

Developments in Business Simulation & Experiential Exercises, Volume 14, 1987

DEVELOPING VARIOUS STUDENT LEARNING ABILITIES VIA WRITING, THE STOCK MARKET GAME, AND MODIFIED MARKETPLACE GAME IN BEGINNING MACROECONOMICS

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ABSTRACT

Three instructional means besides lecturing and class discussions are used to enhance learning under the assumption that students vary greatly in the manner they perceive and process information. A weekly writing summary of a key concept or idea of class discussion, a twelve week "extra" Stock Market Game activity, and three class sessions playing Marketplace Game enable "feelers", "thinkers", "sensors", and "intuitors" to each excel while providing opportunities to develop skill via all means. Professor created "events" and assignments within the two games provide for strategy determinations and research efforts. Students experience fiscal and monetary policy applications in a variety of ways.

INTRODUCTION

Since students vary greatly in the manner they perceive and process information, the author has undertaken various methods of instruction to enhance learning (and appreciation of economics) in his principle sections of macroeconomics. Four distinct kinds of learners have been noted by Jung [4]: feelers, thinkers, sensors and intuitors. Feelers generally do well in small discussion groups; thinkers apprehend well in lecture situations; sensors respond well to demonstrations or hands-on activities; and intuitors do well by guided self-discovery.

The methods of teaching noted in this paper involve use of all the learning approaches (means) noted above, thereby utilizing some of each student's best possibility and providing opportunities to develop growth via the other means. Anderson [1] has undertaken a game-demonstration approach to have also simultaneously all students at least "satisfied" some of the time. Both Anderson and the author have been pleased with the over-all results of their respective efforts including spin-off positive externalities. An additional factor which the author had to consider was the decision about three years ago when the College administration and faculty requested each faculty member to give in each course more attention (A) to developing an increased understanding of international affairs/dimensions, (B) to writing improvement across the curriculum, and (C) to enhancing student developing via various learning procedures besides the lecture method. Fortunately with use of both the Stock Market Game (within a state competition) and an expanded Marketplace Game the author has been able to successfully accomplish all objectives/ goals. Brief descriptions of the Games appear in Appendices I and II.

DETAILS OF CLASS ORGANIZATION

My two macroeconomic (Principles) sections each semester have between thirty-six to forty-two undergraduate students enrolled. Each section is divided arbitrarily by alphabet into nine or ten teams of four or five students each; this arrangement requires students to "learn" to work with persons new to them (as most likely will be the case in their

future employment). The classes meet twice weekly in seventy-five minute sessions. When playing the Marketplace Game three sessions over a three week period, students rotate between households and business roles (manufacturer, retailer, or banks). The Stock Market Game is played over a ten week period with about ten minutes per session devoted to it; students play (and are graded as is the case in the Marketplace Game) both as individuals and as a team. Pre-game briefings and post-game debriefings are undertaken. Domestic and international events as they affect business firms and households are considered briefly each class session. Students are expected to do their research, strategy planning, and keeping up with the news outside of class as well as read their usual textbook assignments.

All students have at least sophomore status, SAT combined scores generally of 1000 or higher, and are matriculated in the Schools of Business, Arts and Sciences, Education, and Technology. My course will be the only economic course taken by one third of the students enrolled because of limited electives in their prescribed curricula; approximately ten per cent of class are foreign students and/or educated abroad. Between ten to fifteen per cent would be classified as minorities. Annual income of students' families vary from poverty to over a million dollars. Nearly each class session, students write one or two brief paragraphs on a variety of economic concepts taken either from text book assignment, class discussion, stock market and/or world events. Once a week these paragraphs are reviewed by the author (usually requires approximately two hours per class) who indicates on each student's paper possible ways to improve explanation and/or exposition. No grades are assigned. This approach was found also to be valuable for Crowe and Vouge [2]. With reasonable amount of feed-back from the professor on the paper, the method "rather than taking time away from the subject, [student writing] enhances the learning and the teaching of the subject. [3]

When playing the Marketplace Game, at the end of each of the three class session, either as a team of two or individually a brief descriptive accounting report is written by the student of that day's injected domestic and international "event" and competition as created by Professor and three or four selected students as it relates to the household, firm, and class room economy. Class discussion frequently involves issues of efficiency, super-fairness, justice, roles of government and Federal Reserve System, unemployment, inflation, and real GNP.

When playing the Stock Market Game, each team each session places its transactions (sell, buy, short sale, etc.) on SCAN sheets, makes notes about the stock involved for their research papers along with what "made" their selected stocks act the way they did. Once a week each team receives an up-dated value of its portfolio, statement of transactions completed or denied, stocks that have been split and/or delisted, plus how it ranks with all the college division teams in the state. Class discussion involves how events affected given firms, industries, domestic and

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international economic policies.

No additional support (financial) is needed; however both the department chairperson and school dean were informed that such teaching activities would possibly lower any annual publications production. Both individuals approved such as student evaluation were excellent and learning/attitude increased in initial efforts.

DETAILS OF FEEDBACK OR MECHANISMS FOR DEBRIEFING

Every semester for many years, the first class dominant written response to my student information questionnaire as to "are there any particular topics in economics which are of special interest to you?" has been stocks and the stock market. No other topic is a close second. As a result many explanations, feed-back and discussion make reference to the effects of events, macro policy and theory on stocks, firms, households, unemployment and inflation. Beside the weekly written non-graded comments, discussions of the measures and their consequences involved in the Marketplace Game each session provide the professor with immediate feedback and debriefing opportunities along with the team accounting sheet summaries. Even after the Marketplace Game activities are completed, the professor is able to refer back during the remainder of the semester to situations and examples of the game, particularly in regard to fiscal and monetary policies and their consequences.

DETAILS OF THE GRADING SYSTEM

The Stock Market Game activities including the research paper is given a twenty per cent weighting in the final grade; the Marketplace Game activities represents one half (ten per cent) of the class participation weighting of twenty per cent in the final grade. The remaining sixty per cent weighting involves two single session tests and a final examination over two sessions. These tests involve essay, true-false, and multiple choice components. Roughly one-fifth of each test has questions relating to the project activities and economic theory. All work is reviewed and graded by the professor who has use of scanning devices to correct true-false and multiple choice portions of the tests. In the Marketplace Games, teams are graded thru competitiveness based on the amount of profit or units of satisfaction and their knowledge of why their result; in the Stock Market Game part of the team grade is based on how well it did in the state and classroom competition while individual grades are given on the research papers.

DETAILS TO GUIDE IN PREPARATION FOR CLASS USE

The two Games each have player's manuals which are given to the students for review one class session prior to playing the respective games. The Stock Market Game (SMG) is played simultaneously in all classes as part of the state competition (for example October 3 to Dec. 11, 1986 in 1986 Fall semester). One entire class session is devoted to explaining the SMG along with strategies, possible impacts of domestic and foreign events, inter-industry and intraindustry competition, etc.

The Marketplace Game (MG) requires about one hour each before and after game to process materials (money, cards,

and records). Among changes made over the years have been use of four students serving in roles as Director of Game (keeping to a given time schedule), Federal Reserve Bank official, a criminal justice major and an economist (to determine needed fiscal policy and police activities). Each of these four persons note on-going activity and assist professor in supplying needed "events". Among inserted activities by the professor are unexpected events, such as a flood that destroys part of the community, and "media" reports of Marketplace business and economic activities and statistics. Special events cards are available, if needed, with the game. At end of session, the gross marketplace product (GMP) is determined.

Resources useful for playing the SMG include daily national newspapers such as the Wall Street Journal and business periodical such as Barron's, Business Week. Standard and Poor's Stock Encyclopedia and Stock Guide are available in the classroom. An abundance of other business publications are available in the library. Dow Jones educational materials, such as its Educational copy of the Wall Street Journal and "How to Read the Stock Market Quotations", are very helpful to students who have not had any acquaintance with stocks.

One professor can handle all the aspects of both games. On occasions each semester I have had a departmental student worker put the necessary money, accounting sheets, and instructional cards in the household boxes (9-10) and business boxes (9-10) for Marketplace Game (MG).

Playing the SMG requires mailing an envelope each day of the teams' transactions (twice a week for maximum of ten weeks). Team captains can be helpful with the obligation.

The best way to avoid errors is to explain clearly the nature, procedures, and objectives of each game; still errors made by students help them realize the consequences that can result in life. The operational and management aspects of the games assist in illustrating desired traits and 'luck' which can determine degree of success.

As far as modifications of the SMG, the 1987-88 Security Industry Association's player's manual and rules may make the Game even more realistic. The MG can be improved by making the banking system addition of actual banking practices. For example, we use the discount rate as needed and no minimum interest rates. We also have government enter the marketplace when it needs resources and borrow money. The student economists, and criminal justice majors are also required (along with professor) to police the marketplace for unethical behavior. In such cases, the party or parties are fined and transactions cancelled.

The SMG necessitates usual time to grading of the research paper along with about three hours to grade team activity per class. In MG class participation grading of individuals is part of day-to-day activity with about five hours needed per class to evaluate individual grades after Game is completed from records and observations.

EXPERIENCE WITH THE GAMES

I have used the Marketplace Game in the basic economic class for all years that my sections were forty-four students or less (many years ago our section sizes were about twenty-five persons); eighteen students

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would be the minimum. Over the years I have also used various self-made stock game activities; however the Security Industry Association Game now has nearly all the "bugs" removed so that this fall will be our second semester with the official game. Not only did this official game give the added dimension (and excitement) of inter-collegiate academic competition, it was a great inducement to do extra research and planning strategies by the students.

Obviously I plan to use both games and the writing of short paragraphs as long as my section sizes do not exceed forty-four students each. Not only does the extra time needed to play the games on my part (mainly because of class size) help "generate" excellent student ratings of the professor, the results in students' tests has been very satisfying. Statements on the semester evaluation of the course and instructor usually cite the Games as being very worthwhile.

The learning objectives thus were to provide experiences for all four types of learners while still enabling each student to develop further in strengths and lessen weaknesses. Hopefully, each student will have succeeded sometimes as an independent thinker. He/she will have defined economic concepts and problems, analyzed latter and evaluated evidence and strategies for possible solutions. Not only does the student relate economic principles to life, but hopefully will have adopted economics as a way of thinking.

REFERENCES

- [1] Anderson, Curt L. "A Student-Participation Demonstration: The Short-Run Production Process," The Journal of Economic Education, Winter 1986, Vol. 17, No. 1, pp. 57-60.
- [2] Crowe, Douglas and Yougs, Janet. "Using Writing as a Tool for Learning Economics," The Journal of Economic Education, Summer 1986, Vol. 17, No. 3, pp. 218-222.
- [3] *Ibid.*, p. 222.
- [4] Jung, Carl G. Psychological Types (Princeton: University Press, 1976).

APPENDIX I

STOCK MARKET GAME (SMG) *

The main intent of the SMG is to involve individuals in a "real life" simulation of investment in the financial system. The primary purpose of the game is to provide an interesting and motivating device for learning about economics, financial markets, and the stock markets. The objective of the game is to take an initial \$100,000, invest it in the market, and try to make as much money as possible usually during a predetermined period of ten weeks. Teams are provided with a player's manual and related information. In New Jersey four separate divisions, including one at the collegiate level, provide competition each semester.

Teams of two or more persons compete using transaction SCAN sheets as often as desired each week. All transactions

* Most of the above information is taken from the Player's Manual.

are made on the basis of daily closing prices on the American and New York Stock Exchanges. Computer capacity limits the number of stocks owned by a team to 50 and the number of transactions in one week to 50. A computer printout of each team's portfolio and weekly transactions is provided to each team along with its divisional standing, stocks which had the most activity in the total competitions, stock-splits, delisting of stocks and any changes in margin or interest rates.

All transaction orders must be for a minimum of 100 shares. The current margin requirement of 50% makes it possible to buy \$200,000 worth of stock initially. Four types of transactions are possible: buy, sell, short sell, and short cover. The SMG is sponsored nationally by the Securities Industry Association. The paper's author coordinates the game in New Jersey from the Center for Economic Education at Trenton State College.

APPENDIX II

MARKETPLACE GAME*

Marketplace developed by Security Pacific National Bank (California) is a simulation game for an introductory course in economics. It provides experiences dealing with the dynamics of our economic system so that concepts can be identified. It is a complete curriculum unit consisting of pre-playing discussion, the game itself, and a post-game debriefing.

The game is divided into simulated months which generally take about fifty minutes of playing time. During this time manufacturers will make finished products (with labor secured from households, raw materials from Umpire, loans from banks, etc.), sell the products to retailers, who in turn sell them to household (equals one "unit of satisfaction"). The transactions are divided into game events with time limitations. To be useful the game should be played for at least two simulated months (sessions); it contains Economic Conditions Cards for twelve "months" (sessions) if desired. Ideally, students should be rotated between their household teams and the businesses they operate. Each sector transactions affect the other sector as well as individual student's behavior (decisions). Additional micro and macro concepts can be incorporated in special events and/or as needed to overcome unemployment, inflation, product shortages, etc.

* Most of the above information is contained in the teacher's manual of Marketplace, pages 1 and 2.