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STUDENT BACKGROUND AS A FACTOR IN SIMULATION OUTCOMES: THE COLLECTIVE BARGAINING EXAMPLE

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ABSTRACT

This study examines the effects that students' backgrounds have on the outcomes of collective bargaining simulations. Collective Bargaining classes studied had varying degrees of homogeneity, as did the work groups formed within each class. The results support the hypotheses that having had work experience gives the student greater capacity to get more deeply into the simulation exercises. Implications regarding (1) the value in using simulation exercises and (2) considerations for implementing and administering such exercises are discussed.

INTRODUCTION

There are a number of criteria to be employed when selecting an appropriate simulation exercise for a class. In addition to the substantive concerns, one needs to consider whether the specific exercise is "right" for the particular group of students in the class at the time. The questions that led up to this paper emerged at the time of a relocation from a midwestern university with a residential campus in a "college town" environment to an urban commuter university. In addition to the setting differences, the former situation entailed all undergraduate classes, populated almost entirely by the "traditional" full-time resident undergraduate student 19-22 years of age. The latter situation, on the other hand, consisted of classes in a specialized professional graduate program, wherein some 90 percent of those in the program were part-time students, employed full-time. Of those employed, approximately 85 percent were employed in some area within the specialized field of the degree program (Industrial Relations).

A variety of bargaining simulations had always been a part of the Collective Bargaining course in the undergraduate setting. Some of the simulations were selected and continued solely on the basis of their merit as the "best way" of learning some of the concepts essential to the field of bargaining. Others, quite frankly, were utilized more in an attempt to provide variety and a change of pace. In revising and upgrading the course for the graduate level, there was no question but that the "substantive" games should stay. There was, however, much apprehension over the inclusion of the others. Upon review, some appeared to be quite superficial. It seemed that the seasoned businessmen and women (several were corporate directors of personnel, labor relations, or industrial relations; many had more than 10 years of experience in their field) would want high-level, technical, current information and would likely balk at playing "little games."

In moving into this new setting, then, many of the previously used games were abandoned. But a new problem--time--reared its ugly head. Relatively few of us are sufficiently engaging, interesting, charming, and witty in our lectures to hold classrooms of students

at attention for three hours at a time--especially at night, after they had caught the 7 a.m. commuter train and then worked a full day. So, soon the search for ways to provide variety and a change of pace began. Re-enter the old repertoire of "extra-substantive" (not "non-substantive") simulations. They were immediate and smashing successes. The "veterans" responded enthusiastically, becoming totally immersed. Whereas in the previous setting with the traditional undergraduate students it had been necessary to constantly urge them on, employ carrots and sticks, and offer guidelines, hints, and assistance, these new students were self-directed. They had to be stopped rather than started. The simulations became the topic of pre-class, break time, and even after-class conversations. De-briefings sometimes presented a problem, in that each group wanted the floor to tell its story and to point out how its solutions were superior to those offered by the other groups. Great competition ensued. Needless to say, the full array of simulations became a permanent and important part of the course. The only issue remaining was the task of finding new and more challenging simulations.

Some years later another relocation occurred. This time, the move was to a university that in many ways presented a combination of the two settings previously described. There was a daytime undergraduate program, populated almost entirely by students with either (a) no work experience, or (b) work experience only in "non-career" jobs. In addition, there was a large night program, wherein the enrollees were primarily part-time students with full-time jobs. In the night program, the students were more likely to be working at "career-type" jobs, or at least for "career employers." One major difference was that almost none were employed in a field closely related to the subject material of the class. These factors and the experience associated with the previous move were considered when revising the course and selecting materials for the new environment. This time, it was somewhat more complicated because of the fact that the course was being offered in both types of settings, the day program and the night program. At this point it was decided that a more systematic study of the use of collective bargaining simulations should be undertaken.

The portion of the study reported here is an attempt to to examine the effects which students' non-classroom (i.e., work) backgrounds have on the bargaining simulation outcomes.

METHODOLOGY

The Sample

Results from collective bargaining simulations in four different classes were examined. There were two day classes (one each in two semesters) and two night classes (one each in two semesters, also). In the day sessions there were 17 and 18 students, divided up

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into four groups each (A-1 through A-4 and B-1 through B-4). The night sessions had 14 and 21 students, with groups of 3 and 5 (C-1 through C-3 and D-1 through D-5).

All students involved had essentially the same academic preparation for the course (senior standing, with prerequisite courses in personnel administration, labor relations, and labor law). There were only 3 people who had had any work experience at all that even touched upon the field of labor relations, and their experiences were (a) not directly in collective bargaining, and (b) at relatively low levels in their organizations' hierarchies. These 3 people were all in the night classes and were all part-time students with full-time jobs. There were no union members in any of the classes. Five people (1 day student; 4 night students) had at one time been members of labor organizations, but none had been officers or stewards or had been involved in their unions in any way that might classify them as activists.

The Simulation Exercises

The collective bargaining simulation used in this portion of the study was the Science Research Associates' game, *Collective Bargaining: A Simulation*. The game embodies role playing, problem identification, solution choice, solution formulation, and the drafting of contract clauses, all in a competitive mode. The aspect of the simulation under examination involves all but the role playing elements.

One of the initial tasks of the game is to select the "best" alternative from a list of specified solutions. These "solutions" are in the form of contract clauses. Participants are provided information about two problem areas and then, for each, are given several specific contract clauses to be adopted in the agreement toward which they are working. They are to select the "best" clause in each case, with no modifications or additions allowed. Later in the simulation, after having written some clauses on their own in other contract areas, they are told to return to these same problem areas. This time, they are given the options of (a) sticking with their original selections; (b) selecting different alternatives from the lists provided; or (c) formulating original solutions (i.e., clauses) of their own.

(To understand the nature of this study, it is first necessary to understand that the author-specified clauses in the lists of alternatives are short and terse. They are "black and white." They are not really sufficient to deal with all the complexities and contradictions that the thorough and sensitive observer should be able to detect in the problem descriptions.)

The Observations

Recall that the day-class groups (A-1 - A-4 and B-1 -B-4) were composed of the traditional full-time undergraduate students. These classes were highly homogeneous; there was inter- and intra-group homogeneity, and there was homogeneity across as well as within semesters. That being the case, the only criterion imposed in the formation of groups was that group sizes be roughly equal.

The night classes presented a different picture, however. Students were older and more work experienced, including a fairly wide variety of experiences, both in nature and in extent. Group composition, therefore, was a factor to be considered. In the first semester (the class of 14, C-1 through C-3), group composition was assigned by the instructor. Information on the background of every student was collected, and those data served as the basis for assignment. Students with the most directly relevant experiences

were "spread out" over the groups. Assignments made sure that the least experienced (including a few non-experienced) did not cluster together, but instead were associated with the most experienced. In the second semester, no controls were exerted. Students were left alone to form groups as they chose, subject only to the equal-size constraint. The result of this freedom was that, by and large, the less experienced joined together (D-1 and D-2) and the more experienced formed their own groups (D-3 through D-5). In the former cases, one group (D-1) had 3 less experienced members and 2 more experienced, while the other (D-2) had 2 of each.

Again, the focus of this part of the study is on the solutions adopted by these different groups, for the purpose of ascertaining whether the nature of these adoptions varied systematically by differences in the backgrounds of group members. Essentially, three kinds of groups were observed: (1) those with homogeneous memberships of traditional, non-experienced, full-time, day students; (2) those with mostly less experienced, part-time, night students; and (3) those with part-time, night students assigned to groups in such a way as to assure that intergroup mixtures of experience were relatively similar.

DISCUSSION OF RESULTS

As indicated earlier, the author-specified clauses in the lists of alternatives provided all fell short of what was really needed to solve the problems. To adequately address the problems the students needed to have gone beyond what those pre-fabricated clauses contained--i.e., they should have written their own clauses, clauses that covered the full range of problems at hand. One of the criteria for evaluating a group's simulation results, therefore, was whether the group had drafted its own original clauses for remedies. The results of this are below:

- Cluster A -- Groups A-1, A-3, and A-4 each retained initial specified clauses from the lists.
Group A-2 retained one initial clause and wrote one original.
- Cluster B -- Groups B-2 and B-3 each retained initial specified clauses from the lists.
Group B-1 retained one initial clause and wrote one original. -
Group B-4 wrote two originals.
- Cluster C -- Groups C-1 through C-3 each wrote two originals.
- Cluster D -- Group D-1 retained one initial clause and wrote one original.
Groups D-2 through D-5 each wrote two originals.

There are (at least) two sets of considerations or qualifications that warrant further amplification. One is whether the newly formulated "creative" solutions are necessarily superior to the lists of author-specified ones. Responses are analyzed here as though such superiority does indeed exist. The basis for this is as follows: (1) the simulation exercise was set up so that the specified solutions were lacking--i.e., those seeing all the nuances of the problem and understanding the operationalities of the specified solutions would recognize that the full array of needs were not met by those specified

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solutions; and (2) the actual creative original clauses that were offered were all judged to be appropriate and to address most or all of the needs unmet by the specified solutions.

The other issue is whether the relationships between experience and drafting original clauses might be a function of something like "ability" rather than simply experience-influenced. An attempt to examine this question was made by looking at the relationship between solution choices and scores on informational tests. (The term "informational tests" refers to tests over information present in the text, in outside readings, and in classroom lectures, where test items were in the form of direct questions rather than case problems, incidents, or other situational formats.) The mean scores from those exams, by group, follow:

<u>Group</u>	<u>Score</u>	<u>Group</u>	<u>Score</u>
A-1	72	C-1	72
A-2	78	C-2	75
A-3	81	C-3	86
A-4	85	D-1	71
B-1	84	D-2	78
B-2	73	D-3	80
B-3	77	D-4	86
B-4	80	D-5	74

Clearly, those scores did not vary systematically by student background. Thus, whether the scores measure innate ability, diligence, motivation, or some other intangible, they do not support an argument that the more experienced enjoyed any advantage over the less experienced from this perspective.

CONCLUSIONS

The results would appear to support the assertion that having had work experience gives the student a greater capacity to get more deeply into the simulation exercises. It stands to reason that, if a set of exercises do in fact simulate the business environment, those with experience in that environment should be better prepared to handle those exercises. They should be able to analyze them more thoroughly and to arrive at more complete, meaningful, and operational solutions to problems. They should be better able to recognize second- and third-order effects. The results suggest this, even down to the pattern among the "mixed" groups, where the more experienced of the two mixed groups went further in developing original solutions.

Several implications follow from these results. They are that:

1. Simulation exercises are useful parts of a course for mature, work-experienced students. They are not mere "filler." They retain the interest and elicit the involvement of this type of student because they allow for (and require) more challenging and more realistic applications.
2. The less experienced students need additional information, coaching, training, and feedback if they are to be expected to obtain the same value from simulation exercises that experienced students enjoy.
3. Lateral learning is an important aspect of simulation. Faculty members utilizing simulations should know the students' backgrounds and should make group assignments accordingly. The importance of this increases as the heterogeneity of the class increases.

4. Simulation exercises carry some learning benefits that are beyond what occurs in the direct transfer of information.
5. To be most effective, simulation exercises must be selected carefully, with student characteristics and backgrounds in mind.

Finally, it should be reported that additional study is currently being conducted. A study of the effects of repeated exercises within a given class is being conducted to see whether (1) the less experienced students with practice become better able to get more deeply into the simulation; (2) the strong involvement of work experienced students continues; and (3) the quality of the creative solutions improves.