

# Developments in Business Simulation & Experiential Exercises, Volume 14, 1987

## DEVELOPING CRITICAL THINKING AND EFFECTIVE COMMUNICATION

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### ABSTRACT

This paper describes a pilot program which integrates Business Policy/Advanced Business Writing into a class designed to foster critical thinking through analyses of business cases and written and/or oral communication of recommendations to appropriate audiences. Authors employ pre/ post measures of success which appear to show favorable results.

### INTRODUCTION

Recent reports on American higher education strongly recommend emphasizing teaching thinking skills at the college level. One report, published by the National Institute of Education, is entitled Involvement in Learning (1985). Another report, Integrity in the College Curriculum (1985), was published by the Association of American Colleges. Both reports address undergraduate and graduate curricula and present a number of explanations for the demise of American higher education. Much of the blame is placed at the feet of faculty and administrators who are accused of being more concerned with research and publication than with educating young people to lead useful lives; however, a number of recommendations are suggested to remedy this situation. Basically, faculty and administrators are encouraged to take students seriously, to establish rigorous curricula that lead to critical thinking and to establish institutions of higher learning where education takes its rightful place next to faculty scholarship.

### THE PROBLEM

It seems safe to assume that the recent criticism of American higher education in general applies to business schools as well. In fact, in a recent article Behrman and Levin (1984) echo with reference to business education the criticisms of the more general review of higher education. Even though Behrman and Levin are mostly concerned with graduate business education, their arguments are probably equally applicable to undergraduate education. Most business schools with graduate programs also have undergraduate programs, and they probably pay less attention to these undergraduate programs than to their graduate programs.

Behrman and Levin reason that, in the quest to achieve academic respectability, faculty and administrators of schools of business have become isolated from and irrelevant to the practice of managing organizations. They suggest that these professional business educators are capable only of communicating among themselves in journals and at professional meetings. Recently, this same criticism seems to have caught the attention of the American

Academy of Management. A new journal called the Academy of Management Executive has been added, and officers of the Academy are giving speeches about the necessity for relevance.

In all fairness it should be recognized that a substantial amount of worthwhile research has been accomplished in business schools over the last two or three decades. Many bright individuals have entered the various fields represented in business schools. There is little question that business schools and schools of management are academically more respected than ever before. Nevertheless, the current criticism of business schools which comes from the business press, corporate executives, business school deans and faculty, journalists and others with an interest in business education persists and needs to be taken seriously.

Among the most frequently read and heard criticisms are that business graduates lack awareness of themselves and their environment, lack a sense of history, cannot think critically or solve problems in unstructured situations, and cannot communicate well orally or in writing. Further, business students are accused of only being able to work within narrow, technical areas such as operations and finance because they have little or no sense of a corporation as a whole or of the critical human side of themselves and the corporation. Thus, they possess neither the skills, knowledge, nor attitudes required to become effective, creative managers and leaders.

Many recommendations have been forwarded for dealing with the criticism of business schools. These range from doing nothing, except more of what is already being done, to doing a deliberate and thoughtful long-term study of outcome measures of business education as proposed by the American Assembly of Collegiate Schools of Business (AACSB) (1985).

After teaching and working in the business policy course both at the undergraduate and graduate level over the years, the authors have become disenchanted and disappointed with students' ability to think critically in the sense of using previous educational experience to structure and solve problems at the general management level. Further, students lack the ability to communicate orally or in writing their ideas or their findings after the analyses and study of a problem.

### A POSSIBLE SOLUTION

After a period of blaming our colleagues in the university generally and ourselves and our

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colleagues in the School of Business specifically, we decided to do something to address these problems.

### Background

Our efforts were encouraged and enhanced by the recent criticisms of higher education in general and the more specific criticism of business education as well as by the renewed interest in programs designed to teach critical thinking. We were also motivated by the fact that our university completely rearranged its composition requirements so that all students now complete a common lower division composition course and then complete an advanced writing course designed specifically for students in each of our five collegiate units after they are admitted to an upper division program.

With the support of the faculty developing the composition program in the College of Liberal Arts and with the support of the Dean of the School of Business, the three authors set out to design an integrated 10-week (one quarter) eight-credit course which integrated the development of critical thinking and communication abilities. One member of the team from the College of Liberal Arts has a background in rhetoric and psychology; one member from the School of Business has background in business education and communication, and the other has taught business policy at the undergraduate and graduate level for several years. This paper reports on the design and implementation of the Business Policy/Writing program we developed and on the results of a preliminary evaluation in a pre/post test design comparing the pilot program to a regular business policy class using the Watson-Glaser Critical Thinking Appraisal (1980) as the criterion measure of critical thinking.

### Pilot Business Policy/Writing Program

Objectives. The three-member faculty team agreed at the outset to teach critical or analytical thinking and communication in an integrated manner to improve students' total intellectual functioning. We based this decision on the underlying belief that a person who cannot think clearly cannot write or speak well. The objectives of the program were to:

- A. develop critical thinking ability,
- B. develop effective communication abilities,
- C. make students aware that critical thinking and effective communication abilities are attributes which are possessed by persons who are successful managers in organizations and who successfully manage their personal lives as well,
- D. make students aware of the inter-relationships between critical thinking and effective communication by providing them with opportunities to apply and demonstrate their abilities in these two areas while,
  1. analyzing complex business cases identifying, evaluating and making recommendations about formulation and implementation of organizational strategy and goals and
  2. communicating the results of their analyses as

well as their evaluation and recommendations related to the strategy and goals, and

- E. motivate students to continue to seek new ways to develop their own critical thinking and communication abilities as well as those of others with whom they relate in order to improve the management process in their own organizations and in society in general.

The objectives of the course directly address problem areas in the business school curriculum of the 1980's which have been identified earlier in this paper. One of the most frequently heard criticisms is that the functional areas are taught in isolation. Critics agree that little or no effort is made to provide students the opportunity to analyze situations and solve problems which require using knowledge from several of the functional areas so that students begin to see both the inter-relationships among functional areas and their relationship to developing organizational strategy and goals. As indicated in the objectives, the program focused on critical thinking related to business and organizational strategy and goals; such critical thinking requires students to use their knowledge from the various functional areas and makes them aware of the inter-relationships among these areas which managers must keep in mind at all times.

Other critics have been concerned with the lack of written and oral communication abilities which business school graduates possess as well as their lack of knowledge related to interpersonal relationships within organizations and their lives in general. The program puts emphasis on developing communication abilities in the context of analyzing business cases and helps students to realize the importance of audience identification, logical organization of ideas, supporting evidence for statements, and other non-technical ideas related to communication.

Finally, critics have charged that business graduates are inept and uncomfortable in situations where they have to balance corporate and social goals. The program provides students an opportunity to deal with this issue in a controlled situation where they can experience the frustrations of criticism related to what they thought were balanced decisions without actually hurting themselves or their organizations. The instructors and members of the class spend time discussing the issues related to the inter-relationships between corporate strategies and goals and the goals of society. Students are put into situations where they must use critical thinking to make decisions related to this area and use communication abilities to effectively inform/persuade an audience of their decisions and the rationale supporting them.

Class details. The Business Policy/Writing program developed by the authors was piloted during fall quarter of 1985. The class of 10 students and 3 instructors met twice weekly (3 hours and 40 minutes per session) for 10 weeks. All the students were in their senior year in the School of Business and Economics. A total of sixteen 4-hour sessions were devoted to the actual training portion of the program, and four sessions were used for the before and after measures of critical thinking and written case analyses. Students who successfully completed

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the program were granted 4 credits in Business Policy (Management Studies credits) and 4 credits in Advanced Writing (English Department credits). They received one letter grade for the course. All assignments were graded by all three instructors and one grade was assigned after consultation among the instructors. A grading scale of 1-4 (including + and -) was used on all alignments where 1 corresponded to a D and 4 an A.

During the pilot course, students worked with cases of increasing complexity and difficulty, made several oral presentations (two of which were videotaped to provide fuller feedback) and wrote many memos based on their understanding of and analysis of the cases studied. Members of the School of Business and Economics, the Department of English, and the community were included in the audiences who received the student presentations and fostered critical thinking through questions and responses to the decisions reflected in the presentations.

The design of the course emphasized a step-by-step, integrated experience in strategy identification, evaluation, and recommendation which required effective communication of this information to someone else. Each class period developed critical thinking by requiring an analysis of a business case, the development of recommendations and persuasive presentation in written and/or oral notes. Over the 10-week period the class moved from the simple and elementary in all areas, such as strategy identification and a short written memo, to the more complex, such as recommendations related to strategy and a well-structured oral presentation to a simulated group of executives consisting of other faculty members from the School of Business and Economics. The course moved from issues of strategy formulation to those of implementation and culminated with a major presentation on the Robert F. Kennedy High School case (Christensen et al., 1982) to a "School Board" that included two real school board members from our community and an English education faculty member from UMD. Through discussion the class received feedback on substantive aspects of analysis and recommendations. Individual and group critiques of written and oral presentations were also prepared. All three faculty members participated equally in this process. Several presentations were videotaped, and students were asked to take responsibility for reviewing and writing critiques of their own presentations. A complete, detailed program outline is available from the authors.

### Outcome of the Pilot Program

The pilot was assessed in a pre/post test group design with the integrated pilot class serving as one treatment group and a non-integrated policy class as another treatment group. The treatment groups were given the Watson-Glaser Critical Thinking Appraisal. Two other equivalent groups (business writing classes) took the Watson-Glaser at the end of the quarter only. The pilot group was also asked to write an analysis of the Sturm, Ruger and Co. (Christensen et al., 1985) case at the beginning and end of the course. The results from the Watson-Glaser have been analyzed and are shown in Table 1.

Even though the data on the Watson-Glaser must be regarded as very tentative, i.e., the pilot group was small and

TABLE 1  
AVERAGE SCORES ON WATSON-GLASER CRITICAL THINKING APPRAISAL

Group Description	Pre-Raw Score	Percentile Rank	Post-Raw Score	Percentile Rank	n
Integrated Class (Treatment 1)	52	25	65	75	10
Non-Integrated Class (Treatment 2)	59.08	50	61.73	60	23
Control 1 (business writing)	-	-	60	50	14
Control 2 (business writing)	-	-	58.6	50	13

several other measures of outcomes need to be used, we conclude that something significant happened to the group involved in the pilot. Even though some of the effect could be due to the Hawthorne effect, both groups were told of the experiment; and we can find no logical correlation between attention from the School and faculty and performance on the Watson-Glaser. Further, two forms of the test were used, and they were switched for the same individual on the pre and post test. In sum, we are encouraged by the test results and conclude tentatively that the pilot program led to more improvement in critical thinking than the non-integrated class.

### Conclusions Related to the Pilot Program

A recent article by Sternberg (1985) may give several clues as to why the pilot program we implemented increased students' ability to think critically. First, students were forced into a process of identifying a problem or problems. Secondly, the problem situation (a Harvard case) was ill structured and more information was presented than needed to be used. This forced students to distinguish between relevant and irrelevant information. Thirdly, problems were lodged in a familiar and relevant context for the students (a business or high school). Fourthly, several solutions were possible and depended on informal knowledge as well as formal knowledge acquired in formal education. Fifth, every problem situation was lodged in intense communication activity, both oral and written. This activity was conducted both in groups and individually. Much of this activity happened during case discussions which included instructor roles appropriate for objectives V-VIII as emphasized by Dooley and Skinner (1974), i.e.,: skill in analyzing business problems, synthesis of action plans, developing useful attitudes and developing judgment/wisdom. Lastly, the instructors were committed to the objectives of the program and at least attempted to convey to the students what Siegel (1980) terms critical spirit or critical attitude.

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### FUTURE PLANS FOR THE BUSINESS POLICY/WRITING PROJECT

The authors are presently formulating plans for implementing a revised program for the academic year 1986-87. We expect to implement two programs in groups of approximately 20 students for a total of 40. Again, two treatment groups will be involved, the critical thinking and communication program and a regular policy program. The policy component in the two treatment groups will be coordinated to allow for more direct comparison. Further, pre-post essays on business cases will be written and analyzed for both treatment and control groups. A computerized context content (McTavish analysis program will be used for this task and Pirro, 1984). Student evaluations will also be used as well as ratings of oral presentations.

### CONCLUSION

Based on the evidence available, we believe that the program on critical thinking and communication represents a significant contribution to answering recent criticisms of higher education in general and business education specifically. We hope others will attempt similar efforts in pursuit of producing graduates with the ability to think critically and communicate well so they can contribute to their organizations and live useful lives.

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