

Dr. Donald L. Shawver, his "Pink and Walker" index in background, explains game to players.

# GAMES BUSINESS



Thirty-seven candidates for Masters' degrees are taking decision-making class.

**T**O THOSE WHO HAVE PUT hotels on Board Walk and gone to Jail without passing Go, the business management game being played by graduate students in the School of Business and Public Administration should have considerable appeal.

But where Monopoly utilizes cards in a "Community Chest" to help mete out success and failure, the business management game makes use of a carefully programmed electronic computer to spell out the consequences. And the answers are a great deal more logical than, "Advance to St. Charles Place. If you pass Go, collect \$200."

"Business management games have been popular with executives for the last 10 years," says Dr. Donald

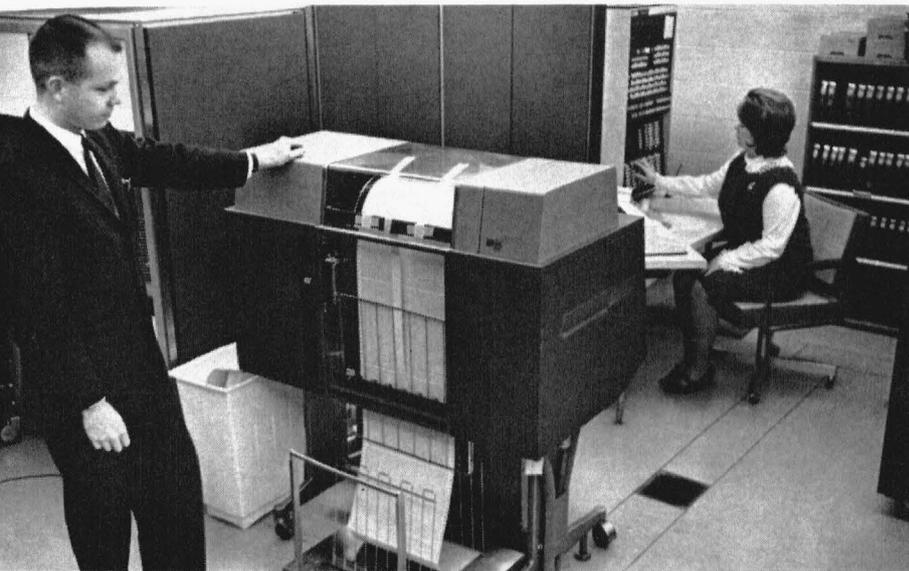
L. Shawver, professor of Marketing in B & PA. "We've been using it at Missouri for the past three years as a teaching aid in our class on 'Business Policy and Decision Making.'"

Dr. Shawver "umpires" the game this semester for 37 graduate students who have been divided into seven teams, competing against each other and their own decisions.

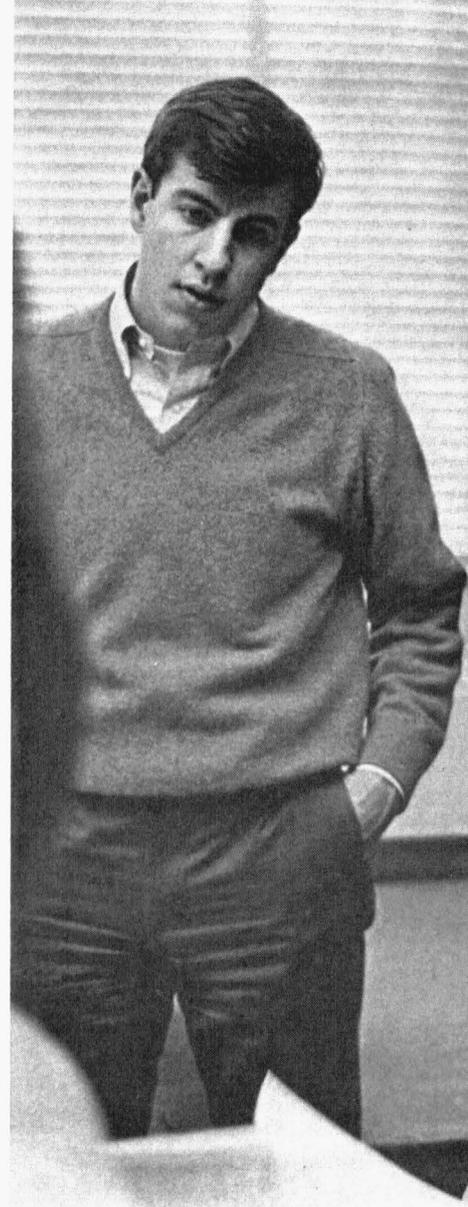
In the game, the players contend with several interacting variables, some of which they can control.

"Obviously," continues Dr. Shawver, "our game cannot model any real situation in every detail, but we do think it has enough of reality about it that the players come to appreciate the tremendous complexities and

# STUDENTS PLAY



Each week, representing one quarter's business, computer analyzes teams' decisions and produces print-outs showing their current financial conditions and industry positions. At left is H. Ray Doty, Systems Supervisor in Computer Research. Operator is Marie Hought.



## *Games Business Students Play*

interrelationships found in an actual business environment."

As played by the class, the game involves a fictitious industry made up of seven going concerns producing similar—but undefined—products. At the start all firms are identical: Each has an equal share of the market and has been pricing its product the same as the others, \$7 a unit. It has a plant worth of about \$5 million, cash of about \$500,000, and an inventory approaching 100,000 units worth \$3 each. The history of each corporation includes quarterly expenditures of \$200,000 for advertising and \$100,000 for research and development.

"That's where the sameness stops," says Dr. Shawver. "Before the game starts, each firm must make assumptions as to the attitudes of its stockholders and boards of directors and draw up a statement of policy

reflecting these attitudes. For example, some firms may try for a larger share of the market, others for a larger profit margin. All companies, of course, are expected to earn a reasonable profit."

For the next 10 weeks, the teams try to meet their particular goals. During each week, representing one quarter's business, the teams must make six decisions independently of every other team: decisions regarding selling price per unit, production volume, advertising expenditures, research and development expenditures, additional investment in plant, and declaration of quarterly dividends.

At the beginning of play and at the start of every quarter, Dr. Shawver gives each team identical forecasts of the "Pink and Walker Index," a fictitious national economic forecast which should affect each team's decisions and certainly will be reflected in the results of



One of seven teams playing game, this group discusses pricing strategy. Second from right is Andy Russell, linebacker with Pittsburgh Steelers.

those decisions. (There are those, incidentally, who believe the name of the fictitious index has more than coincidental resemblance to the name of the dean of B & PA, Dr. Pinkney Walker.)

The computer analyzes each team's decisions each week, and a print-out showing the current financial condition and share of the market is distributed. At the end of four weeks (one year), every team gets a statement of every other team's financial condition, but no other information. No team is permitted to exchange any information with any other team—that's collusion and the anti-trust people, and Dr. Shawver, wouldn't like it.

Now, given all this information, what must a management team do?

"Each team," says Dr. Shawver, "must examine the advertising, research and development, and pricing

policies of its firm in order to determine to the best of its ability what impact these policies have had and will have on the industry market and on the firm's share of the industry market."

The team must take note of its cash as a factor limiting the company's ability to spend for advertising, research and development, and plant; and to pay dividends. The team must review plant value with an eye to future optimum productive capacity. If production in any quarter exceeds optimum plant capacity for that quarter, higher unit manufacturing costs will result. Production plus beginning inventory determines the total number of units a firm can make available for sale. An order must be filled in the quarter received, or the firm loses that business; and under most circumstances, the business goes to another firm. All, part, or none, of the order may go to another firm depending upon pricing differentials. On the other hand, if a firm's production exceeds sales, inventory accumulates and warehousing costs rise accordingly.

After 10 weeks—or "2½ years" if you prefer—the game is over and the results judged.

There's really no way to pick a clear-cut winner, because one firm's objectives may be totally different from another's. Dr. Shawver does award what he terms "brickbats" and "bouquets," however. If a team's cash position got dangerously low during the quarter, a brickbat would be in order. A proper level of inventory would rate a bouquet.

More importantly, Dr. Shawver hopes that the players will have learned something from the closely controlled hypothetical situation that can be used to advantage at some future time in the real business world.

"In particular," says Dr. Shawver, "we want them to learn which key factors to observe in an actual on-the-job situation; to recognize that they should be concerned with establishing policies and strategies of a long-range, rather than a short-range nature, and to appreciate the complexities of situations involving a large number of interacting variables which must be considered simultaneously.

"Business problems are frequently too complex to permit intuition, years of experience, or even analytical tools to lead to an understanding of the overall situation. We hope the business management game will give our students a better insight." □