

Developments in Business Simulation & Experiential Exercises, Volume 13, 1986

SIMULATION - INDOCTRINATION OR LEARNING

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EMPIRICAL DECISION MAKING

For some time a phenomenon that we may call EMPIRICAL decision making has been of concern to decision scientists. This is observed when a person makes a decision in a particular situation that turns out to work very well. The attitude that is represented by this decision then becomes part of that person's managerial style and the same decision is made any time another situation develops that appears to be reasonably similar to the original decision. Eventually the decision making process becomes one of merely looking for the best fit and acting as experience dictates.

Some obvious shortcomings of this approach are that the same problem seldom reappears in exactly the same form so that the fit may not be very good; the original good result may have merely been the result of good luck rather than good decision making; and that times change and even if the situations are identical and the decision was a good one at the time it was made the same decision may not be a good one in today's different environment.

Some twenty years ago in the early days of business simulation a colleague had a consulting assignment from a company calling for the development of a simulation of the company that was to be designed so that the decisions that top management felt were the right ones for the company were also the ones that won the game. Presumably the company management felt that a simulation game would be an excellent way of indoctrinating their employees into a particular way of making decisions. In all probability they were correct in this but there were misgivings even at that time about the extent to which this would lead to solving yesterday's problems rather than tomorrow's problems.

In our decision making courses we stress analysis as the guide to correct decision making, even though empiricism has certainly been a large part of managerial decision making in the past. In recent years though, the shock waves generated by foreign (often Japanese) competition have caused many companies to rethink their way of doing things and doing things the way they have always been done has largely gone out of style.

CURRENT PRACTICE

A not unusual exposure to simulation gaming for a student might be to play one game in a Marketing course where the game was structured such that dollars invested in sales personnel paid off handsomely, and later play another game in a Management of Technology course where large expenditures for new product development were the key to success. I believe the message intended from these relationships is that these variables should be investigated to

determine what their effects were, rather than to imply that the observed effects were universal truths. My concern lies in the extent to which students may actually come away believing that sales personnel dollars are more effective than advertising dollars and that new product development is more important than quality assurance on existing products.

THE CLARKSON EXPERIENCE

At Clarkson University we have run for some time a full course in Management Simulation in which we play a number of short games that are played from start to finish in a two hour lab period. In these games we give the relationships describing the states of nature as formulas rather than having the students derive the relationships. As part of this experience we have observed what have appeared to be fairly strong indoctrination effects when going from one game to another. In a paper presented at the 1984 ABSEL meeting [1] we proposed using multiple games to minimize indoctrination effects, designing the games such that a variable that would have considerable weight in one game would be relatively unimportant in another game. It was recommended that this approach would serve to minimize indoctrination and the paper suggested analysis as the preferred alternative to empirical decision making.

RESEARCH NEEDED

Before searching for ways to minimize indoctrination effects it would appear appropriate to document the existence of such effects. My observations and also my intuition lead me to believe that a successful result in one environment leads one to follow similar strategies in another environment, even when there may be ample evidence to suggest that the strategy will not work in the new environment. It is also my impression that simulation gaming may be a considerably more powerful tool for indoctrination than other pedagogical forms.

While measuring any indoctrination effects being carried forward from gaming to real life decision making would be a difficult (even though worthwhile) task, it should be relatively easy to substantiate their existence within the gaming environment. The immediate recommendation, then, is to endeavor to determine the extent to which a successful result in one game would lead participants to follow a similar strategy in a second game, even when all the evidence suggests the strategy would not be successful.

RESEARCH DESIGN

The suggested research plan would call for the development of two relatively simple games for each variable to be tested in which the effect of other

Developments in Business Simulation & Experiential Exercises, Volume 13, 1986

variables would be minimized. The games should be designed so they appear to be similar but in which opposite strategies with respect to the variable of interest would be appropriate, and some vehicle for suggesting the appropriate strategy other than experience should be provided. For this last purpose the Clarkson format of giving participants all the relationships as formulas would be suitable. Some student groups, randomly selected, would then play the games in one order while other groups would play the games in reverse order.

The inherent variability in decision making could then be measured by the variability among groups playing the games in the same order. The indoctrination effects would then be estimated from the extent to which the variability in groups playing the games in a different order exceeded that which might be expected from the same game order variability.

Any indoctrination effects found should be verified by establishing relationships for more than one variable, and each variable should be tested in more than one environment. It is hoped that investigators at several different universities would be willing to participate in the project by either selecting their own variable for testing or by re-testing a variable being tested elsewhere. I am planning to use PRICE as a variable for initial experimentation this spring in the Clarkson environment and hope that others would be interested in testing the same variable in their environment or in testing other variables.

REFERENCES

- [1] Frazer, J. Ronald, "Advantages of a Multigame Simulation Course," in James W. Gentry and Alvin C. Burns (Editors), Developments in Business Simulation & Experiential Exercises, Vol. 12, Stillwater: Oklahoma State University, pp. 177-179.