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AN ASSESSMENT OF AN IN-SERVICE WORKSHOP'S EFFECTIVENESS IN PREPARING TEACHERS TO USE AN INTEGRATED INSTRUCTIONAL APPROACH FOR ECONOMIC EDUCATION

The Ohio State University

Ph.D. 1982

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AN ASSESSMENT OF AN IN-SERVICE WORKSHOP'S EFFECTIVENESS
IN PREPARING TEACHERS TO USE AN INTEGRATED
INSTRUCTIONAL APPROACH FOR ECONOMIC EDUCATION

DISSERTATION

Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy
in the Graduate School of The Ohio State University

By
Randal Harry Pierce, B.S., M.A.

* * * * *

The Ohio State University
1982

Reading Committee:
Professor Donald G. Lux
Professor Robert E. Jewett
Professor Willis E. Ray

Approved By:

[Signature]
Advisor
Industrial Technology
Education
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To Linda, my wife, and Brian and Anthony, our sons, for their confidence, encouragement and faithful support.
June 18, 1947 ................ Born - Elizabethton, Tennessee

1969 .......................... B.S., East Tennessee State University, Johnson City, Tennessee

1971 .......................... M.A., East Tennessee State University, Johnson City, Tennessee

1971-1974 ..................... Teacher, Vance Junior High School, Bristol, Tennessee

1974-1976 ..................... Graduate Teaching Assistant, The Ohio State University, Columbus, Ohio

1976-1982 ..................... Instructor, The University of Tennessee, Knoxville, Tennessee

FIELDS OF STUDY

Major Field: Education

Industrial Technology Education: Professor Donald G. Lux

Industrial Technology Education: Professor Willis E. Ray

Humanities Education: Professor Robert E. Jewett
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Chapter I
INTRODUCTION

Background

Numerous groups have committed resources to the goal of increasing the economic understanding of Americans. For example, in 1949, groups of industrialists, businessmen, representatives from labor, agriculture, and educators formed the Joint Council on Economic Education, a non-profit organization, to develop an institutional approach to the task of increasing economic awareness of the American people. Currently the Joint Council on Economic Education has over 150 affiliated college-based centers for economic education and community-controlled councils on economic education throughout the country (Business Week, 1971). The state and local organizations adhere to the Joint Council's nonpartisan and objective approach to economics and conduct viable and effective programs in pre-service and in-service education to prepare educators at all levels for teaching economics. They also support curriculum and materials development, research and community awareness. Teachers of subjects other than economics also are prepared to infuse concepts of economics into their subject matter.

Industry, business, labor, agricultural and civic organizations increasingly have recognized the value of these economic education programs and, like the Joint Council on Economic Education, are presently providing a broadening base of funds for their support.

In the spring of 1976, the Rotary Club of Columbus, Ohio expressed a desire to support a pilot program of economic education in the local public schools. To achieve this end, a "Workshop in
Economic Literacy was planned through The Ohio State University, Columbus, Ohio in the College of Education to be taught jointly by the Academic Faculties of Humanities Education and Industrial Technology Education. This workshop was designed to prepare a group of approximately 24 local social studies and industrial arts educators to teach a unit of instruction on applied economics. The teachers were to work in teams of at least one social studies and one industrial arts teacher to prepare units of instruction which could be taught in an integrated manner.

This study was initiated to provide the sponsor, workshop instructors, and participants with information relative to the effectiveness of this "Workshop in Economic Literacy."

**Statement of the Problem**

To this date, there have been few formal assessments or evaluations of programs in education about economics. The problem of this study was to provide evidence of the in-service workshop's effectiveness as an approach to preparing teachers for applied economics instruction. The study also should provide evidence regarding the effectiveness of the integration of social studies and industrial arts in teaching applied economics.

**Significance of the Problem**

There are few problems in life that do not have an economic dimension. Some may think that formal training in economics is unnecessary, assuming that a substantial amount of knowledge of economics will be acquired anyway through other school subjects and day-to-day activities. Research shows this to be an erroneous assumption; for example, in 1973 a simple economics test developed by
the University of Wisconsin was administered to a national sample of almost 15,000 junior high school students. Half of these students were unable to tell the difference between the economics of the United States and the Union of Soviet Socialist Republics, and only 29 percent were able to identify the capitalist system (Dawson, 1975). The problem is not confined to youth; numerous studies have shown the general public's distressing ignorance of economic matters. In one 1971 Business Week survey in which people estimated the business profit margins, responses averaged 28 percent at a time when the appropriate figure was 4 percent. Such evidence of economic illiteracy has prompted the previously mentioned groups and organizations to sponsor educational programs geared to provide students with the knowledge and understanding of basic economic facts, concepts, and principles with which they can rationally approach personal and social problems that have an economic dimension. Quite properly, those who provide support for economic education expect evidence of the results.

Educators designing and operating instructional programs have an ethical responsibility to determine their effectiveness. Only through rigorous, systematic and continuous efforts to evaluate instructional programs will adequately fulfilled professional responsibilities be realized.

Objectives of the Study

The chief purpose of this study was to assess the effectiveness of the "Workshop in Economic Literacy" and to collect data and information to further enhance the effectiveness of similar workshops in the future. A part of the assessment, and a second
purpose of the study, was to test the feasibility of utilizing the methodology of transactional evaluation to facilitate the integration of subject areas in teaching cross-disciplinary content.

The assessment was achieved through a summative evaluation of the workshop's stated objectives. The evaluation consisted of collecting data and information that were used by the researcher and sponsoring personnel as evidence of the effectiveness of this workshop.

The study was intended to provide data and information to meet the following objectives:

1. To describe the planning, scope, sequence, organization, and implementation of the "Workshop in Economic Literacy."

2. To measure the knowledge of economic concepts and principles gained by participants.

3. To measure the knowledge of economic concepts gained by participants' students.

4. To measure attitude changes in the participants and their students toward the subject of economics.

5. To compare and contrast the responses of workshop participants regarding workshop effectiveness.

6. To determine the effectiveness of combining industrial arts and social studies instruction for teaching economic concepts.

7. To draw conclusions and make recommendations relative to the effectiveness of this workshop and the resulting economics instruction provided by the participants.
Scope and Limitations

This study was confined to the assessment of the "Workshop in Economic Literacy" conducted during the autumn quarter, 1976 at The Ohio State University. The data for this study were collected during the 1976-77 academic year from the workshop participants and the participants' junior high school students who were recipients of the instructional units generated in the workshop.

Participants were not randomly selected for study. Participant selection for the workshop was dependent upon the following factors:

1. Teachers who had local school administrators who were interested in the aims of the workshop and who demonstrated a willingness to participate.

2. Industrial arts and social studies teachers who had class schedules which allowed their students to participate in both social studies and industrial arts during the 1976-77 academic year.

3. Industrial arts and social studies teachers who had schedules as described above and demonstrated an interest and a willingness to participate in the workshop.

Implementation of the instructional materials developed during the workshop was restricted to six months. Implementation was further restricted because of limited funds to purchase identified and suggested supplies, materials and equipment.

Intact groups of junior high students were utilized in this study. Students involved were a function of the convenient sample of participants who were identified and no attempt was made to stratify them on any educational or social variables. The comprehensiveness of
the evaluation was limited by other professional responsibilities of
the evaluator and the restraints of a non-funded research project.

Assumptions

This study was based on the following assumptions:

1. Economic literacy, as defined, identified a body of
knowledge of sufficient worth and value to merit the preparing of
teachers and subsequent teaching toward economic literacy in the
public schools, particularly the junior high school level.

2. In-service workshops are a viable means of preparing
teachers to use instructional materials, familiarize them with subject
matter content, and plan instructional strategies.

3. Endeavors to prepare teachers and their subsequent
instruction should be assessed as to their effectiveness as a measure
of their worth.

4. The effectiveness of the workshop could be measured by
teachers' and their students' expressed reactions, knowledge gained,
and attitudes toward economics.

5. Through a systematic collection of identified relevant
data and information relative to the workshop's effectiveness,
information can be gained which will be useful to the decision makers
of this workshop and similar future workshops.

6. A field setting in the arena of the public schools is
adequate to gather evaluative data.

Definitions

In an attempt to avoid misunderstandings as to the
interpretations of various terms used in this study, the following
items are defined:
Economic Literacy - a basic understanding of how the American economic system functions and a sufficient degree of knowledge concerning basic economic concepts and relationships (Scheer, 1974).

Industrial Arts - a study of the changes made by man in the forms of materials to increase their values, and of the problems of life related to these changes (Bonser, 1923).

In-service Education - education which takes place at any time, during the professional life of the teachers (Johnston, 1971).

Integration - the process or practice of combining different school subjects and presenting them as aspects of one unifying project or activity, for example, the teaching of geography, history, art, English, and arithmetic in a study of the Panama Canal (Good, 1973).

Social Studies - those portions of the subject matter of the social sciences, particularly history, economics, political science, sociology, and geography, which are regarded as suitable for study in the elementary and secondary schools and are developed into courses of study, whether integrated or not, and of which both the subject matter and the aims are predominantly social; not to be confused with the social sciences or with subjects having a social aim but not social content (as in the case of English, art appreciation, and personal health), nor to be confined to too narrow or rigid a combination of studies (Good, 1973).

Participant - industrial arts and social studies teachers who were selected and participated in the "Workshop in Economic Literacy."

Organization of the Study

The study is reported in five chapters. The following chapter format was used:
Chapter I contains an introduction including a background, statement of the problem, significance of the problem, objectives of the study, scope and limitations, assumptions, definitions, and organization of the study.

Chapter II contains a review of related literature including introduction, evaluation models and methodology, evaluation of in-service education, evaluative studies of in-service and economic education, and an overall summary.

Chapter III contains the methodology used in the study including the planning of the workshop, evaluation model selection, the population and sample, instrumentation, description of workshop activities, data collection sequence, analysis of data, and summary.

Chapter IV contains the analysis of data relating to each specific objective cited in Chapter I. Data relating to the organization and administration of the workshop, economic attitudes, and economic knowledge are discussed.

Chapter V contains a summary of the procedures, the major findings which resulted from the data analysis, and conclusions drawn from the findings. Finally, Chapter V contains recommendations for future in-service workshops for preparing teachers in economic education.
Chapter II

REVIEW OF RELATED LITERATURE

INTRODUCTION

Educational evaluation represents one of the most pervasive themes in the nation's educational enterprise during the past several years (Popham, 1973). Evaluation in education revolves around the desire of educators and citizens to provide evidence of the instructional system's effectiveness.

Early evaluative approaches in this country constituted little more than descriptions (e.g., counting and recounting of services rendered). In the mid-nineteenth century the newly created Federal Bureau of Education (later the United States Office of Education and now the Department of Education) was directed to show the condition of progress of education in the several States (Anderson, 1973). The result was a series of surveys which probably had their greatest usefulness in encouraging schools to keep accurate records and in providing a rough listing of services that educational institutions could and should offer. These early surveys supplied little assessment of outcomes and few answers to the questions of what return the community and nation were getting from their investment in the schools.

In many instances the uncritical use of simple counts led to absurdities such as assessing the quality of schools by summing the academic credits earned by the students. However, some of these early evaluation attempts were extremely valuable; an example was the landmark curriculum evaluation of J. M. Rice, who in 1892 attempted a first-hand appraisal of public education. Sponsored by The Forum, a
New York monthly, Rice visited thirty-six cities, talked to over 1200 teachers, and wrote a classic of the Muckraking Era, a criticism of the stale curriculum and politicization of the schools (Cremin, 1961). Later Rice carried out what was probably the first serious study which took careful account of educational outcomes. To point out the uselessness of drill and rote repetition in teaching children to spell, he administered his own spelling test to 33,000 students and showed that achievement had no relationship to the amount of time spent in spelling drill. Another pioneer of educational evaluation was E. L. Thorndike, whose studies of curricula and their educational value exploded the idea that the so-called "difficult" studies such as Latin automatically developed intellectual power (Rosenthal, 1973).

Educational evaluation was aided greatly in the early decades of this century by the work of G. Stanley Hall, who developed the use of questionnaires in educational research and who contributed significantly to the measurement movement. The technology of objective scoring, item scaling, and test norming, along with a growing respect for the reliability and validity of measures, gave evaluators many tools needed to answer the "how much?" in the questions of what return the schools were giving their constituents.

Ralph W. Tyler during the 1930's laid the foundation for the evaluation movement as we know it today. It was Tyler's views, which were embodied in the Eight-Year Study of the Progressive Education Association, that advocated a much broader range of student assessment and influenced testors to concern themselves not only with cognitive variables in assessment (Smith, 1942).
During the 1940's the massive induction of personnel into the military services and defense industries resulted in crash training programs. This spurred the search for optimal training results using the most efficient and economical methods available. Wartime pressures provided the impetus for novel instructional methods and devices, such as the use of simulators to teach the perceptual motor skills needed to fly an aircraft (Fatter, 1960). These methods were devised and repeatedly evaluated in order to improve their effectiveness. It was found that mechanical training devices saved lives and expensive equipment which might be ruined by inevitable student mistakes; also these devices could be used to teach cognitive skills as well as perceptual-motor skills. Many measurement techniques and program evaluation methods were improved during and shortly after World War II.

About 1960 the literature on educational evaluation began to swell with the post-Sputnik drive to revise and update curricula, particularly in science and mathematics and generally in all subject areas of the curriculum. In addition, this period also saw a proliferation of new technological aids to education and training (e.g., television, films, computers). These innovative curriculum research and development projects and educational aids spurred studies of their value in assisting, supplementing, and replacing traditional classroom instruction.

Evaluation received further impetus when Title I of the Elementary and Secondary Education Act of 1965 required an annual evaluation of the effectiveness of the programs it sponsored for "disadvantaged" children. Title III of the Elementary and Secondary
Act also required a needs assessment from state departments of education as a prerequisite to funding.

All of these recent developments in education have intensified an interest in the activity of educational evaluation. The literature currently abounds with theories, models, and methodologies of educational evaluation.

**EVALUATION MODELS AND METHODOLOGY**

The term "evaluation" is used rather loosely by the general public, as well as by educators. Popham (1973) puts evaluation in its context by pointing out several misconceptions about the use of the term. One common misconception is the synonymous use of measurement and evaluation. Measurement is merely counting or enumerating so that one can more accurately describe how large or small something is, while evaluation consists of an assessment of merit, that is, measurement consists of status determination; evaluation consists of worth determination (Popham, 1973). Another less prevalent misconception of evaluation is that of equating it with educational research. Educational research is primarily an activity designed to detect the presence or absence of a significant difference between phenomena; unlike evaluation, it is not an attempt to discern whether the difference, or lack of it, is good or bad (Popham, 1973). Many times an evaluation will include educational research in gathering data, but the research process is being used as a means to an end.

A very succinct definition of evaluation is given by Daniel L. Stufflebeam (1968, p. 19). Evaluation is the science of providing
information for decision making. A similar but more explanatory definition of evaluation is given by The Center for the Study of Evaluation:

Evaluation is the process of ascertaining the decision areas of concern, selecting appropriate information, and collecting and analyzing information in order to report summary data useful to decision-makers in selecting among alternatives (Alkin, 1972, p. 107).

In light of this definition, evaluation in education refers to the evaluation of an educational enterprise, such as an instructional sequence, not simply evaluating the pupils within that enterprise (Popham, 1973). The purpose of educational evaluation is to provide information for decision-makers about programs. Almost all evaluators agree on this, but program developers and their sponsors seek many kinds of information about programs and for different purposes.

The information provided for decision-makers tends to be used in one of two ways. The first way decision-makers use information is to determine the effectiveness or efficiency of a program. Authorities such as Campbell and Rossi are evaluation authorities who emphasize the use of evaluation results to demonstrate product or program worth. A second way decision-makers use information is for program or product planning, implementation, and improvement. Authorities such as Scriven and Guba express concern for the use of evaluation results to help improve programs (Weiss, 1972).

The purposes or uses of evaluative information were first clearly differentiated by Scriven (1967) when he categorized evaluation research under two major headings - formative evaluation and summative evaluation. The purpose of formative evaluation was to help in the development of the product or program, usually carried out
in close collaboration with the developer, with the results intended primarily for those who were working on the development. The purpose of summative evaluation was to assess the overall effectiveness of a program or product after it was in operation, usually independent of the developer, with the results intended primarily for those who set policy at various levels (Scriven, 1967). This categorization of evaluation activity is widely used and accepted in the literature; however, many other useful categorizations exist. A sampling of the more feasible ones will be discussed as general evaluation models.

**General Models**

**The CIPP Evaluation Model.** The CIPP model was introduced by Stufflebeam (1968) and divides the evaluation of educational change into four strategies. These strategies are context evaluation, input evaluation, process evaluation and product evaluation. The context evaluation defines the operational context and performs a needs assessment associated with meeting the objectives of the educational change. The input evaluation identifies the system's capabilities and strategies for implementing the educational change. The process evaluation assesses the procedural design for achieving the objectives during implementation. The product evaluation compares the outcomes of the educational change to the objectives. The methods used and the decision-making capabilities of each strategy are illustrated and explained in Figure 1.

**The Discrepancy Evaluation Model.** The discrepancy model was presented by Provus (1971) and outlines five stages in evaluation. It seeks a comparison of program performance with the expected or designed program. The discrepancy model also makes a comparison of
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<th>Method</th>
<th>Relation to Decision-Making in the Change Process</th>
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<td>To define the operational context, to identify and assess needs in the context, and to identify and delineate problems underlying the needs.</td>
<td>By describing individually and in relevant perspectives the major subsystems of the context; by comparing actual and intended inputs and outputs of the subsystems; and by analyzing possible causes of discrepancies between actualities and intentions.</td>
<td>For deciding upon the setting to be served, the goals associated with meeting needs and the objectives associated with solving problems, i.e., for planning needed changes.</td>
<td>The CIPP Evaluation Model A Classification Scheme of Strategies for Evaluating Educational Change</td>
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### The Strategies

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<td>To identify and assess system capabilities, available input strategies, and designs for implementing the strategies.</td>
<td>To identify or predict, in process, defects in the procedural design or its implementation, and to maintain a record of procedural events and activities.</td>
<td>To relate esteem information to objectives and to context, input, and process information.</td>
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<td>By describing and analyzing available human and material resources, solution strategies, and procedural designs for relevance, feasibility and economy in the course of action to be taken.</td>
<td>By monitoring the activity's potential procedural barriers and remaining alert to unanticipated ones.</td>
<td>By defining operationally and measuring criteria associated with the objectives, by comparing these measurements with predetermined standards or comparative bases, and by interpreting the outcome in terms of recorded input and process information.</td>
<td></td>
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<td>For selecting sources of support, solution strategies, and procedural designs, i.e., for programming change activities.</td>
<td>For implementing and refining the program design and procedure, i.e., for effecting process control.</td>
<td>For deciding to continue, terminate, modify or refocus a change activity, and for linking the activity to other major phases of the change process, i.e., for evolving change activities.</td>
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Figure 1:
client performance with expected client outcomes. The discrepancy model's stages and content are outlined in Figure 2.

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<tr>
<td>3. Process</td>
<td>Process Adjustment</td>
</tr>
<tr>
<td>4. Product</td>
<td>Product Assessment</td>
</tr>
<tr>
<td>5. Program Comparison</td>
<td>Cost-Benefit Analysis</td>
</tr>
</tbody>
</table>

Stages of Discrepancy Evaluation
Figure 2

The process of discrepancy evaluation consists of moving through the stages as follows:

1. Design - This first stage compares the program's design, expressed as performance information, to design criteria postulated as standards. This stage checks for discrepancy between the program's design and standards.

2. Installation - This second stage utilizes the performance arrived at in Stage 1 and compares the intended to actual program operations. This stage checks for discrepancy between plans and implementation.

3. Process - This third stage collects information on the program's interim products, such as program emphasis, and compares them with the goals. This stage checks for discrepancy between interim objectives and terminal objectives.

4. Product - This stage measures program performance. This comparison notes the extent the students changed in the direction and amount that they were expected to change. This stage checks for discrepancy between predicted and obtained outcomes.
5. Program Comparison - This stage allows the evaluator to analyze two or more programs with similar outcomes. This stage checks for discrepancy between the effectiveness of programs (Provus, 1971, pp. 184-185).

**Decision-Oriented Evaluation Model.** The decision-oriented model was presented by the Center for the Study of Evaluation and Alkin (1972). This model identifies five areas of evaluation as follows:

1. **Systems Assessment** - This area of evaluation provides information for decisions about the state of the system, the total workings of the program.

2. **Program Planning** - This area provides evaluative information necessary in the selection of particular programs likely to be effective in meeting specific educational needs.

3. **Program Implementation** - This area of evaluation furnishes information relative to the extent a program has been introduced in the manner in which it was intended and to the group for which it was intended.

4. **Program Improvement** - This area supplies evaluation information during the course of a program about the manner in which the program is functioning; e.g., are enroute objectives being achieved? This information is then used for program modification if necessary.

5. **Program Certification** - This area of evaluation provides information to be used by decision-makers in making judgements about the worth and potential of the program (Alkin, 1972, pp. 109-113).
Experiential Taxonomy - Evaluation Model. This evaluation design based on the Experiential Taxonomy was introduced by Steinaker & Bell (1976). Their taxonomy-based model uses each category of the taxonomy to perform a unique function. In the system each part is intrinsically linked to all others. The function of each category is as follows:

1.0 Exposure - In this category data are gathered on all areas which might affect the program under consideration; such areas as existing educational environment, staff, student behavior, and finances are explored and assessed.

2.0 Participation - At this level the information from the exposure stage is used to define the "ought-to be." At this level activities such as a needs assessment are accomplished. Also at this level of evaluation priorities are established, parameters are set, and problems are identified.

3.0 Identification - At this level the plan of action for the program and evaluation are devised. Evaluative criteria, instruments, and instructional strategies are identified and implementation of program and empirical evaluation begin.

4.0 Internalization - This stage of the evaluation scheme is concerned with the process and progress of the program. This level seeks to determine the extent of the program's success in achieving enroute objectives in time for feedback information to modify the process.
5.0 Dissemination - At this final stage the total program is evaluated as an entity. This level of the sequential model determines the worth of the program and reports the results to those who might profit.

Transactional Evaluation Model. Transactional evaluation is a system of educational evaluation which does not focus exclusively on the outcomes of a program under consideration; instead, it looks at the effects of changed programs, emphasizing the implementation of change.

The transactional evaluation model was developed by Rippey (1973) and has two main phases. In the first phase the sources of conflict in change are uncovered; in the second, the proponents and opponents are utilized to develop and implement an evaluation plan. Transactional evaluation must be tailored to the needs of a specific system and its use is limited to cases where an appropriate combination of transactional evaluation and interpersonal communication skills can be obtained. Transactional evaluation is accomplished as follows:

1. The need for change is indicated by the introduction of a new or different program or product.

2. A detailed description of the proposed program (the change) is distributed to all those who will be affected by the change.

3. Each participant is asked to submit a brief written, anonymous, response to the proposal.

4. The evaluator then uses the information from the reports and prepares a questionnaire of scaled-agreement responses that
represents the various viewpoints expressed. This questionnaire is then distributed throughout the system, and its results are tabulated and returned to all the participants. Up to this point the aim of the transactional evaluation has been to prevent any direct confrontation between disagreeing parties and to focus the group's attention on the major issues of potential conflict.

5. At this point there is an initial group discussion; proponents and critics discuss the proposal in light of their background and experience. The information from the questionnaire and discussion serve as feedback into the proposed program.

6. After the initial group discussion, a pilot test of the proposed change is begun. The protagonists and the antagonists are asked to set up the criteria for measuring and assessing the planned outcomes of the pilot program. The strengths and weaknesses of the program are subsequently discussed, while the validity of the arguments are concurrently tested in a practical situation. This step represents a second constructive evaluation of the program.

7. After the pilot program has been completed, its overall success is reevaluated by the group. The knowledge gained through this exercise will serve as a base for rational decisions concerning further implementation.

After a transactional evaluation, widespread implementation has a much better chance of survival with the group who participated in the pilot program and its evaluation.

**Adversary Model of Evaluation.** The adversary model of evaluation challenges the evaluator's role as an impartial collector of information and reporter of implications, whether positive or
negative, about the program. Regardless of the choice, in the models previously discussed the evaluator assumes the tenets of scientific inquiry, but the adversary model suggests the use of the legal profession's approach. In the legal profession the evidence is assembled by one group, such as law enforcement agencies, but the presentation of the evidence to the judge or jury (decision-maker) is assigned to two opposed groups, prosecutor and defender. The hope is that, through their adversary positions, the one presenting the evidence as negatively as possible and the other as positively as possible, the truth will emerge.

The adversary model of evaluation is a novel approach to program evaluation. There is yet no one established model or traditional approach; however, several approaches are possible using the legal profession's framework. One approach is given by Levine, in which the evaluation included an adversary who will cross-examine all the evidence as it is collected in order to develop a rebuttal. Another approach by Kourilsky proposes a setting which employs an affirmative evaluator and a negative evaluator, both making presentations in an attempt to sift out biases and hidden assumptions. A third approach is by Stake and Gjerde which, in one part of the evaluative report, summarizes arguments most favorable to the program; and then, in an adversary section, sums up the most damaging arguments, thus leaving reconciliation of the two positions to the decision-maker (Ball, 1973, pp. 21-22).

The discussion of evaluation models presented above provides an overview of selected general models available to an evaluator. These models identify important and universal evaluation concepts
which can be employed in many contexts by a large diversity of users. The models, although quite different, exhibit some similar characteristics. The formative-summative model, CIPP model, and the decision-oriented models seem to present a typology of evaluation in which the evaluator approaches his/her task in light of the types of decisions to be made using the evaluative data. In contrast, the discrepancy model, the experiential taxonomy model, and transactional model offer the evaluator an over-all sequential strategy to follow with less emphasis on the specific purposes of the evaluation. The adversary model then offers a challenge to the traditional rubric of scientific inquiry by proposing the use of the legal profession's technique for pursuing evidence.

The general models are quite adaptable; but in many instances, lack the degree of specificity required in an unusual context. To remedy this situation, evaluators relying heavily on the concepts of the universal models, have constructed specific models to meet precise purposes in their unique environments. Some of the adaptations and extensions to the general models are discussed in the following sections.

Specific Models

Criteria Acquisition and Product Advancement Model. This model, presented by Wright and Hess, provides a strategy for deciding when a product is ready to move from stage to stage in its development cycle. The model has five stages, matching the five stages they identify in product development. These are initiation, hot house, pilot test, field test, and public diffusion (Borich, 1974).
Holistic Model for Formative Evaluation. Introduced by Katz and Morgan, this holistic model provides a framework for the formative evaluation of programs taking the systems approach in determining congruencies in the following areas:

1. Congruency within processes and products.
2. Congruency between processes and products.
3. Discrepancies between desired and actual processes and products (Borich, 1974).

Quality Assurance Model for Process Evaluation. Presented by Luft, Lujan, and Bemis, this quality assurance model for process evaluation could be used as a substage to any of the general evaluation models. The model attempts to maximize terminal behaviors expected for an educational program by assuring full implementation of planned processes. The stages of this quality-assurance model are as follows:

1. Identify teacher and student entry and terminal behavior empirically.
2. Construct observation schedules.
3. Conduct observations of teachers and students.
4. Relate teacher behavior to student performance (Borich, 1974).
Multistage Model for Evaluating Educational Products. Introduced by Bertram and Childers, this model offers a seven-step process for planning, developing, and diffusing educational products. The processes in the evaluation include the following:

1. Needs Assessment
2. Feasibility Analysis
3. Program Planning
4. Product Design and Engineering
5. Field Testing
6. Operational Testing
7. Dissemination and Implementation (Borich, 1974).

Project Impact on Student Achievement Models. An outgrowth of research by RMC Research Corporation of Los Altos, California, this series of models is based on experimental design. They are used in measuring project impact on student achievement. Figure 3 illustrates the models arranged in decreasing order of scientific rigor (U.S.O.E., 1966).

SELECTING A MODEL

This description of general models covering broad evaluation concepts and specific evaluation models suited to particular needs, or serving as substages, demonstrates that the evaluator cannot arbitrarily select a model for use in an evaluation and expect the data gathered and the resulting analysis to yield desired results. The model or models selected are dependent on the purposes of the evaluation. No design or model for the systematic collection of data
Decision Tree for Selecting Evaluation Models (U.S.O.E., 1966)

FIGURE 3
will be acceptable unless it yields the kinds of evidence the
decision-maker needs and can be tailored to specific program
considerations such as policy, availability, cost, and time. The
evaluator then must choose a model or models which will realize the
best, most reliable, and valid information of the kind needed and that
is feasible to obtain.

After the selection of a model, collection of the data, and
the analysis, the resulting evaluation report is often labeled as
either a "hard" or "soft" evaluation. Ball (1973) describes the
characteristics associated with these labels in the following way:

A hard evaluation usually involves:

1. The use of a research design which is capable
   of discerning causal relationships.
2. The collection of data that are objective, reliable,
   and valid.
3. An analysis of these data by sophisticated
   statistical techniques.

A soft evaluation usually involves:

1. A research design that, at most, can
   point to correlations.
2. Data that are subjective and judgemental in nature.
3. An absence of sophisticated statistical analysis
   of the data collected (Ball, 1973, p. 191).

This description implies a continuum with degrees between the
two extremes; the components involved and the degrees of difference
between hard and soft evaluations are illustrated using a matrix in
Figure 4. The hardest kind of evaluation is an evaluation following
the true experimental design yielding objective data which are subjected to sophisticated statistical analysis. The softest kind of evaluation is a nonexperimental evaluation design yielding subjective data with an unsophisticated statistical analysis. An example of the range between hard and soft evaluations following the experimental design is illustrated in the decision tree in Figure 3, which illustrates evaluation models arranged in decreasing order of scientific rigor. An evaluator seeking to determine under which program the students achieve a statistically higher mean gain on a standardized test and another evaluator seeking to determine under which program the students feel they are learning more are each asking different, yet important educational questions. The "hard" and "soft" stereotype illustrates the range of data available for inclusion in an evaluation; however, the kind of evidence collected, whether based on objective or subjective data, whether collected within an experimental, quasiexperimental, or nonexperimental design, whether statistically analyzed or not should be appropriate to the purpose or the question being asked (Ball 1973).
Components involved in hard and soft evaluations (Ball, 1973, p. 193).

Figure 4

In educational evaluation the choice of a design or model, which should include a theoretical framework and methodology for data collection and analysis, depends upon the purpose(s) of the evaluation. Also, the evaluator should gather the best evidence that it is feasible to obtain, considering the restraints of practicality and cost.

EVALUATION AND IN-SERVICE EDUCATION

For decades the workshop has been one of the more effective methods of in-service teacher education. The workshop is an instructional method in which persons with common interests and problems meet with appropriate specialists to acquire necessary information and develop solutions through group study. It is usually
residential in nature and of several days' duration (Good, 1973). The essence of the workshop for in-service purposes has been expanded to the point that workshops are now found in almost all educational environments and ranging in length from single meetings to continuously ongoing programs.

The necessity of in-service workshop evaluation was pointed out by Kelley (1951) in one of the earliest texts on the subject. Kelley states that the motivation and the objectives of the workshop are different than those of the usual subject matter course; therefore, it is necessary to identify what is to be accomplished through the workshop and construct evaluative techniques to reveal whether or not the objectives were achieved (Kelley, 1951, p. 84). While the objectives in most subject matter courses focus around the acquisition of knowledge or skills on the part of the participant, the ultimate goal of most in-service workshops is to provide benefits to the students of the workshop's participants. This distinction in the objectives of in-service workshops is a significant one in regard to evaluation. The evaluation of in-service workshops when viewed as educational programs are conducted no differently than any other program or product or education; however, the evaluation of in-service workshops does present the evaluator with some unusual considerations.

One initial consideration in the evaluation of educational programs such as in-service workshops is utility. Weiss (1972) has listed four kinds of circumstances in which an evaluation is probably not worth doing. These are:
1. When there are no questions about the program. It goes on, and decisions about its future either do not come up or have already been made.

2. When the program has no clear orientation. Program staff improvise activities from day to day, and the program shifts and changes.

3. When people who should know cannot agree on what the program is trying to achieve, allowing vast discrepancies in perceived goals.

4. When there is not enough money or staff sufficiently qualified to conduct the evaluation (Weiss, 1972, p. 11).

Several other considerations which affect workshop evaluation were noted by Hyder (1971) in a review of literature relative to training through workshops and institutes. Among these were:

1. Funds available are generally inadequate to effectively evaluate workshop activities.

2. Objectives, in many instances, are written in such a manner as to make a specific evaluation very difficult.

3. It is difficult to follow-up participants in training activities to determine if substantial benefits have occurred as a result of training.

4. The tools for measuring training benefits are often inadequate or unavailable (Hyder, 1971, p. 47).
Several evaluative studies of economic education and workshops or institutes have been reported in various fields of education. Five recent studies were considered relevant and of significance in planning this study.

Hyder (1971) assessed the effectiveness of the Industrial Arts Curriculum Project Summer Workshops for Construction Teachers in an effort to collect data and information to further enhance the effectiveness of such programs in the future and to determine the job satisfaction of the teachers completing the training program. He utilized three instruments to assess the effectiveness of the Workshops. These instruments were: an achievement test, the Minnesota Satisfaction Questionnaire, and a participant follow-up questionnaire. Data were collected and analyzed in the following three categories: subject matter achievement, job satisfaction, and participant follow-up.

A Fisher's t-test was used for determining the difference between means. Among the findings were:

1. There was a significant increase in the teachers' knowledge of Industrial Arts Curriculum Project content and process.

2. There was no significant difference in job satisfaction between those who elected to teach the Industrial Arts Curriculum Project program and those who did not (Hyder, 1971).

Collins (1971) evaluated three institutes for teachers of migrant children. The basis of the evaluation was whether the workshop brought about positive attitude change in the participants.
Three measures of teacher attitude were used: an adaptation of a semantic differential using a Likert-type scale, a test devised for the study consisting of a series of paragraphs on a given topic representing a continuum of viewpoints, and post-meeting reaction sheets.

A modified Wilcoxon matched-pairs assigned ranks test on the data from the semantic differential revealed a significant gain in attitude. An analysis of covariance showed a significant gain in attitude on the paragraph test. The post-meeting reaction sheets indicated a positive reaction to the events of the workshops and recommended the increased use of consultants and resource people (Collins, 1971).

Lawson and Ruddell (1973) evaluated eight workshops which instructed elementary teachers concerning existing career education materials. The workshop had four major objectives:

1. Educate the elementary teachers concerning three newly developed elementary career curricula.

2. Select implementation strategies for installing elements of the three curricula in local schools.

3. Select a plan for articulating elements of the three curricula in local schools.

4. Select demonstrated teaching techniques which could be used in a local school program.

The evaluation was carried out by a team from each workshop. Evaluative procedures included pretest and posttest of teachers' attitudes toward career education, a questionnaire concerning the way in which the workshop was taught and organized, a feedback evaluation
form soliciting suggestions for workshop improvement, and a follow-up study sent to participants to determine if the workshop and its materials were helpful.

A descriptive report of the evaluative data indicated a positive gain in attitude toward career education, acceptance of the career curricula, enthusiasm for the workshop approach, and encouragement for beginning the implementation of the career education programs in their schools (Lawson, 1973).

Highsmith (1974) reported a study which sought to measure the impact of in-service institutes in economic education on the students of teachers who had participated. Using thirteen former teacher participants in in-service workshops as his experimental group and a matched group which had not attended the workshops as a control, a teacher questionnaire and student questionnaire were completed to match students on several variables such as sex and number of economics courses taken. The students were then tested after economic education instruction using a standardized economics test, the Test of Economic Understanding. Standard multiple regression was used to establish the relationship between the variables and the scores achieved by students on the test. The statistical analysis provided two findings. First, economics of the kind reflected by the Test of Economic Understanding is learned to an extent that is directly proportional to a student's ability, the kind of formal economics instruction he has received, the kinds of media in his environment, his sex (male), and his age. Secondly, the student's performance on the Test of Economic Understanding improves significantly when their teachers have had in-service training (Highsmith, 1974).
In a 1972 study, Ramsett, Johnson, and Adams investigated student attitudes toward principles of economics in three midwestern institutions. They administered pre- and post-examinations, attitude tests, and questionnaires to thirty-one economics principles classes. The data were subjected to multiple linear regression using both post-examination scores and post-attitude scores as dependent variables with twelve predictors. Among the results were:

1. Learning economics is closely associated with student attitudes toward economics.

2. Instructional quality as perceived by students is closely related to student attitudes toward economics.

3. There is little difference in student performance and attitude scores between institutions (Ramsett, 1974, p. 78).

SUMMARY

Educational evaluation began as little more than a counting of services rendered. However, with the current interest in accountability, it now consists of numerous sophisticated theories, models, and methodologies. Its primary purpose is to provide information for decision making relative to the worth of educational programs. There are several general models available to an evaluator, but in many instances they lack the specificity required. To remedy this situation many adaptations and extensions to the general models have been formulated. The model or models selected by an evaluator are dependent on the purposes of the evaluation, the kinds of evidence the decision maker needs, and must be tailored to the particular
restraints of the evaluator and the program being evaluated.

The evaluation of an in-service workshop presents the evaluator with some unusual considerations such as utility, availability of funds, and difficulty in following up participants. However, their evaluation is conducted no differently than an evaluation of any other educational program or product.
CHAPTER III
METHODOLOGY

The one-quarter "Workshop in Economic Literacy" had a dual purpose. First, it was designed to orient teachers to the availability of instructional materials in applied economics, and cause them to create, adapt, and adopt instructional materials and plans for use in their own classes. Second, it was designed to cause industrial arts and social studies teachers to identify common goals, in terms of their respective contributions to developing economic literacy, and develop ways to mutually reinforce their instructional impact through integration of subject matter and activities.

The six month implementation phase which followed the workshop was designed to provide workshop participants with an opportunity to actually integrate the developed instructional units into their on-going programs. It was also designed to assess the impact of these experiences on both teachers and students by determining their attitudes toward, and knowledge about, the principles of economics which were incorporated in the instructional units.

Chapter III presents the methodology of the study. The sections of the chapter include planning of the workshop, evaluation model selection, population and sample, instrumentation, data collection sequence, treatment of the data, and summary.

Planning of the Workshop

The "Workshop in Economic Literacy" was planned jointly by the Rotary Club of Columbus, Ohio and the Ohio State University. The Rotary Club's planners consisted of an Ad Hoc Committee and the Ohio State University's representatives consisted of one faculty member...
from each of the faculties of Humanities Education and Industrial Technology Education.

The ultimate goal of these planners was to provide economic education in the local public schools. This goal was narrowed to providing a pilot program in economic education due to the restraints of time and money. The pilot program was achieved through a workshop in which participants were prepared to teach integrated economic education units to their students.

The workshop activities were planned to provide the participants with a broad base of academic viewpoints, instructional materials, and resource persons. The academic viewpoints were provided by the workshop instructors which had extensive backgrounds in their respective subject areas of social studies and industrial arts. Also included were academicians from industrial sociology, economics, and political science. Instructional materials on the subject were reviewed and those thought by the workshop instructors to be of value up to an amount of $2,500 worth, were purchased for the participants to utilize. In addition to the instructional materials available at the workshop, which could be checked out and used by participants, the budget allowed each participant $50.00 to purchase additional, personally owned instructional materials.

To present the applied economics input, the Rotary Club provided seminars during the workshop with representatives from area business, industry, government, labor, consumer advocates, and environmentalist leaders. The Rotary Club also made resource persons available to the participants upon request to assist them during the implementation phase.
Evaluation Model Selection

In order to assess this workshop and meet the objectives of this study, procedures were utilized from two existing models. Concepts from these general and specific models were adapted to meet the specific restraints of the workshop. No one general model was selected for the entire evaluation because:

1. By the time the decision was made to conduct the evaluation, the formative segment of the workshop was complete. This negated the use of the CIPP Evaluation Model, the Decision-Oriented Evaluation Model and the Experimental Taxonomy-Evaluation Model since each of these models included both formative and summative elements.

2. The Discrepancy Evaluation Model was not selected because this workshop was unique in its approach to teaching concepts of economics through integrated instruction so no definite standards existed for comparison.

3. The Adversary Model of Evaluation was not utilized since the single evaluator could not serve objectively in the dual role of prosecutor and defender.

4. The Transactional Evaluation Model was utilized because it could focus in on the potential problems of team teaching across subject area lines to achieve the integrated instruction. This was seen as a potential source of conflict since it represented a drastic change from the usual autonomous position of each teacher within the school. However, it was not seen as an overall evaluation model for the entire workshop.

The five specific models discussed in the review of literature were also considered, but, like the general models, most were too
comprehensive to be followed intact. The one specific model used was the Norm-Referenced Model as identified in the Project Impact on Student Achievement Models. This model was used because the evaluation was made of the intact groups of workshop participants and their students. With no comparison group available, the norm group provided a plausible estimate of no-treatment posttest scores. Also the review of literature revealed standardized tests in economics for both the participants and their students. These tests, along with an instrument for determining attitude toward the subject of economics, were used to measure the impact of the workshop on the participants and their students. The participants also were surveyed to determine their perceptions of the workshop's effectiveness.

The resulting selected features of models for the evaluation of the "Workshop in Economic Literacy" was as follows:

1. A transactional evaluation of the integration of subject areas to teach applied economics.

2. The use of norm-referenced tests to specifically measure the workshop's impact on the participants and their students.

3. A survey of the participants to determine their perceptions of the workshop's effectiveness.

The application of these selected model features for this study is explained in the data collection sequence section of this chapter.

**Population and Sample**

The sample utilized in this study consisted of 20 public school teachers who enrolled in a one-quarter "Workshop in Economic Literacy" offered by the Ohio State University during the Fall of
1976. Their teaching experience ranged from two to 20 years with an average of seven years. The number of college level economics courses they had taken ranged from zero to five with a mean of two. Their ages ranged from 23 to 62 with a mean age of 33. These teachers represented eight junior high and middle schools in and around Columbus, Ohio. The student sample consisted of 257 males and 256 females who were enrolled in selected classes taught by these 20 teachers. Table 1 provides a breakdown of the student sample by grade level and sex.

Table 1
Student Sample by Sex and Grade Level

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>6th Grade</td>
<td>156</td>
<td>144</td>
<td>300</td>
</tr>
<tr>
<td>7th Grade</td>
<td>65</td>
<td>66</td>
<td>131</td>
</tr>
<tr>
<td>8th Grade</td>
<td>36</td>
<td>46</td>
<td>82</td>
</tr>
<tr>
<td>Totals</td>
<td>257</td>
<td>256</td>
<td>513</td>
</tr>
</tbody>
</table>

Data were incomplete on 393 of the students, which left a total of 120 students to serve as the student sample for this study.

This severe loss of students from the original sample resulted from the following set of circumstances: (a) During the 1976-1977 school year, several of the participating schools experienced natural gas problems which forced the closing of these schools during the month of February; (b) Additionally, during the 1976-1977 school year, the Columbus area experienced some of the worst weather ever recorded. Many schools were closed and when they reopened, school schedules were altered such that many industrial arts and social
studies classes no longer met at the same time; (c) Furthermore, even among those schools where industrial arts and social studies class schedules remained compatible, the lost school time prohibited teachers from working cooperatively in implementing the integrated instructional units which they had developed during the workshop phase of the study.

While each of the above circumstances was beyond the control of the researcher, they obviously caused a great deal of frustration. More importantly, the reduced sample size severely limited the generalizability of the findings which are reported in Chapter IV.

**Instrumentation**

There were six instruments utilized to gather data from subjects in this study. Assessment of teacher and student attitudes toward economics was achieved through the use of *An Instrument for Determining Attitude Toward the Subject of Economics* (Karstenson, n.d.). Teacher knowledge of economics was assessed using the *Test of Understanding in College Economics* (TUCE) (Psychological Corporation, 1967). Student knowledge of economics was established using the *Junior High School Test of Economics* (The Center for Economic Education, 1972). The transactional evaluation was conducted using an instrument that elicited responses to the workshop proposal. Workshop effectiveness was assessed using two questionnaires developed by the researcher. Each of these instruments is discussed in the following paragraphs.

The instrument used for determining student and teacher attitudes toward economics (Karstenson, n.d.) consisted of ten, five-alternative, multiple choice items. Each item assessed how
respondents felt about the subject of economics in relation to its contribution to their general education, occupational preparation, personal interest, and the like. The response generally followed a five point Likert-type scale of "strongly agree" to "strongly disagree;" "very favorable" to "very unfavorable;" "not at all interested" to "very interested;" "one of the least interesting subjects" to "one of the most interesting subjects," and the like. The reliability coefficient of this instrument was reported to be approximately .90 (Ramsett, Johnson, & Adams, 1974). A copy of the instrument is included as Appendix A.

The instrument used to assess the teacher's knowledge of economics (Psychological Corporation, 1967) was made up of 33, four-alternative, multiple choice items. The test, comprised of two parallel forms, focused on the application of basic economic concepts and principles. An internal consistency reliability measure (Kuder-Richardson 20) on the TUCE of .76 was reported by the publisher (Psychological Corporation, 1968). Content validity of the test was established through the use of a panel of experts but validity was only briefly discussed in the test manual (Psychological Corporation, 1968). A copy of the instrument is included as Appendix B.

The instrument used to assess student understanding of economics was made up of 40, four-alternative, multiple choice test items. The test was designed to evaluate student understanding of basic economic concepts and principles. A Kuder-Richardson 20 reliability coefficient of .78 was reported for seventh graders by the test constructors (Center of Economic Education, 1974). Content validity for the Junior High School Test of Economics was largely
determined by a committee of five teachers and economists who served as a panel of experts. Validity of the instrument was only briefly discussed in the test manual. A copy of the instrument is included as Appendix C.

The first workshop effectiveness survey (Appendix D) which was administered at the last session of the workshop consisted of 23 items. The first 22 items used a Likert-type scale. These items also provided opportunities for respondents to provide additional comments relative to each specific question. The final item on the instrument requested any additional comments or suggestions the respondent had that could help improve similar workshops in the future. The only attempt at ordering the questions in this instrument was to present the most interesting and non-threatening set of questions first as suggested by Babbie (1973). The questions in the survey consisted of positive statements concerning the workshop's effectiveness in the following areas:

1. Adequacy of workshop objectives (Part 1, No. 1, 2, 3)
2. Adequacy of workshop content and experiences (Part 1, No. 4, 5, 6, 7, 9, 10, & 15)
3. Implementation of workshop content (Part 1, No. 13, 16, Part II, 1, 2, 3, 4, & 5)

An initial draft of the instrument was developed and reviewed by the workshop's instructors and the investigator's research adviser. Based on their comments a revised instrument was developed.

The second instrument used to assess workshop effectiveness was similar to the instrument just described but was administered after the participants had been given an opportunity to teach the
integrated instructional units they had developed. This instrument was reviewed by the workshop's instructors and the investigator's research adviser. Recommended changes were made prior to its administration. This follow-up workshop effectiveness survey was the last attempt to obtain feedback from the participants. This follow-up workshop effectiveness survey is included as Appendix E.

Finally, the instrument used in the transactional evaluation was produced by writing a detailed description of the workshop's original proposal which had been approved by the sponsor. The instrument was then submitted to the workshop instructors for review. This revised proposal was then typed with a paragraph at the end which asked workshop participants to respond to the proposal stating what they saw as its advantages and disadvantages as related to their teaching of applied economics. Ten blanks were provided for open-ended responses. A copy of this instrument is included as Appendix F.

A pilot test of an integrated instructional unit was also utilized in the transactional evaluation. This pilot unit consisted of a two-day assignment entitled "Manufacturing and the Economic System." The assignment was photocopied, with permission, from an instructional system entitled The World of Manufacturing (Lux and Ray, 1971). The teaching of this unit required some fixtures and expendable materials which were provided to the participants by the researcher. A copy of the pilot unit and the instructions for its adapted use in this study are given in Appendix G.
Data Collection Sequence

The sequence used to collect the data for this study was as follows:

1. Information was collected from the program sponsor and workshop staff concerning the planning, scope, sequence, organization, and planned implementation of the workshop prior to its start.

2. Demographic and other pertinent data were collected on workshop participants on such variables as age, sex, previous courses in economics, and years of teaching experience.

3. Participants' attitudes toward, and knowledge about, economics were assessed using the two pretests previously described.

4. A transactional evaluation was conducted of the integration of industrial arts and social studies subject matter to teach applied economics. The sequence in the transactional evaluation was as follows:

   a. A detailed description of the workshop's proposal for an integrated instructional unit was distributed to workshop participants.

   b. Participants were asked to submit an anonymous written response to the workshop's proposal, stating what they saw as advantages and/or disadvantages of it.

   c. The information from the responses to the proposal was used to construct a questionnaire of scaled responses that represented the various viewpoints expressed. This questionnaire was then administered to the participants and its results were tabulated and returned.
d. A group discussion was then initiated; proponents and critics discussed the proposal in light of their background and experience. A recording was made of the discussion with the information being used by the workshop staff in program revision.

e. A pilot test of the proposed integrated instructional units was conducted with participants using the assignment entitled "Manufacturing and the Economic System" as outlined in the teacher's guide of the instructional system, The World of Manufacturing, (Lux and Ray, 1971). Protagonists and antagonists were asked to set up criteria for assessing the pilot program. Group discussions were continued.

f. After the pilot program was completed, its overall success was evaluated by the participants using the criteria previously identified. The knowledge gained through this exercise served as a base for planning what instructional units would be developed and used by teachers. While this evaluation exercise was part of the summative evaluation of the workshop, it provided a formative evaluation for the instructional units to be produced by the participants during the course of the workshop.

5. At the close of the workshop, the participants submitted the units of instruction they had developed. These units were developed in teams from each school represented in the workshop. An example unit is included as Appendix H.
6. At the close of the workshop, the participants' attitudes toward, and knowledge about, economics were assessed using equivalent forms of the pretest instruments.

7. At the close of the workshop, participants completed the first workshop effectiveness survey. This instrument was designed to collect information concerning such matters as the workshop's organization, its utilization of time, and relevance of resource materials used.

8. Prior to participants implementing their integrated instructional units, two pretests were administered to a sample of their students. These pretests assessed the student's attitudes toward, and knowledge about, economics and were previously discussed in the instrumentation section.

9. At the completion of the use of the previously developed integrated instructional units, student's attitudes toward, and knowledge about, economics were assessed using equivalent forms of the pretest instruments.

10. Finally, at the conclusion of teaching the integrated instructional units, participants were asked to complete a second workshop effectiveness survey. This instrument was designed to collect information concerning the usefulness of the instructional materials provided for the workshop as well as the effectiveness of the integrated instructional units developed by workshop participants and subsequently used with their students.

A PERT chart was developed to clarify the sequencing of activities which took place during the course of this study. This PERT chart appears as Figure 5.
Treatment of the Data

In order to report summary data useful in decision making, the collected information was analyzed in the following manner.

1. Descriptive statistics were used to summarize the demographic characteristics of teachers and students who cooperated in the study.

2. Measures of central tendency were used to summarize participant attitudes toward, and knowledge about, economics at the beginning and conclusion of the workshop.

3. Results of the workshop-effectiveness survey were obtained from participants at the conclusion of the workshop and also at the conclusion of the school year. These data were tabulated and compared.

4. Descriptive statistics were used to summarize student's attitudes toward, and knowledge about, economics at the beginning of the implementation phase of the study.

5. Descriptive statistics also were used to summarize student's attitudes toward, and knowledge about, economics after the integrated instructional units had been taught.

6. The statistical significance of the difference between pre- and post-test means for both groups was determined using a t-test (p.<.05) on attitude and knowledge measures.

7. Data from the transactional evaluation were obtained from participants, tabulated, and reported.
1. Begin project.
2. Workshop begins.
3. Begin Pretest of Participant's attitudes toward gaining knowledge about economics.
4. Begin Pretest of Participant's knowledge of economic principles.
6. Begin Participants' pilot test of sample instructional unit with their students.
7. Begin participant developed instructional units.
8. Begin Posttest of Participant's attitudes toward gaining knowledge about economics.
9. Begin Posttest of Participant's knowledge of economic principles.
11. Complete workshop.
12. Begin Pretest of Student's attitudes toward gaining knowledge about economics.
13. Begin Pretest of Student's knowledge of economic principles.
14. Begin implementation of instructional units.
15. Begin Posttest Student's attitudes toward gaining knowledge about economics.
16. Begin Posttest Student's knowledge of economic principles.
17. Begin follow-up assessment of effectiveness of workshop by participants.
18. Complete project.

Pert Chart of Key Workshop
And Workshop Evaluation Activities

Figure 5.
The "Workshop in Economic Literacy" was designed to cause industrial arts and social studies teachers to prepare integrated instructional materials for use in teaching applied concepts of economics to their students. To evaluate the effectiveness of the workshop, a model was developed consisting of a transactional evaluation, several norm-referenced measures, and a survey of the participants. Six instruments were used to gather data from the participants and their students. The data were gathered from the participants and their students during the workshop and in the six-month implementation phase immediately thereafter. The data obtained were tabulated and reported in order to provide summary data useful in decision making.
Chapter IV

ANALYSIS OF DATA

The purpose of this study was to assess the effectiveness of the "Workshop in Economic Literacy" and to collect data and information to further enhance the effectiveness of similar workshops in the future. In order to determine the effectiveness of the workshop, the following objectives were established:

1. To describe the planning, scope, sequence, organization, and implementation of the "Workshop in Economic Literacy."

2. To measure the knowledge of economic concepts and principles gained by participants.

3. To measure the knowledge of economic concepts gained by students.

4. To measure attitude changes in the participants and their students toward the subject of economics.

5. To compare and contrast the responses of workshop participants regarding workshop effectiveness.

6. To determine the effectiveness of combining industrial arts and social studies instruction for teaching economic concepts. 

Data collected to meet each of the above objectives, will be discussed individually in the following sections.

Objective 1

To describe the planning, scope, sequence, organization, and implementation of the "Workshop in Economic Literacy." The data for this objective are presented in the introduction and methodology sections of this report. These sections may be found in Chapter III.
Objective 2

To measure the knowledge of economics concepts and principles gained by workshop participants. Pretest and posttest measures of teachers' knowledge of economic concepts and principles were obtained using parallel forms of the Test of Understanding in College Economics (TUCE), (Psychological Corporation, 1967). The test was administered to twenty industrial arts and social studies teachers who participated in the "Workshop in Economic Literacy." The test was given prior to the workshop and at its completion.

Table 2 displays summary data concerning the pretest and posttest scores of the workshop participants' knowledge of Economics. No attempt was made to further treat the data statistically since their mean scores and standard deviations were essentially the same.

TABLE 2

Pretest-Posttest Comparisons of Participants' Knowledge of Economics

<table>
<thead>
<tr>
<th>Test</th>
<th>Range of Scores</th>
<th>Median</th>
<th>Mean</th>
<th>Standard Error of Measurement</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest (N=20)</td>
<td>17</td>
<td>13.2</td>
<td>14.2</td>
<td>2.5</td>
<td>4.6</td>
</tr>
<tr>
<td>Posttest (N=20)</td>
<td>14</td>
<td>14</td>
<td>14.3</td>
<td>2.5</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Note. Maximum score = 33

However, since the Test of Understanding in College Economics was designed to evaluate how much college students learn in elementary courses in economics, data were collected to determine how many college economic courses each participant had previously taken.
Table 3 is a summary of the participants' past experiences in college economics courses and pretest and posttest mean scores assessing teachers' knowledge of economics. Five teachers had not taken an economics course in college, eight teachers had taken one course and seven teachers had taken two or more economic courses in college.

### TABLE 3

Comparisons of Pretest-Posttest Mean Scores and Economics Courses Taken By Workshop Participants

<table>
<thead>
<tr>
<th>Number Of Teachers</th>
<th>Number of Economics Courses</th>
<th>Pretest Means</th>
<th>Posttest Means</th>
<th>Gain (Loss)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>0</td>
<td>11.8</td>
<td>17.2</td>
<td>5.4</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>13.6</td>
<td>16.0</td>
<td>2.4</td>
</tr>
<tr>
<td>7</td>
<td>2 or more</td>
<td>16.7</td>
<td>12.3</td>
<td>(4.4)</td>
</tr>
</tbody>
</table>

An examination of Table 3 indicates that there was a positive correlation between previous instruction in economics and pretest scores. This supports the test being valid. Also, it reports that teachers who had not taken any college economics courses as well as those who had only taken one economics course scored higher on the posttest than those who had previously taken two or more economics courses in college. In fact, those who had the strongest economics background actually showed a decrease in their posttest mean scores.
Whether this resulted from simple regression toward the mean, boredom, lack of challenge in retaking the test, or other reasons is unknown. It should be noted, however, that sample sizes for all groups were too small to draw any significant conclusions.

Objective 3

To measure the knowledge of economics concepts gained by students. Pretest and posttest measures of student knowledge of economic concepts were obtained using parallel forms of the Junior High School Test of Economics (The Center for Economic Education, 1974). Table 4 contains summary data on these tests and t test results for the 120 students for which complete data were available.

<table>
<thead>
<tr>
<th>Test</th>
<th>Range of Scores</th>
<th>Median</th>
<th>Mean</th>
<th>Standard Error of Measurement</th>
<th>Standard Deviation</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest(N=120)</td>
<td>24</td>
<td>12.5</td>
<td>12</td>
<td>2.7</td>
<td>4.1</td>
<td>26.2*</td>
</tr>
<tr>
<td>Posttest(N=120)</td>
<td>24</td>
<td>15.3</td>
<td>16.6</td>
<td>2.7</td>
<td>5.7</td>
<td></td>
</tr>
</tbody>
</table>

Note. Maximum score = 40

*p < .001; 119 df

The results shown in Table 4 indicate that students' mean posttest scores were significantly higher than their mean pretest scores (t =
These results confirm the fact that the teacher-prepared integrated unit of instruction in applied economics were effective tools for teaching students basic concepts of economics.

**Objective 4**

To measure attitude changes in the participants and their students toward the subject of economics.

Assessment of teacher and student attitudes toward economics was achieved through the use of An Instrument for Determining Attitude Toward the Subject of Economics (Karstenson, n.d.). The ten items utilized a five-point Likert-type scale. For scoring purposes, the most positive attitude toward economics was given a value of five; the least positive (most negative) attitude was given a value of one. Table 5 presents summary data and t test results of the attitudes of the 20 teachers who participated in the study.

**TABLE 5**

<table>
<thead>
<tr>
<th>Test</th>
<th>Range of Scores</th>
<th>Median</th>
<th>Mean</th>
<th>Standard Error of Measurement</th>
<th>Standard Deviation</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest(N=20)</td>
<td>15</td>
<td>36.3</td>
<td>37.2</td>
<td>1.4</td>
<td>4.6</td>
<td>.43*</td>
</tr>
<tr>
<td>Posttest(N=20)</td>
<td>19</td>
<td>38</td>
<td>38.4</td>
<td>1.4</td>
<td>4.9</td>
<td></td>
</tr>
</tbody>
</table>

*Note. Maximum score = 50

*n.s.; 19 df
The results indicate that the teachers' mean posttest scores did not differ significantly from their mean pretest scores (t = .43; 19df; n.s.). Thus, teachers' attitudes toward the subject of economics were influenced neither positively nor negatively as a result of their involvement in the "Workshop in Economic Literacy." It should be noted, however, that teachers' attitudes toward economics were generally favorable as indicated by both their high (50 = "perfect" high) pretest and posttest mean scores.

Table 6 presents summary data and t test results of the attitudes of the 120 students who participated in the study and for which complete data were available.

**TABLE 6**

Pretest-Posttest Comparison of Students' Attitudes Toward Economics

<table>
<thead>
<tr>
<th>Test</th>
<th>Range of Scores</th>
<th>Median</th>
<th>Mean</th>
<th>Standard Error of Measurement</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest(N=120)</td>
<td>35</td>
<td>34.3</td>
<td>32.4</td>
<td>1.4</td>
<td>8.0</td>
</tr>
<tr>
<td>Posttest(N=120)</td>
<td>21</td>
<td>41.7</td>
<td>39.1</td>
<td>1.4</td>
<td>7.2</td>
</tr>
</tbody>
</table>

*Note. Maximum score = 50

*p < .001; 119 df

The results show that students' mean posttest attitude scores were significantly higher than their mean pretest scores (t = 15.34; 119df; p < .001). Thus, students' attitudes toward the subject of economics were significantly and positively influenced as a result of their exposure to the integrated units of instruction in applied economics.
Objective 5

To compare and contrast the responses of workshop participants regarding workshop effectiveness.

In order to determine the value of the Workshop in Economic Literacy, two separate assessments were made. First, at the conclusion of the one-quarter workshop, the 20 teacher participants provided their perceptions of (a) how well the workshop objectives had been met; (b) the value of the materials developed and workshop experiences provided; (c) the degree to which the workshop had met their expectations; and (d) the overall effectiveness of the workshop. This instrument is included as Appendix D.

Subsequently, a second follow-up evaluation was conducted at the end of the school year. This second evaluation focused on the degree to which participants had been able to utilize the instructional materials which they had developed in the workshop setting. Assessment also was made of the degree to which teachers were able to integrate the instructional materials into their existing programs and how well these materials had worked. This second workshop effectiveness instrument is included as Appendix E.

Table 7 provides an end-of-workshop assessment of the workshop's stated objectives. Overwhelmingly, participants felt that workshop objectives were realistic and that the experiences and activities provided in the workshop had permitted participants to achieve the stated objectives. Ninety-five percent of the respondents either agreed or strongly agreed that the objectives were realistic while 90 percent either agreed or strongly agreed that the workshop objectives had been achieved. A significant proportion of workshop
participants (40%) had questions or did feel, however, that the workshop objectives had not been as clearly stated as they might have been.

**TABLE 7**
Assessment of Workshop Objectives

<table>
<thead>
<tr>
<th>Question No.</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SA</td>
</tr>
<tr>
<td>1. Objective were clearly stated</td>
<td>15%</td>
</tr>
<tr>
<td>2. Objectives were realistic</td>
<td>25</td>
</tr>
<tr>
<td>3. Objectives were achieved</td>
<td>20</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>20</td>
</tr>
</tbody>
</table>

Table 8 provides two assessments of the value of workshop content and experiences as perceived by participants. The left-hand column presents participants' perceptions at the conclusion of the workshop and the right-hand column presents their perceptions at the end of the school year, after they had had an opportunity to integrate the instructional materials into their programs.

A majority of the participants felt that the economic concepts which had been presented during the workshop had been sufficient in scope, had been relevant to their needs, and had provided balanced points of view. A majority also felt that the contributions made by business and industry representatives, consumers, and academicians, had been significant. Participants were most positive about the usefulness of the instructional resources which had been made available to them during the workshop and the relevance of workshop
content and experiences to their own professional development. This held true for the end of the school year. Better than 90 percent of the participants felt that these resource materials had been useful and that the content and experiences provided had contributed significantly to their own professional development.

Participants were least positive about the adequacy of content presented during the workshop. In fact, most participants felt that more content was needed to adequately prepare them to integrate the workshop-developed materials with their students. A chi square test was utilized to test for significant differences in the distribution of responses between the end-of-workshop and end-of-school year assessments. The result indicated that participants perceived the relevance of the economic concepts which had been presented during the workshop as significantly more valuable after they had actually implemented the integrated instructional units than they did at the conclusion of the workshop ($x^2 = 8.02; p < .05$). No other significant differences were found. However, in general terms, participants' reactions to the value of the workshop content and experiences were more positive after they had actually utilized the content with their students than they were at the end of the workshop.

Table 9 presents participant perceptions of the degree to which various workshop activities and experiences prepared them to implement the integrated instructional units with their classes. Again, the left-hand column presents participants' perceptions at the conclusion of the workshop and the right-hand column presents their perceptions at the end of the school year.
### TABLE 8
Assessment of Workshop Content & Experiences

<table>
<thead>
<tr>
<th>Question No.</th>
<th>End of Workshop (%)</th>
<th>Follow-up (%)</th>
<th>( \chi^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VA A T D SD</td>
<td>VA A T D SD</td>
<td></td>
</tr>
<tr>
<td>4. Economic concepts presented</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Sufficient in scope</td>
<td>10 50 20 10 10</td>
<td>8 54 0 38 0</td>
<td>3.78; n.s.</td>
</tr>
<tr>
<td>b. Relevant</td>
<td>15 65 15 5 0</td>
<td>46 46 8 0 0</td>
<td>8.02; p &lt; .05</td>
</tr>
<tr>
<td>c. Provided balance</td>
<td>15 45 35 5 0</td>
<td>23 69 8 0 0</td>
<td>2.41; n.s.</td>
</tr>
<tr>
<td>5. Business &amp; industry contribution</td>
<td>15 60 10 15 0</td>
<td>15 77 0 8 0</td>
<td>1.53; n.s.</td>
</tr>
<tr>
<td>6. Consumer contribution</td>
<td>25 40 35 0 0</td>
<td>15 69 8 8 0</td>
<td>4.95; n.s.</td>
</tr>
<tr>
<td>7. Academician's contribution</td>
<td>10 55 15 20 0</td>
<td>8 76 0 8 8</td>
<td>4.62; n.s.</td>
</tr>
<tr>
<td>9. Usefulness of instructional resources</td>
<td>50 45 5 0 0</td>
<td>54 38 8 0 0</td>
<td>4.54; n.s.</td>
</tr>
<tr>
<td>10. Adequacy of content</td>
<td>5 30 35 30 0</td>
<td>0 54 31 15 0</td>
<td>2.78; n.s.</td>
</tr>
<tr>
<td>15. Relevance of content and experiences to teachers' professional development</td>
<td>35 65 0 0 0</td>
<td>54 38 8 0 0</td>
<td>3.10; n.s.</td>
</tr>
<tr>
<td>Totals</td>
<td>22 51 17 9 1</td>
<td>25 57 8 9 1</td>
<td></td>
</tr>
</tbody>
</table>
A majority of the participants felt that the workshop speakers had helped to motivate them to actually implement the content with their classes. A majority also felt that the resource persons and workshop instructors had each contributed to their competence in utilizing the instructional units which had been developed. Moreover, an even larger proportion saw the instructional materials, group discussions, and team planning time as activities which helped them to achieve the competence level needed to implement the developed materials. They also perceived their own teaching environment as conducive to implementation with better than 90 percent supporting this view. These positive views of the workshop held true for both end of workshop assessment as well as the follow-up assessment. Finally, while the financial resources needed to implement the instructional units were seen as adequate by 95 percent of the participants at the end of the workshop, only 69 percent felt that these resources were adequate when assessed at the end of the school year. Likewise, participants' perceptions of the contribution made by peers in class were more positive at the conclusion of the workshop (80%) than they were in the subsequent end of school year assessment (54%).

Again, a chi square test of significance was utilized to test for significant differences in the distribution of responses between the end of workshop and end of school year assessments. The results indicated that participants felt significantly more positive at the end of the school year regarding the contribution made by workshop speakers in motivating them to implement the content than they did at the end of the workshop ($x^2 = 3.99; p<.05$). They also felt
TABLE 9
Assessment of Implementation of Workshop Content:

<table>
<thead>
<tr>
<th>Question No.</th>
<th>End of Workshop (%)</th>
<th>Follow-up (%)</th>
<th>( \chi^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Speakers motivated me to implement content</td>
<td>10 50 40 0 0 0</td>
<td>31 61 8 0 0 0</td>
<td>3.39; p &lt; .05</td>
</tr>
<tr>
<td>11. Helped in achieving competence needed in implementation</td>
<td>10 45 35 5 5 0 0</td>
<td>23 69 8 0 0 0</td>
<td>5.39; p &lt; .05</td>
</tr>
<tr>
<td>a. Resource persons</td>
<td>10 50 40 0 0 0</td>
<td>23 69 8 0 0 0</td>
<td>5.39; p &lt; .05</td>
</tr>
<tr>
<td>b. Workshop instructors</td>
<td>20 60 20 0 0 0</td>
<td>8 80 8 0 0 0</td>
<td>1.30; n.s.</td>
</tr>
<tr>
<td>c. Peers in class</td>
<td>15 65 15 0 0 5</td>
<td>27 27 35 10 0</td>
<td>2.39; n.s.</td>
</tr>
<tr>
<td>d. Instructional materials</td>
<td>35 55 10 0 0 0</td>
<td>45 45 0 0 8 0</td>
<td>0.68; n.s.</td>
</tr>
<tr>
<td>e. Group discussions</td>
<td>15 55 25 0 0 5</td>
<td>8 80 8 0 0 0</td>
<td>2.85; n.s.</td>
</tr>
<tr>
<td>f. Team planning time</td>
<td>40 45 10 0 0 5</td>
<td>45 45 0 0 8 0</td>
<td>1.07; n.s.</td>
</tr>
<tr>
<td>14. Teaching environment should allow implementation of content</td>
<td>30 65 0 0 5 0</td>
<td>31 61 0 8 0 0</td>
<td>0.67; n.s.</td>
</tr>
<tr>
<td>17. Financial resources were adequate</td>
<td>30 65 0 0 5 0</td>
<td>15 54 18 8 0 0</td>
<td>2.33; n.s.</td>
</tr>
<tr>
<td>Totals</td>
<td>23 56 17 2 2</td>
<td>28 59 10 4 1</td>
<td></td>
</tr>
</tbody>
</table>
significantly more positive at the end of the school year regarding the contributions made by other resource persons in helping them to achieve the competence needed to implement the instructional units than they did at the end of workshop \( (X^2 = 5.39; \ p < .05) \). No other significant differences were obtained.

**Overall Evaluation of Workshop**

The findings from the evaluation which took place at the end of the one-quarter workshop indicated that 95 percent of the participants felt that the workshop had either met or exceeded the expectations they held at the time of registering. Moreover, all the participants felt that the study and work requirements for this workshop were "reasonable." Participants also overwhelmingly supported the notion that the workshop had sufficient value to be repeated again with other teachers. One hundred percent of the teachers either "agreed" (55%) or "strongly agreed" (45%) with this statement. The vast majority of participants (95%) also were looking forward to using the integrated instructional materials which they had developed in the workshop setting. Even so, at the conclusion of the workshop, participants were generally not very optimistic that the developed instructional materials would actually provide integration of subject matter and facilitate their teaching of the economic concepts contained in these instructional units. In fact, 85 percent of the participants felt that either "little" (40%) or "no" (45%) integration of instructional materials was likely.

In the follow-up evaluation which took place at the end of the school year, however, workshop participants who had by then actually used the instructional materials with their students were much more
positive in their thinking. In fact, 92 percent of the participants surveyed at the end of the school year felt that the instructional materials which had been developed provided either "a great deal" (46%) or "much" (46%) integration of subject matter areas and had facilitated their teaching of economic concepts. Participants also indicated that their efforts at utilizing the developed instructional materials had been very extensive (92%) during the implementation stage. Ninety-two percent also had utilized the instructional resources identified in the developed units. This, or course, may have accounted for their revised estimate of the integrative value of the instructional materials. Moreover, all participants surveyed intended to continue using the units in applied economics which they had cooperatively developed. The weakest link in the integrated instructional units was that only slightly more than half (54%) of the participants utilized the expertise of a Rotarian as a liaison between the school and the area business and industry in their efforts to integrate the economic concepts.

One cautionary note should be attached to this assessment of the value of the workshop and the subsequent value of the developed instructional materials. While the end of workshop assessment included the perceptions of all 20 participants, the subsequent end of school year follow-up only gathered information from 10 social studies and 3 industrial arts teachers. These 13 teachers (65%) were able to complete all of the activities. Thus, the follow-up assessment may have a built-in bias. Based on this fact, one would need to be cautious in interpreting the data gathered during the follow-up assessment phase of this study.
Objective 6

To determine the effectiveness of combining industrial arts and social studies instruction for teaching economic concepts.

The teaching of applied economics through the integration of instruction in industrial arts and social studies represented a drastic change in content and method for the participants of this workshop. The purpose of the transactional evaluation was to identify the effects of this change on the participants. A model for use with the workshop was designed by the researcher following the example by Rippey (1973) explained earlier. The two-phase model first attempted to identify the sources of conflict in change, then gave the participants a chance to implement the change through a pilot integrated instructional unit. The model used is delineated in Chapter II.

At the second meeting of the workshop, the participants were told the purposes of the transactional evaluation, and its procedures were explained. A copy of the instrument requesting responses to the proposal was administered to the participants. Fifteen (75%) of the participants responded and gave 130 separate responses to the proposal. The responses were grouped and synthesized into 66 statements and made into the form of a questionnaire with a Likert-type scale with which the participants could indicate their degree of agreement or disagreement.

Fourteen (70%) of the participants were present and responded to this questionnaire. The results of the questionnaire were tabulated and given back to the participants at the next meeting. A copy of the questionnaire with the tabulated results is included in
Appendix I. Following Rippey's model, a class discussion was then held to attempt to answer questions and resolve identified problems or potential conflicts. The questionnaire and class discussion identified the following concerns by the participants:

1. It appeared to the participants that the workshop proposal assumed they had an adequate working knowledge of economics. The participants did not agree. They wanted some instruction in basic economics.

2. The participants did not perceive an adequate content relationship between industrial arts and social studies that would allow them to integrate instruction in applied economics.

3. The participants did not think they had sufficient expertise in curriculum development to produce integrated instructional units in applied economics.

4. The participants were concerned that the one-quarter workshop was not adequate in length to produce the integrated instructional units.

As a final activity in the transactional evaluation, a pilot test of an integrated instructional unit was given to the participants for use with their students. This two-day unit of instruction entitled "Manufacturing and the Economic System" was utilized by all the workshop participants. The class discussion which subsequently assessed the overall success of the pilot instructional unit and its integrative instructional value resolved most participant concerns. Moreover, the knowledge gained by participants through this exercise served as a base for subsequent rational decision making concerning further implementation and evaluation efforts. Involving participants
in the early stages of this project through the use of a transactional analysis clearly increased their interest and commitment to the project. It also increased the likelihood of success of both the workshop activities and the eventual implementation of the teacher-developed integrated instructional units.
Chapter V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This chapter includes a summary of the study, the major findings which emerged from the analyzed data, and conclusions which seemed warranted based on the findings. In addition, recommendations relative to the effectiveness of this workshop and similar workshops in the future are presented.

The Purpose. The chief purpose of this study was to assess the effectiveness of the "Workshop in Economic Literacy." The workshop was initiated to prepare industrial arts and social studies teachers to develop integrated instructional materials for use in teaching applied economics concepts to their students. A second purpose of the study was to test the feasibility of utilizing the methodology of transactional evaluation to facilitate the integration of industrial arts and social studies in teaching applied concepts of economics.

Methods and Procedures. The "Workshop in Economic Literacy" was sponsored by the Rotary Club of Columbus, Ohio, and delivered by The Ohio State University through the Academic Faculties of Humanities Education and Industrial Technology Education in the College of Education. The one-quarter workshop provided instruction to 20 junior high school industrial arts and social studies teachers from in and around Columbus, Ohio. The workshop participants produced integrated instructional units in applied economics which were to be used with their students during the remainder of the school year.
In order to assess this workshop and meet the objectives of this study, a summative evaluation model was developed. It consisted of a transactional evaluation of the integration of subject areas to teach applied economics, norm referenced tests to measure knowledge of economics, an instrument to measure attitude toward the subject of economics, and a survey of participants' perceptions of the workshop's effectiveness. Data were gathered from the 20 participants and 513 of their students during the workshop and the six-month implementation phase.

Findings. The major findings of this study were:

1. The workshop participants had no significant gain in their knowledge of economics as measured by the Test of Understanding in College Economics as a result of their experience in the workshop.

2. The students who were recipients of the teacher-prepared integrated instructional units had a significant gain in their knowledge of economics concepts as measured by the Junior High School Test of Economics. The Students' mean posttest scores were significantly higher than their mean pretest scores ($t = 26.2; 119df: p<.001$).

3. The participants' attitudes toward the subject of economics were influenced neither positively nor negatively as a result of their involvement in the "Workshop in Economic Literacy."

4. The students' attitudes toward the subject of economics were significantly and positively influenced as a result of their
exposure to the integrated units of instruction in applied economics. The student's mean posttest scores were significantly higher than their mean pretest scores ($t = 15.34; 119$df; $p < .001$).

5. The participants agreed that the workshop objectives were clearly stated (60%), were realistic (95%), and were achieved through the workshop (90%). A significant proportion of the participants (40%) felt the workshop objectives could have been more clearly stated.

6. A majority of the participants felt that the economic concepts presented were sufficient in scope (60%), relevant (80%), and provided balance (60%). However, a significant proportion (40%) felt the economic concepts presented were not sufficient in scope and did not provide adequate balance.

7. A majority of the participants felt the resource persons from business and industry (75%), consumer advocates (65%), and academicians (65%) made a significant contribution to the workshop.

8. The participants overwhelmingly (95%) felt the instructional resources were useful to them in fulfilling the workshop objectives.

9. The participants totally agreed (100%) that the workshop content was relevant to their professional development.

10. A minority of the participants (35%) felt the overall workshop content was adequate to meet the objectives of the workshop. This left the majority (65%) either undecided (35%) or feeling the content was less than adequate (35%).
11. The vast majority of the participants (95%) felt the workshop had either met or exceeded their expectations.

12. All participants felt the study and work requirements for the workshop were reasonable.

13. All participants felt the workshop had sufficient value to be repeated.

14. At the end of the workshop, the vast majority of the participants (95%) were looking forward to utilizing their integrated instructional materials.

15. At the close of the workshop, the majority of the participants (85%) felt their instructional units would provide little or no integration of subject matter. However, 92 percent of the participants surveyed after implementation felt the instructional units provided a great deal or much integration of subject matter and had facilitated their teaching of economic concepts.

16. At the end of the school year the majority of the participants (92% of those responding) had through extensive effort utilized the developed instructional units.

17. All participants responding to the follow-up survey intended to continue using their instructional units.

18. At the close of the school year, slightly more than half (54%) of the participants responding had not utilized the expertise of a Rotarian to assist them in presenting their instructional units.

19. The transactional evaluation identified and attempted to resolve the following concerns identified by the participants:

a. The participants wanted the workshop to include instruction in basic concepts of economics.
b. The participants needed additional information concerning the content relationships between industrial arts and social studies.

c. The participants needed more expertise in curriculum development before attempting to produce integrated instructional units.

d. The participants felt the workshop was not of adequate length to produce the integrated instructional units.

Conclusions

The following conclusions were derived from the findings of this study. However, due to the nature of the population and subsequent sampling technique used, these conclusions should not be generalized beyond this workshop:

1. The "Workshop in Economic Literacy" was not successful in significantly increasing the participants' knowledge of economics concepts and principles. It should be noted, however, that the participants who had taken little or no college level economics courses prior to the workshop did show some gain in knowledge of economics at the end of the workshop.

2. The "Workshop in Economic Literacy" was successful in significantly increasing the junior high school students' knowledge of economics concepts and principles. As indicated by Kelly (1951), the ultimate goal of most in-service workshops is to provide benefits to the students of the workshop's participants. This confirms that teacher-prepared integrated units of instruction in applied economics are effective tools in teaching students basic economics concepts. This also indicates positive effects from this workshop.
3. The "Workshop in Economic Literacy" had no effect on the attitude of the participants toward the subject of economics. However, the participants of this study maintained their positive attitude toward economics as a result of their involvement in the workshop.

4. Integrated instructional units in applied economics can have a significant positive influence on the attitude of students toward economics as a subject.

5. These industrial arts and social studies teachers feel the workshop is an effective way to prepare them to teach applied economics through integrated instruction.

6. Transactional evaluation was used with success in this workshop to assist the participants in identifying and resolving their concerns regarding the combining of industrial arts and social studies instruction for teaching concepts of economics.

Recommendations

In an attempt to encourage additional workshop evaluations and enhance the effectiveness of similar workshops in the future, the following recommendations are given:

1. In-service workshop evaluations should begin during the planning stages of the workshop. This will allow both a formative and summative evaluation, which permits the evaluator to select or adapt the most appropriate general evaluation model, thus assuring a comprehensive evaluation.

2. If perceived workshop effectiveness is surveyed, all individuals directly involved in the activities should be included.
3. The present study should be refined and replicated for use with a larger population using comparison groups to better assess the value of integrated instruction in teaching applied economics.

4. Credit given should be dependent upon a participant's implementation of instructional materials produced in any workshop which expects implementation or where the workshop's evaluation is dependent upon implementation.

5. Caution should be employed in interpreting end-of-workshop evaluations because of the significant differences found in this study regarding end-of-workshop vis-a-vis delayed participant attitudes about workshop value.

6. Further research is needed to determine how to effectively increase subject matter sophistication for participants with little knowledge in the subject matter without frustrating or boring more advanced participants.

7. This study should be replicated in order to increase the generalizability of the findings.
BIBLIOGRAPHY


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Karstenson, Lewis. An Instrument for Determining Attitude Toward the Subject of Economics. Ohio University.


APPENDIX A

An Instrument for Determining Attitudes Toward the Subject of Economics
An Instrument for Determining Attitude
Toward the Subject of Economics

Name ____________________________

Directions:

The purpose of this instrument is to determine the favorability or unfavorability of your attitude toward the subject of economics at the present time. Select the one best response on each item, and indicate your answer by placing an X in the box beside the appropriate answer.

1. How would you rank economics in comparison to other subjects you have studied on the basis of your personal interest in the subject?

( ) a. One of the least interesting subjects
( ) b. Among the less interesting subjects
( ) c. Undecided or indifferent
( ) d. Among the more interesting subjects
( ) e. One of the most interesting subjects

2. How would you rank economics in comparison to other subjects you have studied on the basis of its contribution to your general education?

( ) a. One of the least important subjects
( ) b. Among the less important subjects
( ) c. Undecided or indifferent
( ) d. Among the more important subjects
( ) e. One of the most important subjects

3. How would you rank economics in comparison to other subjects you have studied on the basis of its contribution to your occupational preparation?

( ) a. One of the least important subjects
( ) b. Among the less important subjects
( ) c. Undecided or indifferent
( ) d. Among the more important subjects
( ) e. One of the most important subjects

4. Do you think the knowledge which you will obtain from studying economics will be worth the time and effort that you will put into studying the subject?

( ) a. Definitely no
( ) b. Mostly no
( ) c. Undecided or indifferent
( ) d. Mostly yes
( ) e. Definitely yes

5. To what extent are you interested in learning (or learning more) about economics?

( ) a. Not at all interested
( ) b. Not too interested
( ) c. Undecided or indifferent
( ) d. Somewhat interested
( ) e. Very interested
To what extent are you interested in taking a course in economics?

( ) a. Not at all interested
( ) b. Not too interested
( ) c. Undecided or indifferent
( ) d. Somewhat interested
( ) e. Very interested

Do you intend to take a course in economics while you are in high school?

( ) a. Definitely no
( ) b. Probably no
( ) c. Undecided or indifferent
( ) d. Probably yes
( ) e. Definitely yes

What is your present inclination toward recommending a course in economics to a fellow student who has never studied the subject?

( ) a. Definitely would not recommend course
( ) b. Probably would not recommend course
( ) c. Undecided or indifferent
( ) d. Probably would recommend course
( ) e. Definitely would recommend course

Do you agree or disagree with the following statement? "Economic understanding is essential if we are to meet our responsibilities as citizens and as participants in a basically private enterprise economy."

( ) a. Strongly disagree
( ) b. Disagree
( ) c. Undecided or indifferent
( ) d. Agree
( ) e. Strongly agree

How would you describe your present attitude toward the subject of economics?

( ) a. Very unfavorable
( ) b. Mostly unfavorable
( ) c. Undecided or indifferent
( ) d. Mostly favorable
( ) e. Very favorable
APPENDIX B

Test of Understanding in College Economics
(Psychological Corporation, 1967)
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These consist of pages:

APPENDIX B

APPENDIX C

118-121
APPENDIX C

Junior High School Test of Economics
(Center for Economic Education, 1974)
APPENDIX D

Workshop Effectiveness Survey
The purpose of this instrument is to evaluate this workshop and to provide feedback to the instructors for workshop improvement.

Part I Instructions: Indicate your answer by circling the symbol indicating whether you strongly agree (SA), agree (A), undecided (?), disagree (D) or strongly disagree (SD) with the statement as you understand it. Add comments if you wish.

1. The objectives of the workshop were clearly stated.
   Comments: ____________________________
   SA A ? D SD

2. The objectives of the workshop were realistic in terms of my being able to complete them.
   Comments: ____________________________
   SA A ? D SD

3. The stated objectives of the workshop were achieved.
   Comments: ____________________________
   SA A ? D SD

4. The economic concepts presented were:
   a. Sufficient in scope
   b. Relevant to education
   c. Balanced in points of view
   Comments: ____________________________
   SA A ? D SD

5. The representatives of business/industry provided important, complete, and useful information.
   Comments: ____________________________
   SA A ? D SD

6. The representatives of the consumer provided important, complete, and useful information.
   Comments: ____________________________
   SA A ? D SD
7. The academicians provided important, complete, and useful information.

Comments: ..............................................................

8. The speakers made me want to include more economic concepts in my instruction.

Comments: ..............................................................

9. The instructional resources made available were useful:
   a. During the workshop
   b. For future classroom use

Comments: ..............................................................

10. The content of the workshop was adequate in preparing me to teach applied economics.

Comments: ..............................................................

11. The following played a significant part in my achieving the competency needed to teach applied economics.
   a. Resource persons from business, industry, consumer interests, and academy.
   b. The workshop instructors
   c. The instructional materials reviewed
   d. Peers in class
   e. Group discussions
   f. Team planning time

Comments: ..............................................................

12. The length of the workshop was adequate.

Comments: ..............................................................

13. I am looking forward to using the material I developed in the workshop.

Comments: ..............................................................
14. My school situation will allow me to easily implement the materials I developed.  
Comments: .................................................................
.................................................................................

15. The workshop's information and experiences were relevant to my professional development.  
Comments: .................................................................
.................................................................................

16. This workshop had sufficient value to be repeated again for other teachers.  
Comments: .................................................................
.................................................................................

17. Financial reimbursements were adequate.  
Comments: .................................................................
.................................................................................

Part II Instructions: Indicate your answer by circling the number in front of your answer. Add comments if you wish.

1. To what extent does the material your team developed provide integration of subject matter areas to teach economic concepts?
   1. A great deal
   2. Much
   3. Some
   4. Little
   5. None

Comments: ..............................................................................

2. How did the workshop compare with your expectations of it when you registered?
   1. Much better than expected
   2. Better than expected
   3. About what I expected
   4. Not quite as good as I hoped
   5. A real disappointment

Comments: ..............................................................................
3. The study and work requirements for this workshop were:
   1. Too easy
   2. About right
   3. Difficult
   4. Too difficult
   Comments: __________________________________________

4. Did the workshop contain any flagrant bias?
   1. No
   2. Yes, explain ______________________________________

5. My effort in this workshop is best described as:
   1. Extreme
   2. Considerable
   3. Moderate
   4. Little
   Comments: __________________________________________

6. Please provide any additional comments or suggestions that could help improve similar workshops in the future.
   ____________________________________________________
APPENDIX E

Follow-Up Workshop Effectiveness Survey
Dear

It has been six months since you participated in the "Workshop in Economic Literacy"; in this interim you have had time to assimilate the workshop's content. Even with this school year's unusual interruptions due to bad weather and natural gas shortages many of you have had an opportunity to utilize in your classrooms the instructional materials you developed.

My evaluation of the workshop has been easy due to your cooperation, and I would like to thank you for your assistance in the workshop assessment. The final step in the workshop assessment is a follow-up survey which is part of the participant evaluation.

Please take the time to complete and return the questionnaire enclosed. Your input will provide a more accurate and complete evaluation of the workshop, thus providing pertinent data which can be used to improve upcoming workshops.

Thank you.

Sincerely yours,

Randal H. Pierce

Enclosure
THE OHIO STATE UNIVERSITY
"WORKSHOP IN ECONOMIC LITERACY"
WORKSHOP EFFECTIVENESS SURVEY
FOLLOW-UP PARTICIPANT EVALUATION

The purpose of this instrument is to assist in the evaluation of this workshop and to provide feedback to the instructors for workshop improvement.

PART I INSTRUCTIONS: Indicate your answer by circling the symbol indicating whether you strongly agree (SA), agree (A), undecided (?), disagree (D), or strongly disagree (SD) with the statement as you understand it. Add comments if you wish.

1. The economic concepts presented during the workshop were:
   a. Sufficient in scope
   b. Relevant to education
   c. Balanced in points of view

   Comments: __________________________________________

2. The representatives of business/industry provided important, complete, and useful information.

   Comments: __________________________________________

3. The representatives of the consumer provided important, complete, and useful information.

   Comments: __________________________________________

4. The academicians provided important, complete, and useful information.

   Comments: __________________________________________

5. The speakers made me want to include more economic concepts in my instruction.

   Comments: __________________________________________
6. The instructional resources made available were useful for classroom use.

Comments: ________________________________________________________________

7. The content of the workshop was adequate in preparing me to teach applied economics.

Comments: ________________________________________________________________

8. The following played a significant part in my achieving the competency needed to teach applied economics.

a. Resource persons from business, industry, consumer interests, and academy.

b. The workshop instructors

c. The instructional materials reviewed

d. Pears in class

e. Group discussions

f. Team planning time

Comments: ________________________________________________________________

9. The length of the workshop was adequate.

Comments: ________________________________________________________________

10. My school situation allowed me to easily implement the materials I developed.

Comments: ________________________________________________________________

11. The workshop's information and experiences were relevant to my professional development.

Comments: ________________________________________________________________

12. This workshop has sufficient value to be repeated again for other teachers.

Comments: ________________________________________________________________
13. The $50.00 per participant to be spent for instructional resources was adequate.

Comments:_____________________________________________________________________
_____________________________________________________________________________

14. The instructional materials available on a loan basis at The Ohio State University were easily accessible.

Comments:_____________________________________________________________________
_____________________________________________________________________________

PART II INSTRUCTIONS: Indicate your answer by circling the letter in front of your answer. Add comments if you wish.

1. My effort to utilize the instructional materials developed in the workshop has been:
   a. Extreme
   b. Considerable
   c. Moderate
   d. Little
   e. None

Comments:_____________________________________________________________________
_____________________________________________________________________________

2. Were you able to implement the economics unit you developed in the workshop during this school year?
   a. yes
   b. no

Comments:_____________________________________________________________________
_____________________________________________________________________________

3. Do you intend to use the economics unit you developed in the future?
   a. yes
   b. no

Comments:_____________________________________________________________________
_____________________________________________________________________________

4. To what extent did the material your team developed provide integration of subject matter areas to teach economic concepts?
   a. A great deal
   b. Much
   c. Some
   d. Little
   e. None

Comments:_____________________________________________________________________
_____________________________________________________________________________

5. Did you utilize the instructional resources indentified in the materials you developed as you taught the economics unit?
   a. yes
   b. no

Comments:_____________________________________________________________________
_____________________________________________________________________________
6. In the teaching of your economics unit, did you utilize a Rotarian as a liaison between the school and the area business and industry resources and expertise.
   a. yes
   b. no

   Comments: __________________________________________

7. Did you spend the money for instructional resources provided through the workshop?
   a. yes
   b. no

   Comments: __________________________________________

8. Please provide any additional comments or suggestions that could help improve similar workshops in the future.

   __________________________________________
APPENDIX F

Workshop in Economic Literacy Proposal
Workshop in Economic Literacy

This Workshop in Economic Literacy has a dual purpose. First it will orient teachers to the availability of instructional materials in applied economics, and cause them to create, adapt, and adopt instructional materials and plans for use in their own classes. Second, it will cause industrial arts and social studies teachers to identify common goals, in terms of their respective contributions to developing economic literacy, and develop ways to mutually reinforce their instructional impact through integration of subject matter and activities. The ultimate goal of this workshop is to improve and extend economic literacy, both in its theoretical foundations and its applications to resolving the problems of daily living.

To achieve the above stated purposes the workshop will provide the following activities and experiences:

1. Seminars with representatives from area business, industry, government, labor, consumer advocates, environmentalist leaders, and academicians from industrial sociology; economics, and political science on concerns about free enterprise and economic education.

2. Group discussions of ways to proceed in order to develop integrated responses (between social studies and industrial arts) to the identified concerns via a Junior Achievement-like activity.
3. Review of existing instructional materials on economic education for use at the junior high school level.

4. Class time for individual school teams to develop a general program design and identify needed instructional materials. This will include the creation of materials to fill voids and to provide transition.

5. Presentation of team products, a syllabus, to the group with group and staff critiques.

The preceding represents this workshop's proposed method of providing preparation for instruction in applied economics in local public schools. Using the attached sheets please respond to this proposal stating what you see as its advantages and disadvantages.

Example: This proposal provides the teacher needed time for new program development.

1. 

2. 

3. 

Space was provided for ten responses.
APPENDIX G

Pilot Unit - "Manufacturing and the Economic System"
To:

From:

Subject: Distributing and demonstrating the pilot test materials in the "Workshop in Economic Literacy".

I recommend the following procedure for distributing and demonstrating the pilot test materials.

1. Explain that the pilot test will give each team an opportunity to participate in an integrated activity in applied economics in their own classroom.

2. The activity they will teach has been selected from "The World of Manufacturing," a junior high school industrial arts course. The course is taught using an instructional system consisting of a textbook, laboratory manual, and teacher's guide. The specific activity they will be asked to teach is entitled "Manufacturing and the Economic System."

3. Distribute the reprints from the textbook, teachers guide, and laboratory manual to the participants. Ask them to review the materials.

4. Explain how the instructional system was intended to be used. Mention the teacher's role in reviewing and presenting the activity, then the students role in reading the text and participating in the laboratory activity.

5. Explain that in the pilot test the instructional materials should be used as follows:
   a. The social studies teachers should use the textbook reading and discuss the economic concepts in light of the manufacturing activities being conducted in industrial arts.
   b. The industrial arts teachers should use the laboratory manual reprints and carry out the custom production and the mass production activities on two consecutive days with discussions relating to the concepts covered in social studies.
   c. The team should use the teacher's guide reprint to plan their specific
strategy in teaching this activity. The team should also set up
criteria for assessing the pilot program.

6. Using one set of the fixtures, demonstrate their use in mass producing
cost hangers.

7. Distribute the bags of fixtures and materials to the industrial arts
teachers.

8. Instruct them to work as teams in planning their delivery of the pilot
program, however, for the pilot program to be of value in the workshop
it should be taught within the next two weeks.
Manufacturing and the Economic System

Industry (construction and manufacturing) has never been able to make everything that everyone wants. In the United States, companies are free to decide which goods they will make. They can buy materials, make products, and try to sell the products at a profit. Profit is the extra money, from sales, left over after paying for materials, rent, wages, and other costs.

Most people cannot afford to buy all the goods they want, but each buyer is free to choose what he will buy. Freedom of choice, which both producers and buyers have, is a part of the American free enterprise system.

People also buy and sell services (work that benefits people and improves products). A doctor is paid to help cure illness and heal injuries. A mechanic is paid to repair autos, trucks, or other machines. A teacher, a barber, and a professional ballplayer each performs a service. In the United States no one is forced by law to become a doctor, a mechanic, or a ballplayer. No one is forced to buy the services of these people. There is a great deal of choice about buying and selling services. This is another part of the free enterprise system.

Supply and Demand

People form new companies to make and to service goods because they hope to make a profit. They work to improve their goods and services, to devise new products, and to make a profit. A product must be something that consumers (buyers) will choose to buy. This
gives the consumers some power. Whatever they are willing and able
to buy is called demand. Whatever is made and offered for sale is
called supply. The demand for a product or service always affects
the supply of that product or service. For example, if consumers
buy only small cars, manufacturers will keep on making them. If
consumers buy only large automobiles, manufacturers will make these
instead. Sometimes, the quality of the service that is available
will decide which cars are bought.

Most goods are provided by more than one firm. In the auto
industry several firms make and service small cars. These firms
compete (each tries to do better than the other) for sales. They
try to learn just what the demand will be so they can supply exactly
what the consumers want.

Competition helps keep the quality of goods from falling very
low. The consumer will buy products that work well and that require
little servicing. He will not buy a poorly made auto, for instance,
if there is a better one for sale at the same price.

Economic Growth

Each year the total worth of all goods and services sold in the
United States is figured. This total worth is called Gross National
Product or GNP. As the number of people in America keeps growing,
sales keep growing too. Each year people buy more houses, more
schools and school books, more food, more haircuts, more of almost
everything than they bought the year before. Comparing last year’s
GNP with the figure for the year before shows the economic growth
(increased business) of the United States.
The System of Manufacturing

To understand our manufacturing system (orderly way of making things), you should think of it as having three main parts: (1) input, (2) process, and (3) output. To work well, the system must be managed (planned, organized, and controlled), and so must each of its parts.

Input is whatever goes into a system. There are six kinds of input to the manufacturing system:

1. Natural resources: the animal, vegetable, and mineral materials of nature,
2. Financing: money in the form of cash or credit (borrowing power),
3. Capital: buildings, machines, equipment, tools,
4. Energy: for example, the energy of falling water, wind, or fuel; electricity; the sun's radiation; and atomic energy,
5. Human resources: people, and
6. Knowledge: Knowing what to do and how to do it.

Each input is important. If even one is missing, a company cannot succeed.

A process is an activity that has a purpose or goal. In industry, all activity must be efficient and skillful. All processes are carefully chosen and tried out. When a process works well and is put to daily use, it is called a practice. In industry three kinds of practices are important:

1. Management practices,
2. Production practices, and
3. Personnel practices.

Management practices make sure everything goes according to plan. One important part of a management job is to make decisions.

Production practices change the forms of natural resources into products to be sold. Some of these practices also are used to service...
goods when they need maintenance or repair.

Personnel practices make sure that the skills of workers are used in the best way. Workers are helped to understand each other and get along together, and their jobs are made more satisfying.

Output is whatever comes out of a system. The outputs of industry are material goods. One branch of industry is called construction. It produces goods like office buildings, houses, water-supply systems, highways, and bridges. Materials for these products are assembled (put together) at the place where they will be used.

Another branch of industry is called manufacturing. It produces goods like radios, cans of paint, newspapers, and hammers. These products are assembled in a plant or factory.

**Durable and Nondurable Goods**

The United States government has a system for putting the outputs of manufacturing into classes (groups). There are two main classes: durable goods and nondurable goods. Products that usually last at least three years are called "durable". Products that usually last fewer than three years are called "nondurable".

**Summary**

The system of supply and demand, with companies competing for sales and profit, brings many benefits.

1. The consumer has a wide choice of goods and services.
2. The quality of a product may become poor, but it will not stay poor if a better product can be made for the same price.

The manufacturing system has three main parts: inputs, process, and output. Each day we enjoy using the durable and nondurable outputs of production.
Activity 3A
Manufacturing and the Economic System
Problem 1

Objective
Using a length of soft metal rod, manufacture a coat hanger by hand to demonstrate custom production.

Equipment (Group of 5)
2 pr. combination pliers or side cutting pliers
2 bench rules or yardsticks
1 sample coat hanger

Supplies
1. Assemble with your group. Equipment supervisor get the equipment and supplies.
2. Study the sample coat hanger. The foreman in each group should measure the sample coat hanger to get the basic measurements which everyone in the group will use.

Processing
3. Each student is to measure and cut one 4' length of wire from the stock. Make certain that safety rules are followed.
4. Form by hand the best coat hanger you can make.
5. Save your coat hanger for the next laboratory activity.

Safety
a. Wear safety glasses.
b. Keep wire cutters away from your face when cutting wire.
c. Be careful with the sharp ends of cut wire.
d. Look out for the other fellow's safety and your own when bending wire.

Cleaning Up

6. Equipment supervisor should return all tools to their proper place and dispose of all scraps.

7. Return to your seat, so that your teacher can demonstrate your next laboratory activity.

Problem 2

Objective

Given the problem of making several coat hangers, organize for mass production.

1. Below are eleven steps you will use to mass-produce coat hangers.

2. Your teacher will assign you to a work station. Enter your name under your assigned job.

3. Watch the teacher make a coat hanger so you will know how.

<table>
<thead>
<tr>
<th>Station</th>
<th>Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Measure and shear wire to length. (2 workers)</td>
</tr>
<tr>
<td>#2</td>
<td>Measure and mark wire for bends. (1 worker)</td>
</tr>
<tr>
<td>#3</td>
<td>Form hanger bends and twist neck. (6 workers)</td>
</tr>
<tr>
<td>#4</td>
<td>Form and cut neck to length. (1 or 2 workers)</td>
</tr>
</tbody>
</table>
#5. Form neck. (1 worker)

#6. Back-form hanger. (1 worker)

#7. File burrs. (5 or 6 workers)

#8. Lay out chip board with pattern. (1 worker)

#9. Cut and punch chip board. (2 workers)

#10. Score and fold chip board. (2 workers)

#11. Assemble chip board to hanger and stack product. (1 worker)
Activity 38
Manufacturing and the Economic System

Today you will help mass-produce coat hangers and compare them with the hanger you made during Activity 3A.

Problem

Objective

Given the problem of manufacturing a quantity of coat hangers, perform one specialized task in the production of a coat hanger.

Equipment (Per class with two production lines)

- 6 pr. combination pliers or side cutting pliers
- 6 36" bench rules or yardsticks
- 2 8" double-cut files
- 4 pr. 6" scissors
- 2 bench knives or modeling tools
- 4 No. 7-1 bending fixtures
- 4 No. 7-2 twisting fixtures
- 2 ea. No. 7-3 and 7-4 bending fixtures
- 2 pcs. No. 7-5 hanger neck gage 5 1/2" x 1/2" I.D. pipe
- 2 No. 7-6 templates for hanger
- 2 pencils
- 4 felt markers, red or black

Supplies (Per class with two production lines)

- 120' 1/8" dia. half-hard aluminum wire (1100 H 19 aluminum)
- 3 pcs. 22 1/2" x 34" chipboard (.030" caliper)

Working in Production

1. Production lines have been organized for mass-producing coat hangers. You have been assigned a task on a production line.
2. Directions are given for the work to be performed at all stations. Review the operation for your work station before you begin.

**Station #1-Measuring and Shearing**

**Needed:** Two workers, combination pliers, 36" bench rule, and marking pen.

**Job:** First worker measures and marks wire in 48" lengths. Second worker cuts wire at mark and passes 48" length to Station #2.

**Station #2-Measuring and Marking**

**Needed:** One worker, 36" bench rule, marking pen.

**Job:** Measure 14" from end of wire, mark wire at this point, and pass to Station #3.

**Station #3-Twisting and Bending**

**Needed:** Six workers; two No. 7-1 fixtures; two No. 7-2 fixtures.

**Job:** First worker should bend wire, using No. 7-1 fixtures. Place wire in fixture so that mark on wire is next to mark on left-hand dowel. Bend wire around dowels and guide ends of wire through front of No. 7-1 fixture. After bending, pass fixture No. 7-1 with wire to second and third worker. Form the next hanger, using the second No. 7-1 fixture. Workers #2 and #3 should squeeze ends of wire together and place fixture No. 7-2 over the ends of the wire. Using fixture No. 7-2 twist wire three turns. Remove wrench from wire and take wire out of fixture No. 7-1. Return fixture No. 7-1 to Station 1 and pass wire to Station #4.

**Station #4-Forming and Shearing**

**Needed:** One or two workers, No. 7-5 hanger neck gage, and combination pliers.
Job: Form the small twisted end of the wire as shown by your instructor. Using No. 7-5 hanger neck gage as a guide, cut neck of hanger to length and pass hanger to Station #5.

Station #5-Forming
Needed: One worker, and fixture 7-3.

Job: Form the neck of the hanger as shown in the demonstration. Pass the hanger to Station #6.

Station #6-Back-Forming
Needed: One worker, and fixture No. 7-4.

Job: Back-form the neck of the coat hanger as shown in the demonstration. Pass hanger to Station #7.

Station #7-Filing
Needed: Five or six workers and files.

Job: File burrs from ends of wire as shown in the demonstration. Pass hanger to Station #11.

Station #8-Laying Out
Needed: One worker, No. 7-6 pattern, pencil and chipboard.

Job: Mark chipboard using No. 7-6 pattern provided. Pass chipboard to Station #9 to be cut.

Station #9-Separating and Punching
Needed: Two workers, scissors, and paper punch.

Job: Cut and punch the chipboard blanks as shown in the demonstration. Pass blanks to Station #10.

Station #10-Scoring and Folding
Needed: Two workers, bench knife or modeling tool, and bench rule.

Job: Score but do not cut chipboard. Fold along scored line. Pass folded chipboard to Station #11.
Station #12-Assembling

Needed: One worker.

Job: Insert folded chipboard on coat hanger. Stack the product.

Questions

1. Which manufacturing process resulted in products that were more like the model in size and shape? Check one.
   - The hand process.
   - The mass-production process.

Cleaning Up

1. Clean up the production line and rearrange tools and supplies at your work station.

2. Complete the questions for this laboratory activity.
APPENDIX H

Participant Developed Instructional Unit
ROSEMORE JUNIOR HIGH ECONOMICS CURRICULUM
This curriculum was developed with the variety of teachers we have at Rosemore Junior High School in mind. No teacher has the same amount of time nor the same type of student. Therefore this curriculum offers a teacher a variety of experiences from which to select those that meet the individual needs of his students. It can be used in full or in part. It also permits both the Social Studies Department and the Industrial Arts Department to operate their programs independently, if necessary.

This curriculum was developed with the knowledge that the vast majority of our students have a minimal exposure to economic terms and concepts. Therefore our point of departure had to be quite elementary and yet provide the opportunity for in-depth learning as the program progressed.

This IS A. IVENS HANDBOOK

Unit Prepared By:
Whitchell City Schools
Rosemore Junior High School
Burton Brudeshaw
Judy Easter
Georgette Fox
James Kunfer
Linda White
Upper Arlington City Schools
En Dollar
### The Market Economy

**Curriculum for Economics Unit**

**Length of Time:** 6 weeks

**TOPOCS TO BE COVERED**

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<th>TOPICS TO BE COVERED</th>
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<td>I. Supply &amp; Demand</td>
<td></td>
<td>Socials</td>
<td>Simulation A **&lt;br&gt; (Auction)</td>
<td>As a result of their experience &lt;br&gt; the student should understand &lt;br&gt; the relationship between supply &lt;br&gt; and demand and their relation-ship to prices.</td>
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<td>of Consumer Goods</td>
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<td>Questionnaire <strong>&lt;br&gt; (Gaming Pit)</strong></td>
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<td>Filmstrip A **&lt;br&gt; (Films)</td>
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<td>Supply</td>
<td>&quot;Preparing to produce a product&quot;</td>
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<td>Soc.Stud.</td>
<td>&quot;Films D&quot;&lt;br&gt; &quot;The story of prices&quot;</td>
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|                      |       |            | Soc.Stud.  | "Films E"<br> "What is money?"
|                      |       |            | Soc.Stud.  | "You and your money" |

**II. Production of Consumer Goods**

1. Necessity of Labor

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**#**References and sources for the simulations, games, questionnaires, filmstrips, pamphlets, and films can be found in the addenda. The letters are guides in locating the particular filmstrip or simulation.
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2. Necessity of Technology

- Technology Soc.Stud. - Simulation 'C-3
- Product Engineer
- 'Preparing to produce a product'
- Jigs Ind.Arts - Filmstrip 3
- Fixtures Ind.Arts - Filmstrip 7
- Inventions Ind.Arts - Research & Development in Manufacturing
- New Product Division Soc.Stud. - Field Trip
- Western Electric or Battelle

The student will realize that labor needs to be trained in the use of tools and machinery in order to produce a product.

The student will realize that inventions are the result of need.

3. Necessity of Energy (Natural Resources)

- Energy Ind.Arts - Simulation D-1
- Electricity "Pull the plug"
- Gas (natural) - Lecture
- Oil Soc.Stud.
- Coal - Census (Crisis) E-5
- Atomic energy
- Solar energy

The student will realize that energy is necessary to produce a product.

The student will realize that there are a number of different types of energy available to the producer.

The student will realize that the producer will select the energy that will maximize his profit and production.
## TOPICS TO BE COVERED

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<td>-&quot;Money Management, Your Shopping Dollar&quot;</td>
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| II. |      |       |                  |           |
| 5. Mass Production | Mass production | Ind.Arts | -Simulation I-30 |            |
|                                 | custom production | Ind.Arts | -"Plastic Project" |           |
|                                 | quality Soc.Stud. |       | -Filmslip N |            |
|                                 | quantity Soc.Stud. |       | -"Producing a Product" |           |
|                                 | specialisation |       | -Lecture |            |
|                                 | Interchangeable |       | -Field Trip to Bottling Company (Royal Crown, Pepsi, or Shasta) |           |
| parts                            |                  |       |                  | The student will realize that mass production realizes greater profit than custom production. |
|                                 |                  |       |                  | The student will realize that profit is necessary to pay back the investors, the producers, and labor. |

| III. Advertising and Marketing | market research Product | Ind.Arts | -Filmslip 0 |            |
|                                 | sales consumer service |       | -"Selling and Servicing" |           |
|                                 | advertising Soc.Stud. |       | -"Junk Inventions" |           |
|                                 | test market |       | -Speakers Market Research Sales Advertising |           |
|                                 |                  |       |                  | The student will realize that public awareness is necessary in order to maximize profit and create increased demand. |
|                                 |                  |       |                  | Students will realize that extensive test marketing takes place before a product is sold nationwide. |
IV. Consumer Education

A unit could be developed covering this topic using the Home-Ec Department as a liaison, as well as the Industrial Arts Department and the Social Studies Department.

Students will realize that a wise consumer maximizes the value received for each dollar spent.

V. Career Education - exploration

A unit could be developed using the Guidance Department as a further liaison. Various careers including banking, factory work, supervision, taxassistant, investment broker, small businessman, advertising person, market research engineer, new products engineer, quality control engineer, etc. could be explored. Aptitudes etc. could be surveyed.

The students will realize that a number of occupations exist within the framework of the business world.

VI. Formation of a Student Company

A student company could be organized and run in connection with Units II and III. Sales of stocks would be the responsibility of the Social Studies Department. Production of the plastics would be in the realm of the Industrial Arts Dept. Sales would be the responsibility of both departments.

The objective here is to unify and reinforce all major concepts of Units II and III. The students will learn by doing.
ACROSS
1) extra money, after-all other costs
2) Amount
3) Buyers
4) A new device
5) Percentage of income for support of government
6) Calling attention to something for sale
7) Guides for tools

DOWN
8) can be put or used in place of each other
9) What buyers are willing to buy
10) Money or other gain
11) Way of making things
12) Power use to run machines
13) Money put into a business
14) An interest bearing certificate
15) Producing goods in large quantities
Activity 1 - A

Simulation
Auction

The teacher needs to select a highly desirable item which is not normally available in a classroom situation. The best auction items are those which have a relatively low "in the store" price since students usually have the funds to bid on these items, and because you are increasing the chances of an "inflated" bid price. (Cokes and candy bars make good auction items in almost all classrooms.)

The teacher tries to encourage the bidding beyond the regular store price. (This is why a lower priced item is essential.) Once the bidding has stopped, the item is sold to the highest bidder.

After the auction, try to have students analyze why the auction price was higher than the price they pay for the same item in a store. Why pay 60¢ for a 25¢ Coke when you can wait until after school and purchase one for the lower price?

Students should begin to realize that a limited supply of a highly desirable item tends to increase the price that consumers are willing to pay.

Limited Supply  ♦  Large Demand  ♦  Higher Price
(coke)             (class)             (?)

QUESTNAIRE

This is a simple activity which can be used to show students the relationship among needs, wants, and scarcity. It should also help students to understand what factors limit the ability to supply wants. Because the students will be dealing with their own wants as limited by their personal situations, the activity should be very meaningful and realistic.

- Students should make a list of 5 material items which they would like to have.
- Students should make a list of reasons why they do not own these items.
- A class discussion could follow or the wrap-up could be done in small groups.
- Students need to make a list of the most frequent factors which seem to limit consumption.

Hopefully students will begin to notice a similarity in the factors listed and will be able to make a "master list" of the most important ones.

Income
Unemployment
Level of education
Government regulations or prohibitions
Scarcity of desired item
Activity 2 - B

Gaming - Simulation
ON STRIKE - The Search Labor Relations Game
Search Simulations
Scholastic Book Service

Phases of the Game in Summary:

There is big trouble at the Hipster Blue Jeans factory. The owners of the factory and the leaders of the factory workers' union cannot agree on a new contract. The deadline is just a few minutes away. What will happen? Will the union call a strike?

Choose people in your class to play these six parts: Factory owner, Factory Foreman, Factory Vice President, Union Leader, Union Vice President, Union Shop Steward.
(Students are given a card with a brief summary of each character's position.)
A final meeting between management and the union takes place with each student playing his role.

Looking at the Demands - The strike has been called. The workers are on picket lines around the factory. The factory has been closed down. What is the strike all about? What is the union asking for?
Give students a sheet listing the workers' demands.
Discuss the idea of "compromise."

This strike is bad for the factory, bad for the workers, and bad for the town.
Your class must find a way to settle the strike. First you must take a second look at the demands. Divide your class into two groups. One group is management -- the factory owners. The other is the union leaders -- representing the workers or labor. Each group holds a meeting and decides which demands can be compromised and which ones are "musts."

Take your message to the public.
- Union members need to make picket signs telling the public why they are on strike. Which issues are the most important to them?
- Management - Buy a full page ad in the local newspaper and then write an ad designed to win public support for your side.

The game continues through a series of negotiations sessions and fact finding meetings until the 6-person, union-management team can settle all the 8 demands. When agreements have been reached on all 8 points and when these agreements have been ratified by 50% of the labor group; the game is over.
Activity 3 - C

Gaming simulation
PLAYDOUGH ORNAMENTS

TD ID: The students will be given the clay or other suitable material. They will then be asked to make an ornament of a tree, Santa, or angel. They will shown samples, but will be otherwise left on their own to work. Afterwards we will discuss the outcome and explore the problem area. The students will then be given a new set of material along with cookie cutters to serve as forms. The students will experience a quantitative and qualitative change with the use of a technological apparatus. Ornaments can be painted and fired, or baked, as desired.

OBJECTIVE:
The students will experience first-hand the necessity of technology in manufacturing a product.

MATERIALS NEEDED:
Clay or play-doh, cookie cutters, oven or kiln

"Gaming simulation 4 - D
PULL THE PLUG"

This will be a short demonstration showing electricity or other energy is needed to produce a product. The teacher will pull the plugs to the various machines in the Industrial Arts room, making it impossible to manufacture any projects. This short demonstration should show the student the necessity of energy.

Gaming Simulation 5 - E
CRISIS

This commercially produced game involves the importance of our natural resources in business as well as in our daily lives. Many different situations are set up including shortages and surpluses of energy sources. The students are challenged to solve the crisis at hand with regard to local and international effects. This is truely a motivating experience—one that can involve every student in the class.
Activity 7 - 6

Gaming - Simulation
PROFIT AND LOSS - The Game of Big Business Competition
Search Simulations
Scholastic Book Services

Introduction:

This game is all about big business. After you play the game, you will know
more about all of the things that men and women in big business have to know
about. In this game, you will have to make decisions about how your company will
be run. You will have to decide what products to market, and how to convince people
to buy your products. And you will have to try and run your business in a better
way than your competitor does.

To Begin With:

Choose five people in your class to be a consumer board. These five people
will act as judges and award the profit and loss points. They will decide which
company is doing the best job. And they will decide which company wins the game.
Divide the rest of your class into three teams. Each team is a different
compamy. All three companies are large bakeries. Each bakery must choose the
Chairman of the Board. The Chairman of the Board will conduct all company board
meetings.

Remember, each bakery is competing against the other two bakeries. You must do
everything you can to keep your plans secret. Do not allow the other bakeries to
know your decisions. It could cost you big profits — and perhaps the game!

Phases of the Game in Summary:

1. Selection of the name for your bakery
2. Market Research - what the public likes or dislikes about bread
   (public opinion)
3. Board of Directors meeting to decide on what kind of bread to produce
   Give reasons for the choice
4. Buy Supplies - keep costs as low as possible
   Choose best companies from which to buy your supplies.
5. Decide on prices for your bread. Wholesale / Retail Pricing
   Decide on the sizes for your bread.
6. Advertising the product
   Create a T.V. or Radio ad
   Create a magazine ad
7. Introduction of problems into the game
   - Sales are high but your profits are too low. What do you do?
   - Another bakery owner offers you a merger with his company. What do you do?

The team with the highest number of Profit Points wins the game.
Activity 7 - 0

Gaming - Simulation
THE RAILROAD GAME
Public Issues Series
Harvard Social Studies Project
American Education Publications

Railroad competition was bitter in the 1870's. Could you have met its tough demands? This "game" — simulating a real-life business problem — puts you on your mettle in meeting the challenges that faced railroad managers.

INTRODUCTION

Four railroads run between Oreton and Steeltown. The four independent lines compete for the business of carrying ore from the mines in Oreton to the mills in Steeltown.

The class divides into four groups. These groups take the parts of the managers of the four railroads. The competitive "game" the groups will play is divided into rounds. Each round represents one business day.

SITUATION

The railroads bid each day (round) for that day's business. The mine owner (teacher) each day awards the job of carrying all or part of the output of the mine to whichever railroad or railroads he wishes. Presumably business goes to the railroad or railroads that bid the lowest. The winner of the game is the railroad that makes the most money.

All trains consist of one engine and ten ore cars. Railroad A has two available trains. Railroad B has two available trains. Railroad C has three available trains. Railroad D has three available trains. No engine can pull more than ten cars; no money can be saved by using fewer than ten cars.

PROCEDURE

Each railroad has a break-even point, determined by the fixed costs and variable costs it must pay from its income. The railroads have already cut these costs as far as they can. These costs are shown on the separate expense tables given to each railroad by the teacher. At the start of the competition, each railroad keeps its business information secret from the other railroads.

Each railroad must submit a bid for the day's business. The bid should, ideally be high enough on each day's shipment to meet costs and make a profit, yet low enough to get the contract for the shipment if possible. A railroad's bid may vary according to the number of trains the mine owner will use.

The Mine Owner has a contract with the mill owner in Steeltown. The round trip run by train takes a full day. The contract says that the mine must ship a minimum of 20 trainloads to the mill each week (seven rounds). The most the mine can produce is five trainloads of ore a day.

In other words, the mine owner must send at least 20 loads a week, but cannot send more than 35 trainloads a week.

The mine owner, if he can not come to terms at all with any railroad, can send ore to Steeltown in wagons he owns. But this method is crude. The mine neither makes profit nor loses money by using wagons—but the mine owner wants to make a profit.
THE SEQUENCE of competition

A. Mine owner posts the number of trains of ore he would like to ship on the first day. He may ship only part of the number posted if he feels the bids are too high.

B. Mine owner goes separately to each of the four railroads once to bargain with them in an attempt to get the lowest bid for carrying ore. The final price offered by each railroad must be written down on a slip of paper.

C. Mine owner may return to any or all of the four railroads to give them information, accurate or inaccurate, about the bids submitted by other railroads. The mine owner may do this in an effort to get even better prices. Each Railroad may submit revised bids in writing if the managers think it desirable to do so.

D. Mine owner announces which railroad gets how much business and pays the railroad or railroads the amount of money due each. He does not announce how much money changes hands or what the winning bid was. At this point, the mine owner's clerk tallies the cost, income, and cash balance of each railroad on the tally sheet provided.

E. Each railroad has two kinds of expenses, fixed costs and variable costs, listed on its expense sheet. Fixed costs include such items as maintenance of equipment, interest on bonds, principal on bonds, and stock dividends. Variable costs include crew wages, fuel, water, and supplies. These costs depend on how many trains a railroad uses. Thus they are payable only if a railroad gets some business in a day. Each railroad must subtract all costs from its cash accounts at the end of each round.

F. If at any point a railroad cannot make a required payment, it is considered to be bankrupt and is eliminated from the game.

G. After each round, one representative from each railroad may meet with representatives from other railroads to discuss the prices they will bid for the next round, and other matters of competition. Each railroad sends a representative only if it wishes to do so.

H. Return to step A and begin the next round.

COMMENTS:

This game has other phases which can be introduced. The most meaningful one for this unit's objectives is a variation dealing with modern government regulation of the railroads. The game helps to simulate the economic plight of railroads, introduces possible solutions, and shows how government has stopped in to keep the railroad operating.
A bank can be set up by the students to purchase and loan common classroom supplies. Each student would invest a small amount of money (25%) in the bank and thus become stockholders in the bank. Pencils, paper, staples, tissues, etc. would be purchased with the funds (invest in property) by the elected Board of the Bank. These properties would be loaned at rates predetermined by the Board (the item plus interest). Loan agreements would be written (truth in lending). Similar articles would be returned with the appropriate amount of interest (cash). When the bank is dissolved, the profits or losses would be evenly distributed amongst the bank stockholders.

Each student would draw up a budget using their pocket money (allowance) as income. Categories such as entertainment, food, school supplies, savings, etc. would be used. The students would record their expenditures and after a predetermined amount of time determine how their budget accommodated their spending habits. A balance sheet could be used to show income and expenditures.

The students will engage in the mass production of these items using jigs and fixtures. A flow-chart will be developed to make them in the most efficient way. Because of the large number of functions, most students will have a job to do.
Activity 11 - K

Gaming - Simulation
JUNK INVENTIONS

TO DO:
1. Each student is to bring in any junk, scrap, or expendable items which he 
can beg, borrow, or "liberate."
2. Students may work individually or in small groups.
   (Teachers may wish to make this decision depending on the nature of the 
class or the specific objectives they are trying to accomplish.)
3. Tape, scissors, stapler, paint, and glue will be provided.
4. Work as quietly as possible.
   (This is not a silent activity. It is excellent to do at the beginning of 
a new school year or prior to a holiday vacation break.)

OBJECT:
Each person or group is to use his "junk" to build an invention. The invention 
can be something to use in the real world or it may be a fantasy invention. It does 
not need to work or to have moving parts etc.

Once your invention has been created, you must write a commercial to advertise 
your product. What are its best selling points? Price? Time saving? Durable?

Once the commercials or ads have been written, the entire class will meet 
and each student will give his "sales pitch" to the class.

Some suggested materials to bring:
- popiscle sticks
- soap
- rubber bands
- bones from meat
- wire
- metal pieces
- buttons
- paper plates
- empty spoons
- straws
- candle scaps
- styrofoam pieces
- cloth scaps
- nuts
- dried flowers or weeds
- pine cones
- pipe cleaners
- tin cans
- cardboard boxes
- old magazines
- newspapers
- wood scaps
- nails
- string
- erasons
- tacks
- construction paper
- tin foil
- cotton balls
- toothpicks
- marshmallows
- paper cups
- paper bags
- empty paper rolls
- yarn
- paper clips

COMMENTS:
As part of our economic unit we would be focusing on the advertising aspect 
of this exercise—both written and oral. The activity can also be used beautifully 
in an English writing class or Speech class. With a few modifications, the 
applications are endless.
ADDITION

I. QUESTIONNAIRE

1. Pretend of basic economics terms

2. List five things you want; material things. List the reasons you cannot have these items. Try to focus on factors which limit your ability to satisfy your wants (i.e., income, education, etc.).

3. Post Test

II. GAMES

1. "Pit" Parker Bros.
2. "Monopoly" Parker Bros.

III. FILMS

1. "What is Honey?" Coronet Films
4. "Banks and Credit" American Institute of Banking (see #3)
5. "Fred Meets a Bank" American Institute of Banking (see #3)

IV. FILMSTRIPS

A. "Preparing to Produce a Product" McKnight & McKnight
   Bloomington, Illinois. "Manufacturing Series"
C. "New Look at Budgeting" Money Management (see #D).
   "Economic Issues in American Democracy" Series. Look lots available.
E. "Preparing to Produce a Product" Manufacturing (see A.)
F. "Research and Development in Manufacturing" Manufacturing (see A.)
G. "Profit and Loss" Economic Issues (see D.)
H. "The Profit System" Economic Issues (see D.)
I. "Government and Our Economic System" Economic Issues (see D.)
J. "Managing the Manufacturing System" Manufacturing (see A.)
K. "Controlling the Manufacturing System" Manufacturing (see A.)
L. "Budgeting for Better Living" Honey Management (see D.)
M. "New Look at Budgeting" Money Management (see B.)
N. "Producing a Product" Manufacturing (see A.)
O. "Selling and Servicing" Manufacturing (see A.)
VI. PAMPHLETS FOR STUDENTS

2. "The Railroad Era, Business Competition and the Public Interest" (See Teacher Resources).
4. "Money Management, Children's Spending"
5. "Money Management for Young度过ers"
6. "Money Management, Your Budget"
7. "Money Management, Your Shopping Dollar"

Nos. 4-7 available from: Household Finance Corporation
Prudential Plaza
Chicago, Illinois 60601

VII. TEACHER SOURCES

1. Basic Economics by Charles Edmonds (8th 110, $7.75).


VII. TEACHER SOURCES (cont.)


APPENDIX I

Workshop Proposal Questionnaire Results
In an earlier meeting you were given a list of responses to the workshop's proposal and asked to indicate whether you would strongly agree (SA), agree (A), disagree (D), or strongly disagree (SD) with each statement. The results have been tabulated and beside each statement is a percentage which reflects the response pattern of the class to the individual statements. After you have examined the results a class discussion will be conducted with the intention of answering questions and resolving problems concerning the workshop's proposed method of preparing you to teach applied economics.

<table>
<thead>
<tr>
<th>Statement</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. This proposal provides teachers with worthwhile knowledge from the experience of experts in various fields of work.</td>
<td>21%</td>
<td>79%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2. Community resources from the private economic sector provide an awareness of objectives that need to be developed at the middle school level.</td>
<td>14%</td>
<td>86%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>3. This proposal provides too much time for the presentation of community views, leaving less time for teachers to discover usable materials.</td>
<td>7%</td>
<td>7%</td>
<td>86%</td>
<td>0%</td>
</tr>
<tr>
<td>4. The seminars provide a wider knowledge of those aspects which affect economics.</td>
<td>14%</td>
<td>65%</td>
<td>21%</td>
<td>0%</td>
</tr>
<tr>
<td>5. The seminars have given teachers a view of how government leaders and business leaders feel about our economic system.</td>
<td>29%</td>
<td>71%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>6. The lectures from area business people made me aware of resource people.</td>
<td>7%</td>
<td>86%</td>
<td>7%</td>
<td>0%</td>
</tr>
<tr>
<td>7. The seminars should have represented more of the groups with interest in economics.</td>
<td>0%</td>
<td>61%</td>
<td>39%</td>
<td>0%</td>
</tr>
<tr>
<td>8. A one week lecture session on basic economics would be helpful.</td>
<td>50%</td>
<td>43%</td>
<td>7%</td>
<td>0%</td>
</tr>
<tr>
<td>9. This proposal provides the teacher as well as the student, background information needed to understand our economic system.</td>
<td>7%</td>
<td>50%</td>
<td>29%</td>
<td>14%</td>
</tr>
<tr>
<td>10. The course may have been of greater benefit if it had been divided into two quarters. The first quarter a review of basic economics for the teachers and the second quarter developing curriculum for the students.</td>
<td>57%</td>
<td>36%</td>
<td>7%</td>
<td>0%</td>
</tr>
<tr>
<td>11. This proposal permits both the students and teachers to either obtain or better their knowledge of our economic system.</td>
<td>14%</td>
<td>86%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Statement</td>
<td>SA</td>
<td>A</td>
<td>D</td>
</tr>
<tr>
<td>---</td>
<td>------------------------------------------------------------------------------------------------------------------</td>
<td>----</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>12.</td>
<td>This course assumes a greater working knowledge of economics than most teachers of junior high possess.</td>
<td>71%</td>
<td>7%</td>
<td>0%</td>
</tr>
<tr>
<td>13.</td>
<td>The workshop will increase in teachers of social studies and industrial arts an awareness of students needs for understanding of free enterprise as well as methods to achieve this end.</td>
<td>86%</td>
<td>7%</td>
<td>0%</td>
</tr>
<tr>
<td>14.</td>
<td>This course provides the teacher with a chance to review material learned and forgotten years ago.</td>
<td>57%</td>
<td>29%</td>
<td>0%</td>
</tr>
<tr>
<td>15.</td>
<td>Bringing instructional materials to class to preview is a great way to decide on new materials. Catalogs often overstate the use of the materials.</td>
<td>50%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>16.</td>
<td>Reviewing instructional materials gives the classroom teacher an opportunity to view new materials available in this field.</td>
<td>43%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>17.</td>
<td>This proposal provides the teachers with the opportunity to survey economic materials designed for the classroom.</td>
<td>57%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>18.</td>
<td>This proposal will enrich the development of a program by the reviewing of needed instructional materials.</td>
<td>64%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>19.</td>
<td>Many of the existing instructional materials in economics can be incorporated into the unit that will be developed in this workshop.</td>
<td>79%</td>
<td>14%</td>
<td>0%</td>
</tr>
<tr>
<td>20.</td>
<td>Knowing what resources are available and where they can be obtained will enable teachers to be more efficient in their teaching methods.</td>
<td>71%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>21.</td>
<td>Reviewing audiovisual materials will give teachers an opportunity to identify ways to unite social studies and industrial arts.</td>
<td>56%</td>
<td>22%</td>
<td>0%</td>
</tr>
<tr>
<td>22.</td>
<td>Since our school days are busy, it is necessary that we have time to work in class.</td>
<td>43%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>23.</td>
<td>The use of class time and being able to plan together with the other members of my school will be helpful.</td>
<td>43%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>24.</td>
<td>In allowing time for new unit development, the workshop also allows time for exploring newer ways to achieve economic literacy.</td>
<td>64%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>25.</td>
<td>It would help to talk to a teacher who has actually instructed junior high students in economics. I would like to know students' reactions to such programs.</td>
<td>57%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>26.</td>
<td>Feedback from others who have had previous knowledge in writing units in economic education is needed.</td>
<td>57%</td>
<td>14%</td>
<td>0%</td>
</tr>
</tbody>
</table>
27. I feel it is a positive advantage to teach about economics. However, I feel we must decide what is important to teach. I do not feel qualified to do this at this time.  
28. The in-class time will probably be insufficient for the development of an instructional unit.  
29. This proposal allows teachers an opportunity to participate in curriculum development.  
30. Trying to write a unit covering 3 grade levels may be difficult because of the wide range of ages and academic abilities.  
31. This proposal allows for the preparation of a unit of study which can be readily utilized and/or adapted to many educational situations.  
32. There is an inability of program designers to really determine if a unit of study is workable, and in determining the utilization of the unit.  
33. This project gives the teacher opportunity to participate in curriculum development, but limits the type of curriculum that can be developed.  
34. This proposal assumes that a long project will be more effective than a series of short problems solved by groups.  
35. This proposal enables teachers to work cooperatively in formulating a workable and meaningful program for the students.  
36. The program provides a logical approach to the development of instructional materials.  
37. Each individual team will be able to develop a program to the needs of their particular school situation.  
38. Group discussions are useful to find out how other schools may lead into this program.  
39. The proposal as stated allows for sharing of ideas among participants-not only in team work, but also in group presentations.  
40. Through the vehicle of group presentation, all of us will be able to benefit from the work of the entire class.  
41. There may be problems of scheduling classes with industrial arts and social studies.  
42. Integration of the two subject areas allows the student to correlate a common issue.
43. This program allows for the social studies department and industrial arts classes to interact. There is usually little contact between these two departments. 57% 43% 0% 0%

44. This proposal provides for the integration of subject areas which shows relationships of the subjects and of daily living. 21% 79% 0% 0%

45. Teacher cooperation throughout school may be difficult, since the unit may cause "waves" in the curriculum. 93% 0% 0% 0%

46. The proposal permits flexibility in integration of subject areas and the choice of methods and materials to arrive at objectives set forth in each curriculum. 21% 86% 7% 0%

47. This forces a cooperation among teachers of two different approaches to subject matter. 23% 69% 8% 0%

48. Interaction between social studies and industrial arts curriculums should help to build a workable model of the free enterprise system. 0% 93% 7% 0%

49. Problems of coordinating a program within the junior high setting have not been clarified. 21% 50% 29% 0%

50. Students will have an opportunity to develop ideas and acquire information and apply what they have learned through integrating social studies and industrial arts. 8% 92% 0% 0%

51. Integrating the unit across grade levels might be a problem. 21% 50% 21% 8%

52. Funding may be difficult for additional materials to meet the needs of the developed program. 36% 28% 36% 0%

53. The course provides funds with which the classroom teacher can purchase classroom materials. 36% 64% 0% 0%

54. This proposal provides for necessary money to purchase needed materials. 36% 50% 7% 7%

55. The method of funding and implementing a new program could raise problems in lieu of monetary shortages within the school. 36% 43% 21% 0%

56. The presentation of projects to the class is an advantage. Sharing ideas can be of benefit to all. 21% 79% 0% 0%

57. Objective evaluation of the developed unit will afford the team planners to cite weaknesses and to strengthen the unit. 7% 93% 0% 0%

58. Presentation of units at the end of the course allows for a sharing of ideas between teachers in different schools. 14% 86% 0% 0%
59. This proposal provides for no evaluation after the program has been initiated with students................................. 21% 36% 43% 0%

60. Need a follow up evaluation to find out successful programs as well as failures................................. 21% 79% 0% 0%

61. Long term effects on students are difficult if not impossible to determine, but, they should be considered ... 29% 71% 0% 0%

62. The instructional materials available on a loan basis being held at the University may make it difficult for some teachers to secure them................................. 22% 64% 14% 0%

63. The instruction resulting from the units created in the workshop should provide students grassroots information on how our "free enterprise" system operates................................. 14% 86% 0% 0%

64. The direction and objectives of the workshop were not sufficiently clear prior to enrollment................................. 29% 43% 14% 14%

65. It would be helpful to become better acquainted with the other members in the workshop................................. 7% 64% 29% 0%

66. A disadvantage to this proposal is its experimental nature with no textbook for the student................................. 7% 29% 57% 7%