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THE NOMINAL GROUP TECHNIQUE: A VEHICLE FOR IMPROVING CASE METHOD COURSES

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ABSTRACT

The purpose of this paper is to illustrate the use of the nominal group technique as a decision making process in case method courses. The rationale underlying the technique and its advantages over the traditional interacting group process are explained. A detailed methodology for utilizing the nominal group technique in class is provided.

INTRODUCTION

Many courses in schools of business across the nation utilize the case method of teaching. The procedure frequently involves a small group of students in a setting designed to simulate top management committee meetings. The students are assigned a case and required to develop alternative solutions to the stated problem, and then to select the "best" course of action. The decision making process is typically the traditional approach in which group members interact in a relatively unstructured fashion. The specific technique the group employs to complete its task is either consciously designed by the group members themselves (and this design will differ among groups) or simply evolves as a result of their interaction. Very little attention is given to the decision making process used even though the process itself is a major determinant of the alternatives identified and selected. Thus students participate in the decision process without recognizing the significant impact of the process on the final decision reached by the group.

The typical interacting group process, in whatever form, has a number of weaknesses: interacting groups may be dominated by one individual; group decisions may reflect considerable social pressure to conform; too much time and effort are directed toward maintaining social-emotional relationships at the expense of the task; negative prejudgment of new ideas may occur; group members may pursue only a single train of thought since the initial stages of the discussion may focus thoughts in one particular direction; and not all members contribute to the extent of their abilities.

MAKING GROUP DECISION MAKING MORE EFFECTIVE: THE ROLE OF THE NOMINAL GROUP TECHNIQUE

The nominal group technique (hereafter, NGT) has been suggested as a means of overcoming the weaknesses of interacting groups and, hence, improving the effectiveness of group decision making [7]. This structured group decision process involves the following well- defined steps;

1. Group members silently and independently generate alternative solutions to a problem while sitting around a table. The purpose of this step is to stimulate "creative tension" within the group members by placing them in the presence of others

who are silently working. If one observes other members industriously writing down alternative solutions, then he/she will be psychologically encouraged to formulate a list of solutions also. Since the members are not allowed to interact, no prejudgment of ideas can occur and the individuals are not likely to "fall into a rut" and think only along the lines suggested by the more verbal members of the group.

2. Under the direction of a facilitator, each member--one at a time, in turn, around the table--presents one of his/her alternative solutions to the group without discussion. Each alternative is written on a tear sheet by the facilitator. This procedure allows all members to participate to the extent of their abilities while not allowing one person to dominate the session. It also eliminates the distraction of arguments among members wishing to defend their alternatives. Nonconformity and conflicting ideas are tolerated with no interruption of the decision-making process.
3. After all individuals have presented their ideas, the members interact by discussing the alternatives listed on the tear sheets. They may request clarification or elaboration and are allowed to defend their own ideas and attack the ideas of others. This phase helps to balance the earlier task emphasis with social-emotional interaction and permits a free discussion of alternatives after all the alternatives the members have generated have been identified.
4. At the end of the discussion period, each member votes, by secret ballot, for those alternatives that he/she considers to be the best solution(s) to the problem. The results of the secret vote comprise the group's decision. Secrecy reduces the pressure to conform to the voting patterns of others and permits each person to support only those alternatives perceived to be the "best."

The use of the NGT in case method courses holds promise for improvement over current methods for at least two reasons: research indicates that it overcomes many of the disadvantages of the interacting group process; and students are introduced to (and possibly trained in using) an alternative method of group decision making which can be quite useful to them beyond their academic experience. They also become aware of the importance of the group decision process as an influencing factor.

How then, does one utilize the NGT in the classroom?

IMPLEMENTING THE NOMINAL GROUP TECHNIQUE IN CASE METHOD COURSES

Preliminary Steps

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Students should be divided into small groups of five to nine people, and should be arranged so that they are seated around a table. Since the procedure involves periods of silent work, the room must be large enough to permit the relative isolation of more than one group, or the groups should be housed in different rooms.

The following supplies will be needed for each group;

- An easel;
- A flip chart;
- A roll of masking tape;
- A felt tip pen; and a
- Packet of 5 x 7 cards.

Each group will require a facilitator who must be trained in administering the nominal group technique. The facilitator may be a member of the class and may also participate in the group decision making process. The training session can be completed in approximately an hour and a half. Essentially, each facilitator should become familiar with the procedures outlined in the following section.

NGT Procedure for Solving Case Problems

1. Each student is provided with a copy of the case problem and is asked to read it carefully.
2. The students are instructed to generate as many alternative solutions to the problem as they can during the next 15 minutes. They are asked to work without speaking to anyone else, and to record each individual alternative solution on a separate 5 x 7 card.
3. At the end of 15 minutes, the facilitator will set up the easel and flip chart at the end of the table. Each student will be asked to read one alternative solution in turn, around the table, as the facilitator records and numbers each of the alternatives on the flip chart. As each sheet is filled, the facilitator tears it off and tapes it to the wall in clear view of the group. This process is continued until all alternative solutions have been recorded. No discussion or comments are permitted during this phase.
4. The facilitator now allows the group to discuss any or all of the alternatives in any fashion they desire for 15 minutes.
5. The facilitator distributes ballots (5 x 7 cards) to each of the group members and asks them to vote by secret ballot for the alternative(s) (identified by number) that they consider to be the best solution(s) to the problem. there is no discussion during the voting process. The voting will consist of allocating 10 points among the alternatives each member considers to be the best solution(s). If, for instance, an individual wishes to vote for only one alternative, that person should write down the number of that alternative and assign it 10 points. If, however, an individual wishes to vote for more than one alternative he/she should write down the number of each of those alternatives and allocate the 10 points among them based on the priority assigned to each one.
6. The facilitator collects the ballots and records the votes on the tear sheets that were taped to the wall. The group may

- now discuss the alternative(s) that received the most votes.
7. Each group then reports to the rest of the class its solution to the case and the underlying rationale. Since the groups' solutions will probably differ, these differences can provide an impetus for further class discussion.
 8. Finally, the class should then analyze the decision making process they used and compare and contrast it with the more familiar interacting group process.

RESEARCH EVIDENCE ON THE EFFECTIVENESS OF THE NOMINAL GROUP TECHNIQUE

Research on the relative advantages of the NGT over the traditional interacting process has produced mixed results, as shown in Table 1. Although the dependent variables used to represent group decision-making effectiveness differ substantially from study to study, the majority of the research studies shown in the table conclude that nominal groups are superior to interacting groups in important ways. Our own research has clearly demonstrated that groups of students using the NGT in developing alternative solutions to case problems are able to generate significantly larger numbers of possible solutions than are students using the traditional interacting approach.

TABLE 1
NOMINAL GROUPS VERSUS INTERACTING GROUPS:
RESEARCH RESULTS

Representative Studies in which Nominal Groups have been found to be superior to Interacting Groups on certain variables:	
Study	Dependent Variables
Gustafson, et al. [3]	Judgments of subjective likelihood estimates
Van de Ven & Delbecq [8]	Quantity of unique ideas generated & satisfaction of group members with their decision-making process
Souder [5]	Statistical consensus on R&D investment guidelines & in achieving task integration
Burton & Pathak [1]	Quantity and quality of alternative solutions
Van de Ven [6]	Levels of service efficiency & community acceptance*
White, et al. [9]	Rates of implementation of group-derived problem solutions
----- Representative Studies in which Nominal Groups have not been found to be superior to Interacting Groups on certain variables:	
Study	Dependent Variables
Green [2]	Quantity and quality of alternative solutions
Burton & Pathak [1]	Group member satisfaction
Miner [4]	Quality of the decision and level of acceptance of the group's decision

*This study actually compares the Program Planning Mo-

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del, which employs the nominal group technique in its early phases, to a conventional planning process using the interacting group process.

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