

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

USING A COMPUTER-BASED BUSINESS PLAN ASSISTANT IN CONJUNCTION WITH A MARKETING SIMULATION GAME

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ABSTRACT

This paper discusses a computer assisted approach to help students develop a business plan in preparation for playing a marketing simulation game. It presents a sample business plan and leads the student through the various phases of business plan writing taking into consideration the characteristics of the proposed business, such as industry classification, start-up or otherwise, size of the business, and nature of the technology.

INTRODUCTION

A business plan is the first step in starting a business. It not only helps the user to actually map out a strategy but it is also essential for raising capital or attracting other business associates (MDC 1985). It ensures that would-be managers have thoroughly thought through the key issues they are likely to face in their business and have developed appropriate plans for dealing with them.

In the simulated environment of a computer-driven business game, the same rationale applies. Starting a game is like entering a new business. Students should think through the nature of their business and the issues they are likely to face. Writing a business plan prior to starting the game provides an excellent method of ensuring that students have done this (Stapleton 1987). Writing the plan not only prepares students to play the game more effectively, but it conditions them to look for issues that may or may not arise as the game progresses, thus enhancing their learning experience.

Notwithstanding its importance, students often receive little training on how to write a business plan. First, while it is usually alluded to in the course of study, the actual teaching of what a business plan is and how it should be written is often missed entirely in a business program. Second, if it is addressed, it is often covered in an advanced course that is taken simultaneously or after the one in which the simulation game is used.

The problem is complicated still further by the fact that effective simulation games generally take virtually an entire term to play, thus leaving little time to cover business plan writing in the host course prior to starting the game.

One way to address this problem is to put the instructional task in the hands of a computer. This paper presents a computer-driven business plan assistant that can help students write a plan. It helps them select an appropriate outline for their plan and then helps them structure the content of each section. The process of helping students generate a plan also teaches them the basics of business-plan writing.

WHAT THE SYSTEM SHOULD PROVIDE

A business plan generator system should ideally provide two functions: First, it should focus students' attention on key issues such as the nature of markets and competition, the nature of the product, marketing and manufacturing strategies, sources of finance, and government regulations. In essence, then, it should provide the basic outline that governs the basic structure of the plan.

Second, it should guide the user by providing prototypic text as a model to follow when writing each section of the outline. This can be done in two ways: It can simply call up text from a data bank so that students can rework it in a word processor, or it can quiz students regarding the specific nature of the plan, then modifying the text to fit the individual situation. For instance, the nature of a business plan can vary substantially from one application to another. A plan that deals with a manufacturing industry (SBA 1986a) suggests a different set of issues than one that deals with a construction firm (SBA 1986), a retail establishment (SBA 1986b), or a small service firm (1986c). Therefore, the plan generator might store several different outlines and query students regarding the specific industry in order to determine which outline to provide.

This procedure highlights a key feature of the instructional approach we are suggesting in this paper: In fact, students only need a single outline -- one that fits the particular game being played in the class. The industry and its key characteristics are probably obvious from reading the manual. By requiring students to consciously identify the particular industry they are dealing with, the system reminds them that there are other industries that might differ in important ways. This process of classifying business situations by comparing and contrasting specific case settings

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constitutes an important part of management education (Corey 1980).

The same principle applies throughout. At each stage, the system should provide instruction as well as assistance. At the outline level, it should teach students what topics should be covered in a business plan. At the content level, it should teach students how these topics are typically addressed, then providing students with the opportunity to extend their understanding by determining how adapt the prototype text is to their own situation.

USING THE SYSTEM

The specific system was designed using four prototypic business plans provided by the Small Business Administration (SBA 1986a, 1986b, 1986c, 1986d). The selection was one of convenience. While these are not necessarily the ideal prototypes to use for business simulation games (most of which involve large businesses), they are close enough in for to provide a working first model of the plan generator.

The basic operation of the system is described in the following sections.

Selecting Sample Text

After the system is invoked, it presents the students with a series of screens into which the students input information.

The first screen asks students if they would like to work on an earlier business plan or start a new one. In either case, they are invited to type in a name for the business plan, and a new one is either created or an old one retrieved from the system's data base.

The students are also given the choice of being given a sample plan or creating one for themselves. In general, any plan will provide some guidance, so the students will opt for a sample plan. However, the option of creating a plan gives instructor a means of entering a sample plan that might not have been included in the original system. Each new plan can be incorporated into the system's data base for use by future students.

Creating a new plan involves two separate tasks: The first is that of creating an outline. The second is filling in the outline with sample text.

Following the initial two questions, students must select an industry in order to determine which sample plan to select. The initial version of the system includes plans for construction, manufacturing, retail, and service industries.

When filing a new plan for future use, the system requires an elaboration of the industry menu so that users can enable the system to select a proper sample from among the competing alternatives on file. For instance, if the instructor were to enter a sample plan for a supermarket, the system would ask:

Which industry?

1. Construction
2. Manufacturing
3. Retail
4. Service
5. Other

If the answer is "Other," the system will query regarding the name of the industry, thus expanding the menu. In the case of a supermarket, the industry would be "Retail" Since the category already has a plan on file, the system will create a submenu and query regarding the name of the two entries - in this case, "General Retail" and "Supermarket."

Editing the Plan

Following the selection of a sample plan, the system loads the plan into a word-processing module. The second screen asks students whether they want to edit, print, or quit the system. Selecting the print option sends the plan that has been loaded to the printer, while the quit option terminates the session.

Selecting the edit option evokes a menu containing an outline of the sample plan. For instance, selecting the edit option for any of the four industries incorporated in the initial system would evoke the following menu:

Which component of the plan would you like to edit?

1. Executive Summary
2. The Company
3. Markets and Competition
4. The Products
5. Selling
6. Manufacturing
7. Financial Data
8. Investment
9. Appendices
10. Return to the Main Menu

In response to the menu selection, the system evokes the appropriate section into the working area of the word processor. Students then proceed to modify the text to address the specific needs of their particular business situation.

Financial Reports

While financial reports are generally confined to a specific section of the business plan, they require a different kind of thinking process than the more qualitative/descriptive portions of the plan. As a result, we have provided a special financial planning module to help students generate these reports. While the module provides the general flexibility of a spread sheet, it has special templates for preparing pro-forma income projections, balance sheets, and estimates of cash flow.

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The pro-forma income statements include a detailed selection of revenue and cost accounts. The system queries students regarding which categories are relevant to their company. It then requests that they enter the key values for each. It provides them with the option of using formulas to estimate future sales and costs. When all the data are entered, the system calculates the derived values such as gross margin, net before and after taxes income, and cumulative income for as many years as the students request (default = 1 year).

The system takes a similar approach in developing projected balance sheets. It presents students with a menu of accounts and asks them to select those that are applicable to their company. It then asks for initial values and proceeds to update them using the information gleaned from the revenue and expense accounts used to derive the income statement.

The cash flow analysis provides a structured system to help students project sources and uses of funds. Exhibit 1 illustrates an example developed for a construction firm using the current version of the system.

SUMMARY AND CONCLUSIONS

The system described in this paper is simple to use and flexible enough to adapt to particular styles of business plan preparation. Furthermore, the sample plans stored in the system can easily be expanded to provide the degree of guidance instructors wish to provide relative to a given business simulation game.

Beyond the obvious function of helping students write a business plan, the system provides a major educational service as well. It gives students an idea of what business plans look like and sharpens decision making skills through both the writing process and the use of the financial data processing module. By requiring students to rework prototypic text, it forces them to evaluate their plans and strategies relative to the general prototypes that they are given. While the prototypes provide a useful model, the rewriting process hones thinking and writing skills through a process of contrast and comparison. By presenting students with a menu of typical income, expense, asset, and liability accounts, the system helps students understand the financial structure of a company. Developing actual revenue and expense projections gives them a practical exercise in forecasting.

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EXHIBIT 1:

A PROTOTYPIC CASH-FLOW STATEMENT FOR A CONSTRUCTION FIRM

Estimated Cash Forecast For Construction Firms			
	January	February	March
Expected Available Cash:			
Cash Balance	70000	151780	151103
Expected Receipts:			
Job A	45000	5000	1000
Job B	10000	10000	10000
Job C	15000	4000	20000
Bank Loans	40000	3000	3000
Total Expected Cash	180000	173780	185103
Expected Cash Requirements:			
Job A	5000	15000	6000
Job B	10000	1000	5000
Job C	7500	1000	5000
Equipment Payments	1450	1450	1450
Taxes	745	702	654
Insurance	672	672	672
Overhead	1400	1400	1500
Loan Repayments	1453	1453	5458
Total Cash Required	28220	22677	25734
Cash Balance	151780	151103	159369
Total Loans Due to Bank	40000	43000	46000

Backtrack(B) or Forward(F) ? F