Book of Facts (1983) and Petersons Annual Guide to Undergraduate Study (1983). Finally, the adoption

lists were analyzed to identify how many items in total were used by each institution. In order to determine the relationship among the three selected characteristics of the adopters based on the number of simulations and experiential packages used, a three way factorial ANOVA design was employed.

RESULTS

A (3 x 5 x 2) factorial analysis of variance was conducted using number of simulation and experiential packages used by institutions as the dependent measure. The 3 levels of the first factor, institutional status, were defined as either AACSB accredited members, AACSB non-accredited members, and non-members of AACSB. The 5 levels of institutional size were classified as either schools with student populations of up to 1,999; 2,000- 4,999; 5,000-9,999; 10,000-19,999; or 20,000 or more. The third factor, institutional support, was dichotomized into two categories, privately or publicly supported institutions. Table 2 presents the results of the three-way ANOVA.

TABLE 2
RESULTS OF THE ANALYSIS OF VARIANCE FOR INSTITUTIONAL STATUS, INSTITUTIONAL SIZE AND INSTITUTIONAL SUPPORT

Source of Variation	Sum of Squares	df	F
Main Effects			
Institutional status	50.722	2	14.318***
Institutional size	79.335	4	11.204***
Institutional support	.705	1	.398
Two-way Interactions			
Status x Size	8.029	8	.567
Status x Support	1.701	2	.480
Size x Support	7.125	4	1.006
Three-way Interaction			
Status x Size x Support	9.755	7	.787
Error	1128.313	637	

**p<.01
***p<.001

As shown in Table 2 there were no significant two- way or three-way interactions, therefore only the significant main effects are reported. The mean number of simulations and experiential packages used and standard deviations for each of the main effects levels are presented in Table 3.

The institutional status main effect showed a significant difference among the three institutional affiliations; accredited members of AACSB, non- accredited members of AACSB, and non-members of AACSB (F=14.318, p<.001). The Scheffe multiple comparisons procedure, used to test for specific paired comparisons, was used as the follow-up test to look at differences among all possible combinations of the three status affiliation types.

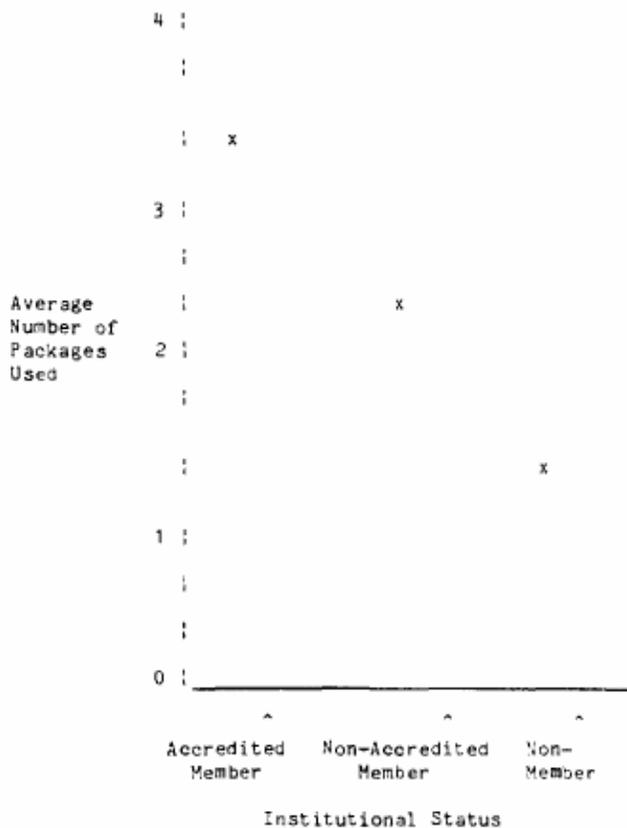
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TABLE 3
MEANS AND STANDARD DEVIATIONS FOR THE THREE FACTORS
ON THE NUMBER OF PACKAGES USED BY INSTITUTIONS

Factors	Means	SD	n
Institutional Status			
AACSB Accredited Member	3.20	1.80	207
AACSB Nonaccredited Member	2.31	1.39	222
Nonmember of AACSB	1.43	.80	237
Institutional Size			
less than 1,999	1.41	.74	179
2,000 - 4,999	1.89	1.19	158
5,000 - 9,999	2.51	1.33	144
10,000 - 19,999	2.91	1.70	115
20,000 or more	3.84	2.11	69
Institutional Support			
Private	2.64	1.71	354
Public	1.86	1.20	312

It was found that AACSB accredited institutions tend to use significantly more simulation and experiential packages than non-accredited members ($p < .01$) and non-member institutions ($p < .01$), and that non-accredited members use significantly core packages than non-member institutions ($p < .01$). graph of the institutions status means is presented in Figure 1.

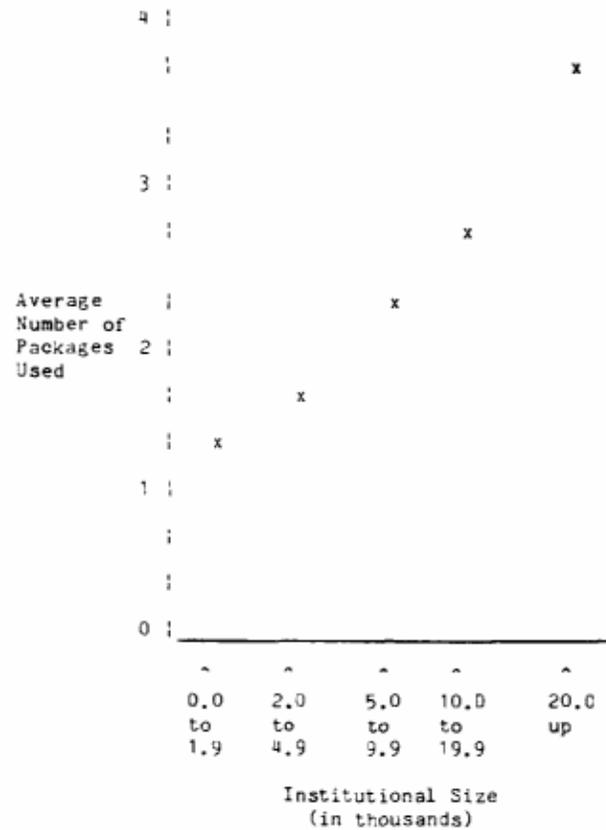
FIGURE 1
MAIN EFFECT OF INSTITUTIONAL STATUS ON THE NUMBER
OF PACKAGES USED BY INSTITUTIONS



The main effect due to institutional size revealed significant differences among the five institutional size categories on the number of simulations and experiential packages used by institutions ($F=11.204$, $p < .001$). Except for the specific comparison between institutions of size 5000-9999 and 10,000-19,999, all specific comparisons were found to be significant ($p < .01$).

In general the analysis indicates that larger institutions tend to use more simulation and experiential packages than smaller institutions. A graph of the institutional size means is presented in Figure 2.

FIGURE 2
MAIN EFFECT OF INSTITUTIONAL SIZE
ON THE NUMBER OF PACKAGES
USED BY INSTITUTIONS



The third main effect, institutional support (private versus public), did not reveal significant differences between public and private institutions on the number of packages used by institutions ($F=.398$, n.s.). Thus, the third possible effect that public institutions will use fore packages then private institutions was not supported.

The data provide convincing evidence that the degree of institutional affiliation with AACSB may have some bearing on how many simulation and experiential packages an institution may use. In addition, the number of simulation and experiential packages used

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by institutions is clearly related to the size of the institution. Whether an institution was privately or publicly supported had no effect on the number of packages used by an institution. Because there were no significant interactions or confounding main effects, we feel confident that these institutional characteristics had independent effects on the number of packages used by institutions.

CONCLUSIONS

The findings of this study suggest that the AACSB does encourage innovation as measured by the number of computerized business simulation and experiential learning packages adopted. AACSB accredited institutions use more of these innovative techniques than do AACSB member institutions. AACSB member institutions in turn use more of these innovative techniques than do non-AACSB member institutions. Future research needs to explore who the individual users are and how they are using these techniques.

APPENDIX I

Computerized Business Simulations

- * Barton, Richard F. (1973) The IMAGINIT Management Game. Lubbock, TX: Active Learning.
- Boone, Louis E., and Kurtz, David L. (1972) The Sales Management Learning Game. Morristown, NJ: General Learning Press.
- * Boone, Louis E. (1971) Marketing Strategy: A Marketing Decision Game. Columbus, OH: Charles E. Merrill.
- * Brooks, LeRoy D. II. (1975) The Financial Management Learning Game. Homewood, IL: Richard D. Irwin, Inc.
- * Bush, Ronald F. and Brobst, Bob. (1979) Marketing Simulation. New York, NY: Harper and Row.
- Cone, Paul N., Basil, Douglas C., Burak, Marshall J., and Megly, John E. II. (1971) Executive Decision Making Through Simulation. Columbus, OH: Charles E. Merrill Publishing Co.
- Cotter, Richard V. (1973) The Business Policy Game (New York: Appleton-Century-Crofts).
- Day, Ralph L. and Ness, Thomas E. (1973) Marketing in Action: A Decision Game. Homewood, IL: Richard D. Irwin, Inc.
- Edge, Alfred G., Keys, Bernard, and Remus, William E. (1980) The Multinational Management Game. Dallas, TX: Business Publications, Inc.
- * Eldredge, Daniel L. and Bates, Donald L. (1980) The Business Strategy and Policy Game. Dubuque, IA: Wm. C. Brown.
- * Estes, James (1985) Managing a Dynamic Business. Livermore, CA: Eagle Publishing Co.
- * Faria, A.a., Johnstone, D. G., and Nulsen, N. O. (1974) Compete: A Dynamic Marketing Simulation. Dallas, TX: Business Publications, Inc.
- Frazer, Ronald J. (1975) Business Decisions Simulations: A Time-Sharing Approach. Reston, VA: Reston Publishing Co.
- Frazer Ronald J. (1977) Introduction to Business Simulation. Reston, VA: Reston Publishing Co.
- * Gitman, Lawrence C. Robana, and Biggs, William D. (1981) PORTSTRAT: A Portfolio Management Simulation. New York, NY: John Wiley and Sons.
- Goosen, Kenneth N. (1973) Introduction to Managerial Accounting: A Business Game. Glenview, IL: Scott Foresman.
- * Greenlaw, Paul S., and Frey, William M. (1967) Finansim: A Financial Management Simulation. Scranton, PA: International Textbook.
- * Greenlaw, Paul S., and Hottenstein, Michael P. (1969) Prosim: A Production Management Simulation. New York, NY: Harper and Row Publishers.
- * Greenlaw, Paul S., and Kniffen, Fred W. (1964) Marksim: A Marketing Decision Simulation. New York, NY: Harper and Row Publishers, 1964.
- Gupta, Shiv K. and Hamman, Ray T. (1974) Starting a Small Business. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- * Henshaw, Richard C. and Jackson, James N. (1972) The Executive Game and the Finance Game. Homewood, IL: Richard D. Irwin, Inc.
- * Jensen, Ronald L., and Cherrington, David J. U973) The Business Management Laboratory. Dallas, TX: Business Publications, Inc.
- * Keys, Bernard, and Leftwich, Howard. (1977) The Executive Simulation. Dubuque, IA: Kendall/Hunt Publishing Company.
- McFarlan, Warren F., McKenney, James L. and Seiler, John A. (1970) The Management Game. New York, NY: Macmillan Publishing Co.
- * Nichols, Arthur C. and Schott, Brian, (1975) SIMQ. Dubuque, IA: Kendall/Hunt Publishing Company.
- * Scott, Charles N. and Strickland, Alonzo, J. III. (1974) Tempomatic IV: Management Simulation. Boston, MA: Houghton Mifflin Co.
- * Smith, C. Nye, Estey, Elmer E., and Vines, Ellsworth F. (1974) Integrated Simulation. Cincinnati, OH: South Western Publishing Co.

Experiential Learning Packages

- * Beatty, Richard W. and Schneier, Craig, (1977) Personal Administration: An Experiential/Skill Building Approach. Reading, MA: Addison-Wesley Publishing Co., Inc.
- * Bracey, Hyler C. and Sanford, Aubrey, (1981) Basic Management: An Experiential-Based Approach. Plano, Tx: Business Publications, Inc., revised edition.

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- * Certo, Samuel C. and Garf, Lee A., (1980) Experiencing Modern Management. Dubuque, IA: Wm. C. Brown Co., Publishers.
- Domm, Donald R., Blakeney, Roger N., Matteson, Michael T., (1973) and Roger Scofield, The Individual and the Organization. New York, NY: Harper and Row.
- * Dutton, Richard E., (1975) The Behavior Laboratory. Pacific Palisades, CA: Goodyear Publishing, Co., Inc.
- * Finch, Frederic E., Jones, Harsey R., and Litterer, Joseph A. (1976) Managing for Organizational Effectiveness. New York, NY: McGraw-Hill Book Co.
- Glueck, William F., Jauch, Lawrence R., and Coltrin, Sally A. (1980) The Managerial Experience. Hinsdale, IL: The Dryden Press, 2nd edition.
- Herbert, Theodore T. and Lorenzi, Peter, (1981) Experiential Organization Behavior. New York, NY: Macmillan Publishing Co., Inc.
- Joyce, Robert D. (1972) Encounters in Organizational Behavior: Problem Situations. New York, NY: Pergamon Press.
- * Kast, F. E., and Noenzweig, J., (1976) Experiential Exercises and Cases in Management. New York, NY: McGraw-Hill Book Co.
- * Klatt, Lawrence A. and Urban, Thomas F., (1981) KUBSIM: A Simulation in Collective Bargaining. Columbus, OH: Grid, Inc.
- Kolb, David A., Nubin, Irwin M., and McIntyre, James M., (1979) Organizational Psychology: An Experiential Approach. Englewood Cliffs, NJ: Prentice-Hall.
- * Knudsen, Harry N., Bell, Cecil H., and Woodworth, Robert T., (1979) Management: An Experiential Approach. New York, NY: McGraw-Hill Book Co.
- * Lau, James B., (1979) Behavior in Organizations: An Experiential Approach. Homewood, IL: Richard D. Irwin, Inc. revised edition.
- * Miles, Robert H. and Randolph, W. Alan, (1979) The Organization Game. Santa Monica, CA: Goodyear Publishing.
- * Morris, William C. and Sashkin, Marshall (1976) Organization Behavior in Action. St. Paul, MN: West Publishing Co.
- Rausch, Erwin, (1968) Collective Bargaining. Chicago, IL: Science Research Associates, Inc.
- Reddin, W. J. and Stuart-Kotze, R. (1974) Effective Situational Diagnosis. Fredericton, New Brunswick, Canada: W. C. Reddin.
- Schreier, James W., (1976) RAISE II: A Personnel Simulation. Milwaukee, WI: Lakeshore Group LTD.
- Selection. (1973) Warren, NJ: Educational Research.
- Vaughan, James A. and Deep, Samuel D. (1975) Program of Exercises for Management and Organizational Behavior. Beverly Hills, CA: Glencoe Press.
- * Veiga, John F. and Yanouzas, John, (1979) The Dynamics of Organization Theory: Gaining a Macro Perspective. St. Paul, MN: West Publishing Co.
- * Whatley, Arthur A. and Kelley, Nelson Lane (1977) Personnel Management in Action. St. Paul, MN: West Publishing Co.
- Zif, Jay Jehiel and Otlewshi, Robert E., (1970) Contract Negotiations. New York, NY: Macmillan Publishing Co., Inc.
- Zif, Jay Jehiel and Walker, Arthur H. and Archery, William T., (1970) Managing the Worker. New York, NY: Macmillan Publishing Co., Inc.
- Zif, Jay Jehiel, Walker, Arthur H. and Orbach, Eliezer, (1970) The Personnel Department. New York, NY: Macmillan Publishing Co., Inc.
- Zif, Jay Jehiel, Walker, Arthur H., Orbach, Eliezer, and Schwartz, Howard, (1970) Reorganization. New York, NY: Macmillan Publishing Co., Inc.
- * Computerized business simulations and experiential learning packages for which replies were received.

REFERENCES

- American Assembly of Collegiate Schools of Business (AACSB), AACSB Accreditation Council Policies, Procedures and Standards 1983. St. Louis, Mo: AACSB.
- American Assembly of Collegiate Schools of Business (AACSB), AACSB Membership Directory 1962-83. St. Louis, MO: AACSB.
- Blau, Peter M. (1960), "A theory of social integration." American Journal of Sociology, 1960, 545-556.
- Business Higher Education Forum, (1985) America's Business Schools: Priorities for Change (Washington, D.C.).
- Gordon, R.A. and Howell, J.E. (1959) Higher Education for Business (New York, NY: Columbia University Press)
- Kelman, Herbert C. "Process of Opinion Change." Public Opinion Quarterly, Spring, 1961, 57-78.
- Pierson, F.C., et al. (1959) The Education of American Businessmen (New York, NY: McGraw- Hill).
- Linquist, E.F. (1953) Design and Analysis of Experiments in Psychology and Education (Boston: Houghton Mifflin Company).
- Peterson's Annual Guide to Undergraduate Study -1983 (Princeton, NJ: Peterson's Guides, 1983).
- The World Almanac and Books of Facts, 1983 (New York, NY: Newspaper Enterprise Association, Inc. 1963).