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ABSTRACT

As part of the Phase II report of the Illinois Occupational Curriculum Project, this document focuses on the structuring of a model for occupational curriculum development and evaluation. Thus, a questionnaire was developed to identify: (1) the tasks and various activities within the institutions, (2) some of the key curriculum changes that have been made and how these changes have progressed from the initial effort to final adoption, and (3) the decisions made, how they were made, and who was involved in them. Conclusions based on data collected and analyzed included: (1) More junior and community colleges should complete a manpower survey, (2) Job analysis surveys should be completed or utilized in occupational program planning, (3) One of the primary methods used in the development of occupational programs and courses was the reviewing of programs of other institutions, and (4) Most of the decisions pertaining to occupational program identification and development were made by the occupational dean. Upon completion of Phase II of this project, Phase III is proposed for pilot testing the model. Related documents are available as VT 014 775 and VT 014 776 in this issue, and ED 050 270. (JS)

AN INVESTIGATION OF DECISION-MAKING PRACTICES IN ILLINOIS JUNIOR COLLEGES WITH IMPLICATIONS TOWARD A SYSTEMS APPROACH TO CURRICULUM DEVELOPMENT AND EVALUATION IN OCCUPATIONAL EDUCATION

As Part of the Phase II Report

"The Development of Systems Models for Decision-Making in Occupational Curriculum Development and Evaluation"

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STATE OF ILLINOIS
BOARD OF VOCATIONAL EDUCATION AND REHABILITATION
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Dwight Davis

Joseph Borgen

PREFACE

This report focuses on one area of emphasis undertaken by the Illinois Occupational Curriculum Project in developing a model for occupational curriculum development and evaluation. It is only a part of the total Phase II report on the research and development project entitled The Illinois Occupational Curriculum Project, heretofore referred to as the Research and Development Project in Occupational Education entitled "The Development of Process Models for Decision-Making in Curriculum Development and Evaluation." This project is currently in progress at Joliet Junior College, Joliet, Illinois, with present efforts directed toward the initial development of a systems model designed to assist administrators in decision-making related to the development and evaluation of occupational education programs. The project is funded by the State Board of Vocational Education and Rehabilitation, Division of Vocational and Technical Education, Research and Development Unit, State of Illinois.

Purpose of the Project

This project is based on the assumption that more systematic means must be developed to assist curriculum planners in the development of new programs and the continuous evaluation of on-going programs in occupational education.

The following questions serve as the basis for the project research and development activities:

1. Can generalizable systems models be developed to provide curriculum planners with a systematic decision-making procedure for program identification, development, implementation, and evaluation?
2. Is it possible to develop guidelines for the identification and utilization of resources and evaluative criteria in accomplishing the activities specified in the systems model?

Objectives of the Project

The following are the overall project objectives:

1. To develop systems models for curriculum development and evaluation in occupational education.
2. To develop guidelines for the utilization and application of the systems models.
3. To test the applicability and usefulness of the systems models in a pilot situation at selected institutions offering occupational programs.
4. To develop a plan for dissemination and in-service training for curriculum planners in the utilization of the systems models.
5. To promote research in related areas.

Overview of the Total Project

The project is divided into four distinct phases. These are:

Phase I: Project Planning

Phase II: Initial Systems Model Development and Preliminary Evaluation

Phase III: Pilot Testing of the Model

Phase IV: In-depth Evaluation of the Project and Dissemination of the Findings

Phase I focused on a review of the literature, while Phase II involved the comparison and evaluation of systems, models, and decision-making and the development of a systems model for curriculum development and evaluation in occupational education. Phase III and Phase IV are proposed for further development, implementation, and evaluation of the model.

Phase I: Project Planning

Phase I was initiated March 1, 1970, with a grant of $24,550.00 from the State Board of Vocational Education and Rehabilitation. This grant combined with $6,916.00 in local funds providing a total budget of $31,466.00 to conduct the project through June 30, 1970.

The project planning activities centered around three major areas of concern identified as being particularly important to the establishment of a firm basis for the project:

1. Review of the literature on models for curriculum development and evaluation.
2. Review of current thinking on the effects of planned curriculum on social and economic conditions.
3. Study of potential consultants and resources agencies qualified to assist in subsequent phases of the project.

Phase II: Initial Systems Model Development And Preliminary Evaluation

Phase II was initiated July 1, 1970, with a grant of $67,178.00 from the State Board of Vocational Education and Rehabilitation. This

grant combined with $16,950.00 in local funds providing a total budget of $84,128.00 to conduct the project through June 30, 1971.

This phase of the project focused on research and development activities in four major areas of concern directed toward the initial development and validation of a systems model for curriculum development and evaluation in occupational education. The following topics served as the focus of investigative activities for Phase II of the project:

1. Investigation of Management Systems
2. Investigation of Curriculum Models
3. Identification of Decision-making Practices in Occupational Education
4. Initial Model Development and Testing

Developmental efforts were executed to coordinate the findings from the aforementioned areas of investigation with the objective of developing an initial systems model for decision-making in curriculum development and evaluation.

Future Phases of the Project

Two additional phases of this project are planned. Upon completion of Phase II, Phase III is proposed for pilot testing the model. This pilot test will provide orientation workshops for the application and use of the model, field testing of the model under actual conditions, and implementation of the model in selected institutions. Phase IV will provide for an in-depth evaluation of the project and the dissemination of findings to other institutions for their use in developing and evaluating occupational curricula.

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CHAPTER I

INTRODUCTION

Junior colleges and junior college occupational programs are expanding at a rapid rate in the State of Illinois and also in the United States. Each year hundreds of new occupational programs are begun in Illinois community and junior colleges, many of which may have been established with "seat-of-the-pants" decisions. The rapid proliferation of programs has increased the press on the occupational dean or director for his time with no relief being provided to help him in an efficient and logical way to make better decisions. One of the areas of greatest need is a framework to aid decision-makers in making good decisions. Many of the past models or systems for helping decision-makers were very vague and/or of poor quality. Many unsound decisions were the inevitable result.

The development and implementation of a systems model for curriculum development and evaluation in occupational education at the junior college level is a difficult yet necessary task.

Need for the Study

In order to develop a curriculum systems model which reflected the state of the art of decision makers in the field, it was necessary to conduct a study to identify those people making decisions, the different decisions made, and the resources utilized in making the decision.

Objectives of the Study

1. To identify curriculum decision-making processes in junior colleges in Illinois at the institutional, program, and course level. (decisions made)
2. To identify those people in junior colleges who make curriculum decisions. (who?) (how?)
3. To identify from the literature current tasks and practices used in occupational education curriculum development and evaluation.
4. To identify the philosophy, rationale, and organizational structure of the development and administration of junior college occupational education curriculums.
5. To identify the extent that junior college personnel are doing or following the tasks and practices listed in "3."
6. To prepare a report on those tasks, practices, curriculum decisions, and factors considered essential in developing and evaluating occupational education curriculums.
7. To incorporate the essential factors into the curriculum and systems model.
8. To identify and compare the stages of decision-making and to develop a model for decision-making.

Assumptions

1. That the respondents accurately reported information pertaining to occupational program development and evaluation to the interviewer.
2. That the instrument was broad enough in scope to obtain the essential aspects of occupational program development and evaluation.

3. That the sample population of programs and respondents was a valid sample.
4. That the information solicited from the community and junior college personnel will be useful in the designing of a systems approach to occupational curriculum development and evaluation.

Limitations

1. The study was limited to junior and community colleges in Illinois.
2. The study was limited to eight occupational program areas and six programs per area.
3. The study was limited to responses from deans, division and/or department chairmen, program directors, and selected staff.

Definition of Terms

1. Decision -- The act or process of deciding by making a judgment.
2. Decision-making -- A sequential process by which an evaluation of the alternative lines of conduct is made.
3. Decision-making Practices -- Those activities and resources completed and/or utilized by administrators or junior college personnel in making a decision concerning occupational program development and evaluation.
4. Program and Course Development Phase -- That phase of occupational program development which deals with the development of program and course objectives, program and course descriptions, etc.
5. Program Evaluation Phase -- That phase of the program which deals with procedures and activities completed in evaluating occupational programs and courses.

6. Program Identification Phase -- That phase of the program which occurs before specific courses are identified. It deals with the identification of manpower needs, student interests, community support, resources available, etc.

7. Jury of Experts -- A competent group of people recognized by others in their respective fields as being authorities. The jury of experts validated the instruments used for the survey.

8. Occupational Education -- Refers to those educational programs designed to prepare students for gainful employment upon completion of a specified program.

C H A P T E R II

DECISION-MAKING IN EDUCATION: A REVIEW OF LITERATURE

One of the areas of greatest need is a framework to aid decision-makers in making good decisions. Many of the past models or systems for helping decision-makers was very vague and of poor quality. Many unsound decisions were the inevitable result.

It was felt that before one could properly address himself to decision-making, he should be cognizant of the setting of the administrator and the tasks and processes of administration. Therefore, the first part of Chapter II contains a brief overview of these items. This overview logically leads the reader into decision-making and the decision-making models and systems which are covered in the latter part of the chapter.

Purpose of the Chapter

The purposes are:

1. to show the administrator in his setting;
2. to identify the tasks and processes of administration;
3. to identify the classification schemes used in determining levels of decision-making;
4. to identify the limits of decision-making;
5. to identify and compare the stages of decision-making;
6. to develop an ideal model for decision-making; and
7. to develop the framework necessary for the construction of a decision-making instrument.

The Administrator and His Setting

Administration may be conceived structurally as a hierarchy of subordinate-superordinate relationships within a social system. Pictorially, the administrator and his setting could be shown as:

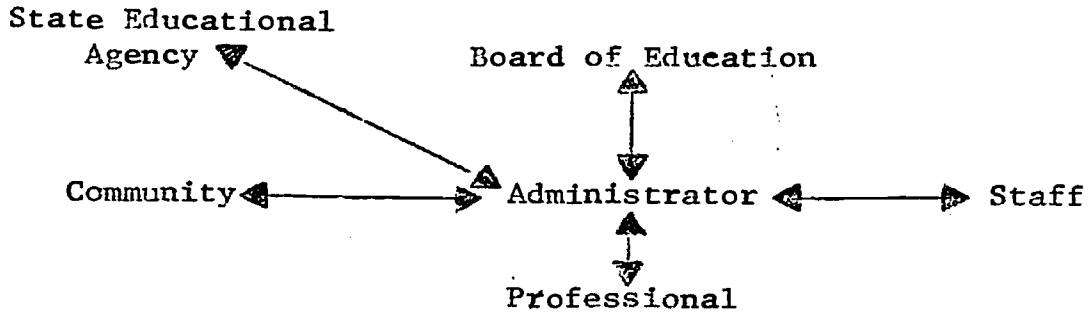

Figure I: The Administrator and His Setting

Within this setting there are specific factors of influences which affect the decision-making process of the administrator. These are:

1. Demographic
2. Financial
3. Technological
4. Socio-political
5. Psychological

The administrator has different roles to perform in carrying out his job. For instance, the president of a junior or community college must be superordinate to the staff and represent the staff to the board of education.

There are many different roles or levels of administrators within a junior college. These may be: (1) President; (2) Vice-President; (3) Deans; (4) Department Heads; etc. These roles are occupied by real individuals and no two are alike. In order for the staff to be happy and the administrators to be happy, the role perceived by the staff and the community must be the same as the role perceived by the administrators or else there will be undue discomfort for both factions.

An administrator is constantly assessing decisions in terms of various expectations by his constituents. Getsels (41:156) clearly depicts this in his general model which shows the nomothetic and idiographic dimensions of social behavior to be:

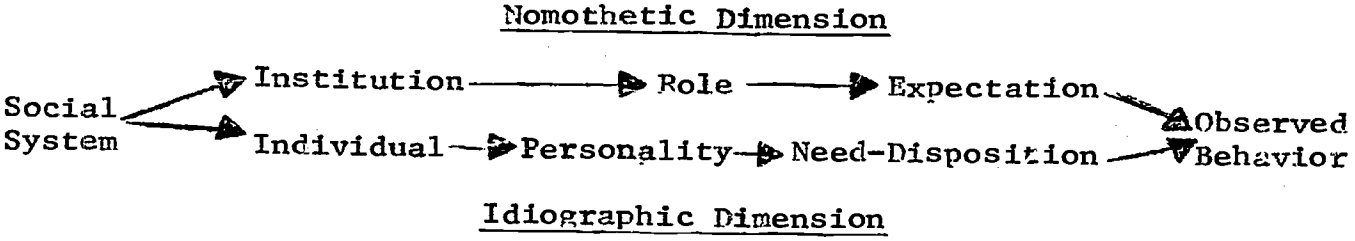

Figure 2: General Model showing the Nomothetic and Idiographic Dimensions of Social Behavior

The nomothetic (institutional) dimension is determined by a series of reference groups, such as the board of education, faculty, the public, fellow-administrators, etc. The nomothetic dimension of the model shows that the social system is defined by its institution, each institution by its constituent roles, each role by the expectations attached to it followed by some observed behavior. The idiographic (individual) dimension of the model shows that an individual operating within a social system has a unique personality, need-disposition, and depicts some kind of observed behavior.

There are several troublesome facets of the Getsels model: (1) insufficient attention is given to the problem of the dynamics of the interaction between these organizationally defined expectations and the personally determined needs; (2) the model does not agree with decision-making models; and (3) it omits the processes of administration.

The behavior of an individual is a function of role and personality. The interplay between role and personality is a behavioral act and this interplay differs with the institutional setting. The proportion of the role and personality factors determining behavior of an individual varies with the specific act, the specific role, and the specific personality involved. Getsels (41:158) shows this in his model on role and personality (See Figure 3).

A given behavioral act may be conceived as occurring at a position represented by the dotted lines through the role and personality possibilities represented by the rectangle model. The left hand side of the model shows that the proportion of the act dictated by the consideration of role-expectations is relatively large, whereas the proportion of the act dictated by considerations of personality is relatively small. At the right hand side of the model, we see just the reverse where considerations of personality are greater than those of role-expectation. In any given setting, administration always deals with proportions of both of these components.

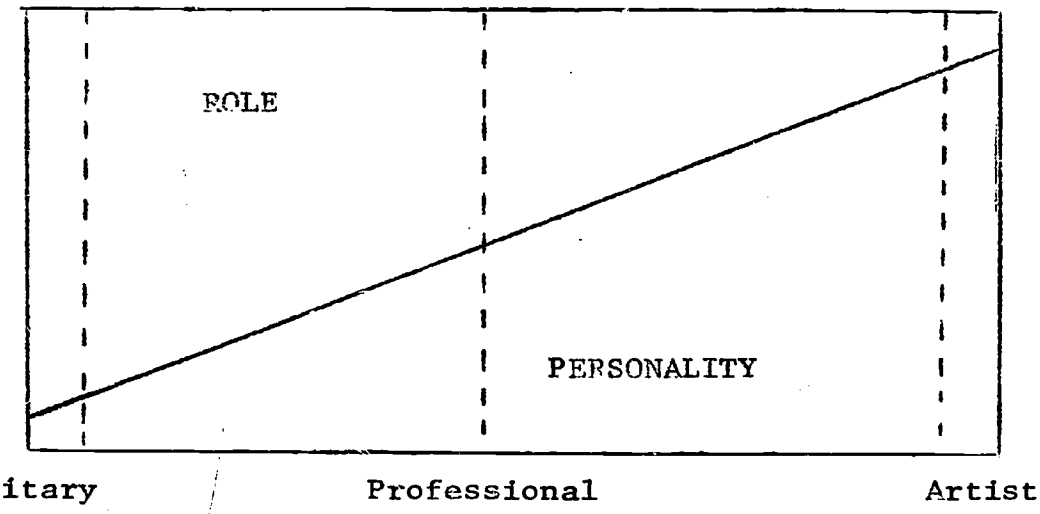

Figure 3: The Interplay Between Role and Personality In A Behavioral Act

Administrative relationships always function at two levels of interaction; i.e., individual and institution. In addition, there are three types of conflict in administrative settings: role-personality, role, and personality.

Summary

1. Administration deals with social behavior in a hierarchial setting.
2. These models are useful for stimulating and guiding what seems to be a fruitful line of inquiry into the administrative process.

Tasks and Processes of Administration

Tasks and processes are ways of looking at administration. The tasks are what has to be done. The processes are what the administrator does every day. An administrator is a man with values who perceives tasks. This man has skills and abilities. He must ascribe priority to tasks. This can best be shown by the following model:

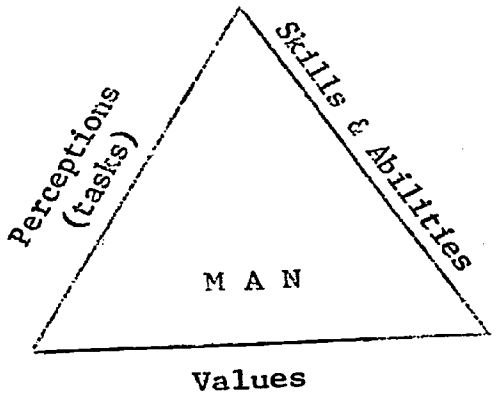

Figure 4: Model of "The Man" Administrator

The administrative tasks or operational areas of administration may be grouped into categories. These are: (1) organization and structure; (2) finance and business management; (3) student personnel; (4) curriculum and instruction; (5) staff personnel; (6) school plant or physical facilities; (7) transportation; and (8) school and community relations (19:90-91). There are many specific tasks to be performed in each of these areas and some of these tasks may be delegated to different administrators within a junior or community college system. In addition, curriculum committees, advisory committees, and others assist with the tasks.

The processes of administration are the same; the tasks are not. The following can be said of an administrator: (1) an administrator strongly affects policy and effects policy; (2) the administrator is a goal setter; and (3) the administrator develops some kind of order in getting a job done. Administration as a process refers to the way in which an organization makes and implements decisions. Some writers call this approach the decision-making process.

Campbell (19:137) states that Simon amplifies the idea of the concept of administrative processes as follows:

> "It should be noted that the administrative processes are decisional processes; they consist in segregating certain elements in the decisions of members of the organization, and establishing regular organizational procedures to select and determine these elements and to communicate them to the members concerned. If the task of the group is to build a ship, a design for the ship is drawn and adopted by the organization, and this design limits and guides the activities of persons who actually construct the ship.
>
> The organization, then, takes from the individual some of his decisional autonomy, and substitutes for it an organization decision-making process. The decisions which the organization makes for the individual ordinarily (1) specify his function, that is, the general scope and nature of his duties; (2) allocate authority, that is, determine who in the organization is to have power to make further decisions for the individual; and (3) set such other limits to his choice as are needed to co-ordinate the activities of several individuals in the organization" (89)

In his explanation of decision processes, Simon helps us see that the decision-making with which we are concerned is not individual but rather organizational decision-making. The administrator occupies a key spot in the process.

Litchfield (62:3-29) in discussing administrative theory set forth major and minor propositions having to do with the administrative process. These propositions show a flow from decision-making, to program formulation, to communication and motivation about a program and involve the checking and controlling standards of performance and continual reappraisal. Litchfield's theory is as follows:

First major proposition: The administrative process is a cycle of action which includes the following specific activities:

A. Decision making
B. Programming
C. Communicating
D. Controlling
E. Reappraising

Minor proposition: Decision-making may be rational, deliberative discretionary, purposive, or it may be irrational, habitual, obligatory, random, or any combination thereof. In its rational, deliberative, discretionary, and purposive form, it is performed by means of the following subactivities:

a. Definition of the issue
b. Analysis of the existing situation
c. Calculation and delineation of alternatives
d. Deliberation
e. Choice

Minor proposition: Decisions become guides to action after they have been interpreted in the form of specific programs.

Minor proposition: The effectiveness of a programmed decision will vary with the extent to which it is communicated to those of whom action is required.

Minor proposition: Action required by a programmed and communicated decision is more nearly assured if standards of performance are established and enforced.

Minor proposition: Decisions are based on facts, assumptions, and values which are subject to change. To retain their validity, decisions must therefore be reviewed and revised as rapidly as change occurs.

The administrative process, then, may be defined as the way by which an organization makes decisions and takes actions to achieve its goals. (19:138).

The setting of goals and the development of some kind of order in getting the job done is a function of the administrator or manager. Cook (23:5) states that:

> Basically, management can be considered as a process which involves the functions of planning, organizing, directing,

> and controlling the personnel and other resources needed to accomplish an objective or goal. It is generally recognized that a manger's principal role is to make decisions with regard to each of the functions noted above.

Many techniques or systems have been developed in order to make the administrator's task easier or to increase the level of decision-making or to increase the accuracy of decision-making. These models, techniques, or systems are reviewed in the following sections of the chapter.

Classification Schemes Used in Determining Levels of Decision-Making

Webster's Seventh New Collegiate Dictionary (117:214) defines decision as "the act or process of deciding, especially by giving judgment." Miller and Starr (66:22) define a decision as ". . . a conclusion or termination of a process." However, this is a very narrow definition when one thinks in terms of the first definition. Rogers (80:78) provides a broader definition by stating:

> Decision-making is the process by which an evaluation of the meaning and consequences of alternative lines of conduct is made. Johnson and Haver (1953, p. 8)* listed the following steps in decision-making: (1) observing the problem; (2) making an analysis of it; (3) deciding the available courses of action; (4) taking one course; and (5) accepting the consequences of the decision.
>
> Decision-making is thus a process that may be divided into a sequence of stages with a different type of activity occurring during each stage.

Dill (31:200) points out that the task of deciding is as common as the task of doing at each level of the administrative organization.

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*Glenn L. Johnson and Cecil B. Haver, Decision-Making Principles in Farm Management, Lexington, Kentucky: Agricultural Experiment Station Bulletin 593, 1953 reported in Rogers (81:78).

Griffiths (46:122) and Dill (31:200) both state that directing and controlling the decision-making process are central functions of administration. They both feel that an understanding of the decision-making process in a particular enterprise is the key to its organizational structure.

An essential difference in the decision-making approach is that it highlights the goals, tasks, and choices that determine activities in organizations. What administrators do and how they allocate their time is a product of what they want to achieve, and how they decide to proceed.

There are many different classification schemes used to classify decisions and the decision-making processes. Levy (61:30) proposed or identified a classification scheme to assist decision-makers in arriving at realistic and thoughtful decisions. He indicated that decisions need not be the result of rational and scientific procedures to be adequate. His scheme is to distinguish between goals and means. Levy believes this to be essential for effective decision-making since they are at times both implicit in a decision and at times distinguishing characteristics of different decisions. Moreover, the distinction reflects numerous intangible but powerful influences which perceptibly affect choice. Therefore, Levy breaks decisions into two major classes, goals, and means. He further classifies each of these classes as general or social, level of affectation, and as personal or social in focus of interest. His classification system is shown in Figure 5.

Type of Issue	Primary Personal Interest	Personal Interest With Social Effects	Primary Social Interest	Social Interest With Personal Effects
General Level				
Goals				
Means				
Specific Level				
Goals				
Means				

Figure 5. Levy's Decision-Classification Scheme (61:30)

Rogers (83:10) uses the following scheme in classifying innovative decisions:

1. Optional Decision -- individual decisions influenced by norms and are made regardless of the decisions of other individuals in the social system.

2. Contingent Decisions -- based upon decisions of others, an individual can adopt or reject only after others have made the decision to adopt or reject.

3. Collective Decisions -- individuals in the social system agree to adopt or reject by consensus and all must conform to a system's decision once it is made.

4. Authority Decisions -- those forced upon an individual by someone in a superordinate position.

Diesing (29) has identified five types of decisions and rationality. These are:

1. Technical -- choosing means which are adopted to the desired ends.

2. Legal -- applying a system of rules to prevent or settle disputes.

3. Economic -- transferring values between economic units and transferring values to economic ends within an economic unit (exchange and allocation).

4. Social -- making roles internally consistent, making pairs of roles fit together without conflict, making the sequence of roles which a person is expected to take action throughout his life contain no sharp discontinuities, making the social system compatible with the non-social environment, and developing a value system which reinforces the structure of roles.

5. Political -- organizing thought itself: the rationalizing of decision-making structures.

Salveson (84) identified four kinds of decisions. These are:

1. Understanding -- decisions as to the relevant and useful concepts of the real world.

2. Recognition -- assertion or denial that a particular object or set of objects belongs to one of the sets defined in decision of understanding.

3. Action -- decisions that relate to changes in the state of the universe by selecting courses of action.

4. Enterprise -- decisions which bound decisions of action.

Conrath (20:44-45) constructed a model of superorganizational classification decision system. This system is: institutional and policy.

1. Institutional -- perceived by the decision-maker to be of a repetitive nature and to have an irrevocable constraint time horizon of no larger than a single decision time period.

2. Policy -- perceived by the decision-maker to be of a "one shot" nature and/or to establish irrevocable constraints for a time horizon greater than the one usual for periodic decisions of the same type.

Nelson (68:10-12) combined the classification systems of many of the other authors of decision models and systems and developed the following three-level model of decision-making. These are:

1. Technical -- these are problems of methods, procedures, processes or techniques necessary to the duties of the superintendent, president, or staff.

2. Human -- these are problems in working with people and the process of creating a creative effort within the staff.

3. Conceptual -- this is the ability to see the enterprise as a whole; a man that can look at the whole task or picture and see what to do.

Ott (73:47-48) in his review of literature on the decision process has identified the different authors who identified the different steps common to all decisions. His findings are as follows:

> Wilson and Alexis (122:151) have identified at least six elements common to all decisions. They are:
>
> "1. The state of nature
> 2. The decision-maker
> 3. The goals or ends to be served
> 4. The relevant alternatives and the set of actions from which a choice will be made
> 5. A relation which produces an ordering of alternatives in some arrangement
> 6. The choice itself, the selection of one or some combination of alternatives"
>
> Wilson and Alexis indicate further that in terms of the six elements common to all decision models, the ideal man makes a choice on the basis of:
>
> "1. A known set of relevant alternatives with corresponding outcomes
> 2. An established rule or relation which produces an ordering of the alternatives
> 3. Maximizing something such as money rewards, income, physical goods, or some form of utility."
>
> Vris (111) has identified five factors that should be considered in making a decision. These conditions are:
>
> "1. Situation Assessment -- size up the decision situation by digging into the facts affecting it.
> 2. Self-Analysis -- determine your individual slants and biases before deciding.
> 3. Adequacy of alternatives -- be sure the scope and magnitude of your decision fit the situation.
> 4. Time -- don't rush your decision when there is additional need and time for research of facts.
> 5. Control -- a firm unalterable decision is fine, but use a step-by-step building block control when possible."

Four broad classes of decision-making processes have been identified by Dahl and Lindblom (26:22-23):

> "1. The democratic -- leaders are heavily influenced by non-leaders through such devices as nomination and election.
> 2. Hierarchical -- leaders are heavily influenced by the structure of the hierarchy itself.
> 3. Bargaining -- leaders to some degree interdependent with each other exercise reciprocal controls over each other.
> 4. The pricing system."

Limits of Decision-Making

Griffiths (46:127) states that:

> Decision-making is a sequential process, one tied to another. An understanding of the decision-making process in a particular enterprise is the key to its organizational structure.

He further states (46:140): "All decision-makers operate within a set of limits. Limitations on decision-making power improves the caliber of decisions made." The following limits on decision-making were listed by Griffiths:

1. Definition of Purpose -- prevents the making of certain decisions; a function of top management.
2. Criterion of Rationality -- select individuals who accept the goals of the enterprise; give intensive indoctrination and in-service.
3. Conditions of Employment -- employed for a particular position; this limits the decisions he can make.
4. Lines of Formal Authority -- individuals know who will make those decisions which affect him directly.
5. Relevant Information Provided -- provide information to others who help make decisions.
6. Time Limits -- setting a time limit is a method of forcing action on the part of subordinates.

Griffiths also states that the effectiveness of an administrator of an institution is inversely proportional to the number of decisions he must make.

Identification and Comparison of the Decision-Making Stages

A framework with common understandings is necessary for thoughtful decision-making. However, such a framework is probably not presently available. Ott (73:3-4) agrees with the above and states:

> One of the areas of greatest need is a framework to aid decision-makers in their recognition of the types of decisions they need to make. Other common shortcomings of decision technology are failure to search for a range of alternative courses of action in the process of making a decision . . .; failure to establish explicit criteria for judging alternative courses of action. . .; and basing a decision on what this writer believes to be a faulty premise . . . .

Many authors have developed decision-making systems and models. Some of the systems and models are very simple while others are much more complex and involved. A review of these systems and models was made; however, rather than list page after page of the different systems and models, it was felt that a better comparison could be shown by developing a matrix table listing the stages of decision-making of the different systems and models and showing which systems and models of the different authors contain the different elements or stages of decision-making. Therefore, Table 2.1 was constructed.

Table 2.1 shows the different steps of decision-making of twenty-one different authors. In reviewing the table from left to right, one can see that failure to establish objectives and to specify criteria was one of the most common weaknesses of the decision processes of the first authors listed. As a result, the models listed by the authors on the left-hand side of the chart had to base their decisions on collected data or material and choose alternatives without having any specific criteria within which

TABLE 2.1

A COMPARISON OF THE ELEMENTS OF THE DIFFERENT DECISION-MAKING MODELS

Stages of Decision-Making	Authors of Models																				
	Gore	Simon	Kowin	Drucker	Litchfield	Porter	Whiteside	Brim, et.al.	Dewey	Osborne	Symonds	Rogers	Griffiths	Lasswell	Hill	Smith	Kepner & Tregoe	Calkins	Gulatt	Osborne	NICHE
1. Establish objectives.															X	X	X	X	X	X	X
2. Establish relative importance of objectives.															X		X	X		X	X
3. Recognize and define the problem.	X		X	X	X	X	X	X	X	X		X	X	X		X		X		X	
4. Identify the causes of the problem (collect facts).				X	X		X	X		X	X		X		X				X	X	
5. Develop optional or alternative solutions.	X	X		X	X	X	X	X	X	X			X		X	X	X	X	X	X	X
6. Establish criteria or standards by which the solutions will be evaluated or judged as acceptable and adequate to the need.													X		X	X			X	X	
7. Collect data.			X										X						X	X	X
8. Evaluate alternatives: A. against the objectives or evaluation criteria															X	X	X	X	X	X	X
B. base decision on collected material.	X	X			X	X	X	X	X		X	X	X	X							
9. Choose the alternative: A. Best able to achieve all the objectives as the tentative decision															X	X	X	X	X	X	X
B. Choose alternatives.			X	X	X		X	X	X		X			X							
10. Explore the tentative decision for future possible adverse consequences.		X	X								X				X		X		X	X	
11. Implement the final decision and control possible adverse consequences by taking other preventative actions.	X					X		X	X			X	X		X	X	X		X	X	
12. Incubation - letting up - to invite illumination.										X											
13. Synthesis - putting the pieces together.										X											
14. Specification of possible outcomes.																			X		X
15. Evaluate the results of the process.			X					X	X	X			X	X	X	X			X	X	
16. Make changes in the problem-solving plan.			X					X								X			X	X	

to choose these particular alternatives. In addition, the models on the left-hand side of the chart failed to evaluate the results of the decision process.

Another common defect in conceptualizations of the decision process is a lack of search for alternatives. Three examples of these types of models are those of Symonds (104:125-129), Rogers (82:18), and Lasswell (60), as shown in the middle of the table. The models by Griffiths (46:132-133) and Lasswell (60) are examples of decision models that do not explicitly call for a trial phase. The models on the right-hand side of the table from Dill (31:201) through the WICHE model (54) could be classified as relatively complete models. However, even these have some shortcomings as one can notice by analyzing the table. Two models, Gelatt (40) and WICHE (54) both ask for the specification of possible outcomes of the particular model, which was not asked for in all of the other models. This is seen as an important characteristic or contribution of a particular decision-making model.

Development of an Ideal Model for Decision-Making

After examining the stages of decision-making of the different models and systems in Table 2.1, a model for decision-making was developed which contained a compilation of the necessary elements and stages of decision-making. The model (See Figure 6) provides a decision-making system for an administrator or decision-maker to follow in the development of a new program or in making decisions on an already existing program. These steps are:

1. The specification of the possible desired outcomes.
2. From the outcomes, the decision-maker establishes the objectives for his school system or for a new occupational program. These objectives should be stated in terms of both short-term and long-term goals. The reason for establishing the desired outcomes and objectives early is that it is difficult for a decision-maker to solve a problem or to make a decision unless he has some idea of why he wants to solve it, or what an ideal outcome would be.
3. The establishment of the relative importance of the objectives based upon the desired outcomes is the third step. The decision-maker will have no way to accurately judge the success of his operation if he does not clearly understand his objectives.
4. The fourth step is the definition of the problem. The problem must be clarified and clearly defined.
5. The next step is the identification of the possible causes of the problem. By identifying possible causes, the decision-maker will be helping himself complete the next step which is the development of solutions.
6. The sixth step is the development of optional or alternative solutions. Such alternative courses of action should be formulated with a view toward satisfying the predetermined objectives and goals.
7. The seventh step is the establishment of standards or criteria by which the solutions will be evaluated or judged as acceptable and adequate. Two commonly accepted standards are contribution to the objectives and costs.

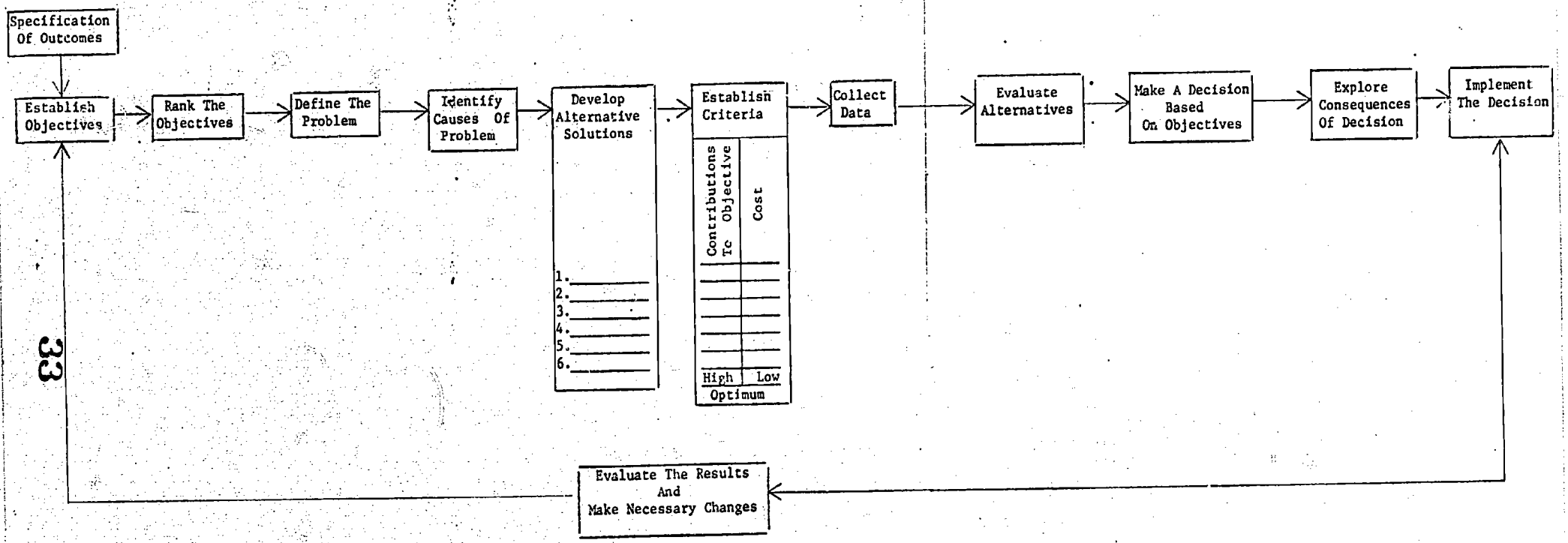


Figure 6: Decision-Making Model

8. After the alternative actions have been identified and the criteria or standards established, information must be gathered relative to the consequences of the various alternative. The gathering of such information requires not only a data system but an integrated management information system. A management information system collects and presents data which allows the decision-maker to compare the consequences of alternative actions. Usually the alternative actions will be limited by the scarcity of resources: that is, dollars, people, etc. Therefore, much of the information supplied by a management information system will be associated with resources required for conducting various activities. (54:2-3) The facts and data gathered should be verifiable and agreed-upon data. These facts should be backed up by some evidence to which all can agree. Many decision-makers err when they do not treat facts objectively. They try to gather other things such as opinions, biases, hunches, or make conclusions as if they were facts. This step could be viewed as a search activity knowing full well that various alternatives exist but are not obvious to the decision-maker. Additional possible alternatives may be revealed during the search.
9. The ninth step is the actual evaluation of the alternatives. It is based upon the collected data.
10. The tenth step and sometimes most difficult aspect of decision-making involves selection of those alternative actions which are most likely to optimize the organization's function as identified

by the objectives. Invariably, compromise is involved in such selection. (Optimize refers to the search for a middle ground which will allow the institution to operate in such a way that the greatest number of objectives are served to the highest degree possible.) As shown in the model, it should be one which contributes highly to the objectives and has a low cost.

11. The eleventh step is the exploration of the tentative decision for future possible adverse consequences. If the decision was to establish a chemical technology program, the decision-maker should ask himself: "What if I buy all this expensive equipment and I am unable to recruit students?
12. The twelfth step is to implement the final decision and to control the possible adverse consequences by taking other preventative actions. The use of advisory committees and key personnel in a community and the wide use of public relations is one way to protect the decision-maker in the establishment of a new but controversial program.
13. The final step is the evaluation of results and the making of necessary changes in the program or plan.

The model, as you can see, analyzes the data in the form of a payoff matrix. The matrix usually contains various options and criteria for choosing options. Two simple example uses of the model showing only the payoff matrix are:

PROBLEM: To identify whom to interview and the type of interview form to use for the survey.

OBJECTIVE: To identify the personnel to interview and the best type of form to use. Constraints -- time and money, and probability of cooperation.

Various Options	Criteria for Choosing Option				
	Contribution To Objective	Cost	Feasibility (will it work; can it be done)	Time Constraints	Probability Of People Cooperating
1. Interview all personnel--long form	5	5	3	5	3
2. Interview key personnel--long form	4	4	4	5	3
3. Interview all personnel-- short form	4	5	4	5	4
4. Interview key personnel--short form	4	4	4	3	5

Scale: 5 = High; 4 = Medium; 3 = Low; 2 = Uncertain.

After evaluating the alternatives, based upon the contribution to the objective and the constraints, the best option was number four. It had the highest probability of success at the lower cost and contributed fairly high toward the objective.

Another example would be the development of a fire science curriculum at Central Community College in the Program Development Phase:

PROBLEM: A survey showed a need for a fire science program. The problem was how to determine the best way to develop the curriculum.

OBJECTIVE: To develop an ideal fire science curriculum for the Hometown, Illinois community at Central Community College.

Various Options	Criteria For Choosing Option				
	Contribution To Objective	Cost	Feasibility	Time Constraints	Probability Of People Cooperating
1. Look at other junior college curriculums	4	3	4	3	
2. Look at AAJC curriculum guides	4	3	4	3	
3. Bring in Nat'l Consultants	4	5	3	5	
4. Do an Occupational Analysis	5	5	5	5	5
5. Advisory Committee Determine it	4	3	5	5	5
6. Curriculum Coordinator Determine it	4	3	5	4	

Scale: 5 = high; 4 = medium; 3 = low; 2 = uncertain; 1 = no contribution.

Since only one objective was identified and there were no constraints, the completion of the occupational analysis would be the best procedure.

Uses and Maximization Principles of a Decision Model

Decision-making can be rational or irrational and both good and poor decisions can be implemented in an efficient way. Obviously, we are concerned with decision-making as a rational matter. A decision-maker's decision will consist of the selection of one of his available strategies. The decision-making can be based upon both subjective and objective judgments. It is imperative that the decision-maker develop optimal objectives and select from among the available strategies the one which maximally optimizes the objectives. There may be times when a decision-maker may not achieve his objective. One reason for this may be that certain factors that affect the achievement of his objectives are outside the control of the decision-maker. An example is frequent intransigence of society and nature. A second possible reason would be competition of rational opponents. In other words programs by different industries in the town and by other community and junior colleges within the area may prevent the establishment of a new program at a particular junior college.

Miller and Starr (66:34-35) have identified nine maximization principles which can help the decision-maker make the right decision. These are:

1. Choose the objective; specify its dimension and value.
2. Isolate all of the variables that are pertinent to the attainment of the objective value; i.e., the relevant independent variables.
3. Develop the relationships that exist between the independent variables.
4. Distinguish controllable variables (which can be part of the strategy) from noncontrollable variables (classifying the latter as either states of nature or competitive strategies).
5. Develop forecasts and predictions for the noncontrollable variables, which should be treated as states of nature. Those variables which have (rational) intelligence behind them must be treated separately by game theoretic methods.
6. Determine whether or not the forecasts and predictions are based on stable processes. This determination can be intuitive but powerful methods of statistical quality control are available to assist.

7. Develop the function that relates the independent variables to the dependent objective variable.
8. State the restrictions that limit the possible value of controllable variables.
9. Choose those values of the controllable variables (i.e., that strategy) which promise to maximize the degree of attainment of the objective, within the limits set by the restrictions.

At times, there are also different inputs that can and cannot be controlled by the decision-maker. Three different types of inputs are: (1) Inputs that cannot be controlled; (2) Inputs that are controlled by an outside agency with intelligence; and (3) Inputs that an executive can control. Miller and Starr (66:18) identified a simple input-output model of the organization with feedback channels. An example of this model is:

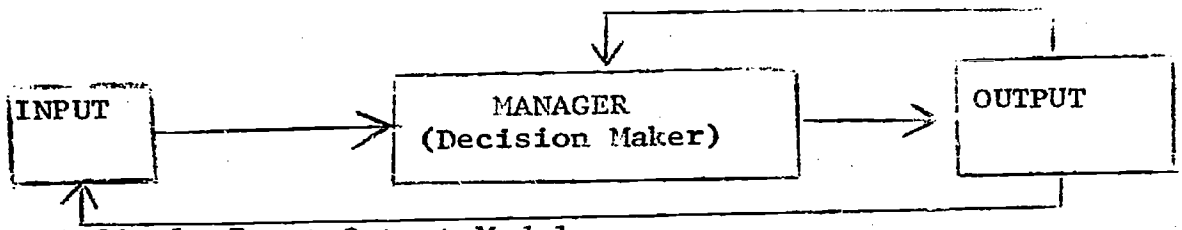


Figure 7: A Simple Input-Output Model

Most output should be fed back for inspection, evaluation, and follow-up. It is essential that the decision-makers view the total organization and its environment as a system of inter-related activities and factors. No one variable of the organization structure may be altered without affecting other aspects of the system.

Within any institution, there may arise conflicts between the individual's roles, conflicts between the group objectives, and conflicts between the individual's role and the group objectives. Miller and Starr (66:53) have listed five causes of some of the conflicts:

1. People customarily maintain various objectives.
2. Multiple objectives are frequently in conflict with each other.
3. We can only optimize as of that time when the decision is made.
4. Typically, decision problems are so complex that any attempt to discover the set of optimal actions is useless. Instead, people set their goals in terms of outcomes that are good enough. (So do organizations. Administrators do not strive for an optimum).
5. Human beings make every effort to be rationale in resolving their decision problems.

In making a decision, an administrator must operate within some set of bounds as shown in the first section of this chapter. Miller and Starr (66:62-63) have listed four of these constraints which they call bounded rationality of the organization.

A. Every factor cannot be considered in a problem precisely because of the limitations of human rationality.

B. . . . There are sharp constraints on the availability of information needed to resolve a decision problem. The cost of collecting, sorting, analyzing, and synthesizing information operates as an immediate constraint.

C. . . . Sometimes the reverse holds true: there are enormous excesses of information that cannot be sorted, classified, and processed in any economic sense. We have census tapes of demographic data, financial reports, . . . Bureau of Labor Statistics, . . . and piles of other kinds of information which (at the minimum) have some peripheral value. How does one go about squeezing out the value? Information inundation can be quite as debilitating as information scarcity. . . . Even the assistance of large-scale computers may not prevail over the costs of programming and extracting meaningful summary data in useful form for the human user bounded in his rationality.

D. . . . There are usually an incredibly large number of possible states of nature, to say nothing of competitive actions. No decision problem could begin to be formulated if the attempt were made to include all of these possibilities. Almost any change in the economy, or in the national and international affairs, influences the future behavior of the enterprise. Perturbations such as these mean that the search for an optimum solution of any specific decision problem ultimately must yield a less than optimal result because some of the critical factors are not taken into account.

Development of a Framework Necessary for the Construction of a Decision-Making Instrument

After reviewing the references on decision-making and the completion of this chapter, it was decided to re-review the decision-making instruments developed by Scott (86:25-38), Miller and Starr (66), Benner (9), Ott (43), and Odiorne (70). This review of literature provided the necessary framework for the development of the decision-making instrument as it was learned that most decision-making surveys were in the form of a matrix. Based upon the suggestions of Cook (24) of The Ohio State University and Braden (10) of Oklahoma State University, a matrix-type survey was developed to identify decision-makers, types of decisions made, and resources used in making the decision. The complete procedure for the development of the survey instrument is contained in Chapter III.

C H A P T E R I I I

DEVELOPING A STRATEGY FOR DATA GATHERING

Many different people were utilized in this phase of the project. Their comments are interwoven into the report. Early in the project Stern (101) and Arnold (8) were consulted concerning strategies for data gathering. They indicated that if the purpose of the survey is to identify the mechanisms used by the institution to develop a curriculum, a certain set of questions will need to be asked. If the purpose is to identify practices and characteristics of that institution which are significant to curriculum model development, then a different set of questions will need to be asked. These consultants also suggested that the staff develop the very best type of questionnaire that can be developed and to administer it to personnel in at least 6-8 junior colleges in Illinois. Stern and Arnold indicated that the questionnaire should identify the following things:

1. The tasks and different things going on in the institutions, who is doing them, and to what extent. (Different administrators, teachers, etc.)
2. Identify some of the key curriculum changes that have been made and trace these through from the initial effort to final adoption of the change.
3. Identify the different decisions made, how they were made, and the different people involved.

In selecting the sample, it was advised that the institutions which started similar programs be polled. Stern and Arnold also stated:

> Limit the instrument to new programs developed in the last 2-3 years. In other words, by using programs developed in the last two years, the people will be able to trace their different decision-making processes for us.

Dressel (33) and Meaders (65) stated that the project staff should go to different junior colleges in Illinois and ask them to trace the development of some of their newer occupational programs. Dressel indicated the following procedure for identifying decision-making:

1. Conduct a personal interview. Make it very specific, such as, identification of several new curricula within the last two years.

2. Indicate to the institution that these new curricula came out within the last two years and that you are trying to determine the factors which affected or influenced curriculum decision-making. You need to ask:

   A. Where did the request for a new curricula originate from:

      (1) a staff member; or

      (2) outside the institution.

   B. Please give us a factual report of the major factors or sequence used in developing the new curriculum. (People and decisions made).

Dressel also stated that many times after a new curriculum is developed, it is forgotten. He advised that a determination should be made of the kind of continuing monitoring the people do to see that the new occupational curricula is related to the changing needs. Dressel cautioned that many times, people are unrealistic in their ratings or demands in developing a curriculum. Educators may

practice one thing but preach another. People many times will indicate extra courses to include in a curriculum; however, unless the courses involve relevant skills, they become a barrier to it. For example, liberal education courses added to an occupational education curriculum which do not add to the skills needed by the student are a barrier.

Meaders indicated that there is a formal and an informal structure for making decisions. Both of these need to be analyzed. The formal structure includes the hierarchyof: president, deans, department chairmen, advisory councils, curriculum committees, etc. The state legal basis for the operation of a junior college program needs to be pursued to determine: (1) What limitations are imposed by the state for funding a new program? Are there exceptions? Will they only fund several programs in the state? and (2) What procedure must be followed in order to establish a new program? Informal structure involves the personal relationships that exist between members of the staff of occupational education to the presidents office, etc. The survey should determine who exchanges information. If a banker in town is a confidant of a key college official, this may be the most important influence on decision-making.

Gray (44), Reynolds (77), and McCage (64) emphasized that the project should consider the articulation between a local district and a junior college. In other words, the initial skills a student has developed should be considered in developing the junior college occupational program. A determination should be made as to whether junior college personnel go into the local high schools to see what subject matter content is being taught.

Faris (39), Stowe (104), and Schwen (85) pointed out that the project staff should consider several specific questions in decision-making when talking to different junior college personnel. These are: (1) Ask the department heads if many of their new ideas are overridden; and (2) What kind of reward systems are built into the structure. They stated that these types of questions will indicate how many decisions a department chairman really makes and where the decision-making really takes place. If not too many of their ideas ever get through, it means that it is a highly superordinate structure and that most of the top-level administrators are making the decisions and not the faculty and the department heads.

As a result of the feedback from the many different consultants, the following strategy for data gathering was developed:

1. Review the literature to identify factors and practices considered in curriculum development and evaluation.
2. Obtain a listing of all new occupational programs from the State Department of Education which were added in the last two years in the State of Illinois.
3. Develop instruments to identify:
    a. Those people in junior colleges who make curriculum decisions
    b. How decisions are made
    c. What decisions are made
    d. Those curriculum decisions which are most crucial
    e. The current tasks and practices used in occupational education curriculum development and evaluation
    f. The philosophy, rationale, and organizational

structure of the development and administration of junior college occupational education curriculums

g. The extent that junior college personnel are doing or following the tasks and practices listed in "e" above

4. Bring in a jury of experts to validate the instruments.
5. Select one or two institutions from those identified in "2" above and pretest the instruments. Personally interview the occupational education dean and department heads who are involved with curriculum decisions.
6. Analyze the pretest data and revise the instruments as the need arises.
7. Select a sample from those identified in "2" above.
8. Arrange with the sample identified in "7" above to personally interview those faculty or staff who are involved in curriculum decisions.
9. Personally interview the study sample.
10. Analyze the data and prepare a report of the findings.
11. Incorporate the findings into the curriculum decision-making model.

Identification of Essential Factors To Consider in Program Development and Evaluation

A comprehensive review of the literature was completed in the early part of this phase of the project. From this review of the literature, a sixteen page list of factors and practices to consider in curriculum development and evaluation was prepared. This list is

contained in Appendix A.

Design of Instruments

Based upon the recommendations of the many different consultants, the list of practices identified in Appendix A was condensed and developed into two different survey instruments -- Part I and Part II. (See Appendix B). Part I was intended to determine where requests for new programs came from, the different procedures followed, and other information concerning both development and evaluation of occupational education programs. Part II contained the complete condensed list of all of the factors and practices listed in Appendix A and was intended for the deans and department heads of occupational education to check whether they completed a particular practice, to indicate how important this practice was in the completion of it in developing or evaluating their program, and the importance of that particular factor to consider in the development of an ideal program.

Selection of the Jury of Experts

Gray (44), Reynolds (77), Borgen, and Davis made recommendations for a possible jury of experts. The list of names identified by these people is contained in Appendix C.

The jury was mailed a two-page cover letter and the two instruments contained in Appendix B. The two-page letter indicated the purposes of the instruments and asked the jury to evaluate the instruments in terms of the purposes and objectives. The jury was then asked to meet at Joliet Junior College on November 20, 1970, to review the instruments (See Appendix D for details).

Validation of the Instruments

The Jury met at Joliet Junior College on November 20, 1970, to review the instruments. The following recommendations were made by the jury:

1. They recommended that the junior college presidents no be interviewed.
2. They recommended that the deans of occupational education be interviewed and if a long instrument is used, they should be asked to respond in terms of the total program and not a specific program.
3. They recommended that the department heads respond to a specific program.
4. They recommended that the instruments be shortened as much as possible.
5. They recommended that the staff visit as many junior colleges as possible.
6. They indicated that the compiled instrument list should be considered as the ideal items to consider in occupational program development and evaluation.

Item 6 had broad implications because the staff would no longer have to be concerned about obtaining a rating on all of the factors listed in the instrument. In addition, Dressel (33), Arnold (8), Cook (24), and other consultants also indicated that the compiled list was the ideal and that a rating would not be needed on all of the items.

After tabulating all the responses from the different personnel who served on the jury of experts, it was found that the instruments were not getting at the question of decision-making.

It was also found that many jury members tended to rate that they completed or did each item and they rated each item high.

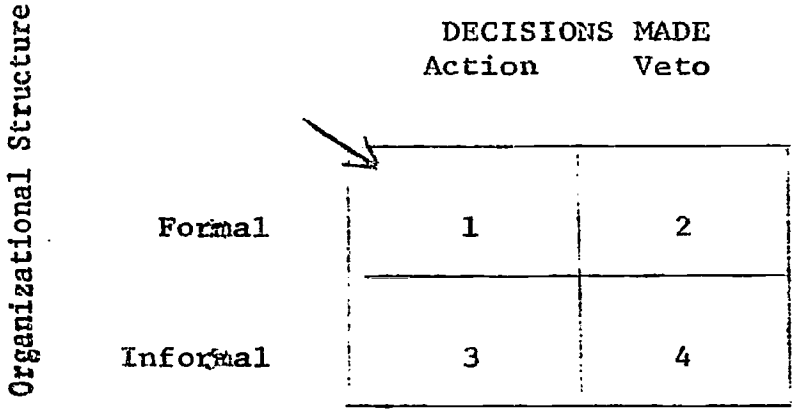
In meeting with Cook (24), Shea (87), Trzebiatowski (109), Arnold (8), Stowe (102), and Schwen (85), it was agreed that the instrument did not identify who was making decisions nor did it provide an indication of a time sequence for decision-making. Therefore, it was felt that a new instrument was needed. The different consultants recommended that effort be concentrated on reviewing the many different references on decision-making which might provide the framework necessary for the development of a new instrument. Cook (24) stated that a curriculum model could be developed and taken around to the different junior college personnel and ask them to use it in curriculum development and evaluation. A determination could then be made as to whether the model utilized all the factors that were amassed from the literature. Another opinion suggested was that rather than use the present questionnaire strategy the staff should go to the junior colleges with the list of factors and have the deans, department heads, and faculty check which person is using what factors and then to obtain a rating of these factors. This could be done by having one-half the junior colleges perform the first task and the other one-half perform the second task. The form would be as follows:

Factors Considered	Which Person is Using What Factors?		
	Dean	Dept Head	Faculty
A.	x		
B.		x	
C.			x

Walker (112) cautioned to be sure and indicate to the personnel that are being interviewed that the interview is not an assessment of the adequacy or inadequacy of the different occupational programs but rather a determination of a representation of the real world. If this point is not spelled out, the personnel may be defensive and state what they think we want to know.

The following items were delineated by Walker:

1. You must assume that you cannot do a complete community power study in your survey. There must be a necessary delineation to the project. You could look at the formal organizational structure and some of the memos transmitted to different personnel; however, you will never obtain a complete picture of the decisions made nor the decision-making procedure followed and the influence upon each person making key decisions. Pictorially, this may be diagrammed as follows:



In essence, the survey staff energies would be concentrated in 1/4 of the total possible area of consideration, (Cell 1 Formal-Action).

2. You need to determine why or why not different factors were not used in developing and evaluating a curriculum. If an individual did not consider manpower information and student interest in program development but felt that these items were important in program development, you need to determine why he did not consider them. You may be able to develop a partial list of reasons during the pretest, classify these reasons into categories, and then have these items rated during the actual sample study. Such items as inadequate resources (money, staff), time, etc., will probably be the factors. You then would have a list of resources that are essential to gather data or consider factors not used but deemed essential. The questionnaire for this area could be as follows:

Factor	Whether Considered Or Used	Importance	Why or Why Not?
			A. Resources 1. Money 2. Staff B. Time etc.

Arnold (8) felt that the instrument should be shortened to only include the major areas unless it was felt that the other data was absolutely essential. In this case, he suggested the respondent be paid as a consultant for the lengthy time to complete the survey.

In addition, he felt that the respondents should be asked what they considered and what else should they have considered in program development. Arnold did not feel that the respondents should be asked to respond to -- what about so and so -- because by doing so, the study would be biased the same as if they were to sit down and rate the whole list.

Development of the Decision-Making Survey Instrument

Since the old instrument did not identify the different decisions nor the time sequence of when decisions were made, those instruments were scraped and new instruments were developed. (The information gathered was useful in the development of the systems model.) Based upon the recommendations of the consultants, a study was completed which is entitled "Decision-Making in Education" (See Chapter II). This study provided the framework necessary for the development of the decision-making instrument. In meeting with Braden (10), a matrix type instrument was developed. The initial matrix instrument is shown in Appendix E-1. However, in a pretrial of this instrument with selected department heads at Joliet Junior College, the project staff was dissatisfied with the results of the survey. Therefore, Form E-2 was developed in which decision-makers could be listed, the types of decisions made, activities completed, and the resources used in completing these activities. Instead of having the items listed under Program Identification, Program Development, and Program Evaluation as on Form E-1, these items were placed across the top such as is shown on Form E-2. Appendix E-3 shows additional refinement of E-2 in addition to adding program and institutional information on the same form instead of on an

additional form.

In a pretrial with Illinois Valley Community College and with Elgin Community College, additional items were identified and added to E-3. These items are contained on Form E-4. In addition, in meeting with the computer experts, it was decided to number the form differently to facilitate IBM analysis of the data.

Selection of the Study Sample

McCage (64) of the State Board of Vocational Education and Rehabilitation sent to the project staff a listing of all the different junior college programs which were approved by the State Board after October 10, 1968. From this listing, a master matrix table by institution and by program was developed. There were over 200 different programs approved in the past two years. However, upon tabulation of these, it was found that only 33 different programs were approved for five or more institutions within an area. Appendix F contains the matrix showing junior colleges and those programs approved at five or more junior colleges in the last two years.

In selecting a sample for interview, it was decided to list all the different programs in Appendix F under the five major headings used in the State of Illinois; that is, Applied Biological and Agriculture Occupations, Business Marketing and Management Occupations, Health Occupations, Industrial Oriented Occupations, and Personal and Public Service Occupations. Each program was then assigned a number and using a table of random numbers, the programs to be used in interview were selected. In looking at Appendix G, one can note that in three program areas, two programs were selected;

whereas, in two areas, only one program was selected. The reason for this was that in those three areas there were twi... as many programs approved and therefore, in order to use an even ratio.. two had to be selected. The final programs selected for interview were Agriculture Business, Business Data Processing - Key Punch, Marketing Mid-Management, Inhalation Therapy Aide, Automotive Mechanic, Electronic Technology, Law Enforcement, and Child Development.

The next step was to determine which programs would be visited at which institutions. To accomplish this, the schools within each program area were assigned a number; and again using a table of random numbers (32:316-317), six schools were selected in each program area. In addition, possible alternates were identified in case a particular institution had failed to establish that particular program. Appendix H contains the list of the particular institutions and programs which were included in the sample.

Selection of the Pretest Sample - The pretest sample was composed of Elgin Community College, Joliet Junior College, and Illinois Valley Community College. Joliet Junior College was excluded from the original test sample due to the fact that the project is located on this campus and a lot of the different personnel were used for feedback in designing the instruments. Illinois Valley and Elgin did not appear in the original sample when programs were selected which then made them available for selection as a pretest sample.

Collection of the Data

The occupational deans of junior colleges selected for interviewing were contacted via telephone, explained the purposes of the

project, and arrangements were made for a personal visit. One member of the project staff visited the personnel in each institution. (See Appendix I for visitation schedule.)

It was intended that the occupational dean and the division and/or department chairmen would be interviewed at each institution concerning the selected programs. The dean was to respond to the development of all programs while the other personnel would only respond to a specific program.

The procedure for the interview was as follows. The interviewee was explained the project and asked to respond in terms of program identification, program and course development and program evaluation. Key questions were asked to help the respondent. Appendix J contains the standard introduction and key questions.

The form contained in Appendix E-4 was used to record the data. An "X" was placed opposite the item in the sequence given to the researcher. For instance, if a person indicated to the researcher that an idea originated with interested businessmen, an "X" was placed under Program Identification Column 1, row 64. An "X" was also placed in Column 1, row 29 and row 34, indicating that collectively the idea originated from a resource. If the second thing the respondent indicated was that he began to explore the occupational area and then met with an advisory committee, the completed form would be as follows:

Sample Partial Completed Form

Decison-Maker	Program Identification 01	02	03	04
21 Occupational Dean		x	x	
29 Resource	x			
Type of Decision				
32 Optional		x		
33 Contingent				
34 Collective	x			
35 Authority				
Activities Completed				
36 Began to explore area		x		
37 Completed manpower survey				
43 Held meeting with:			x	
Resources Utilized				
59 Advisory Committee			x	
64 Interested Businessmen	x			

The decision-making form not only identified who was making decisions, the decisions made, and the resources utilized, but it also identified a time sequence of the different decisions.

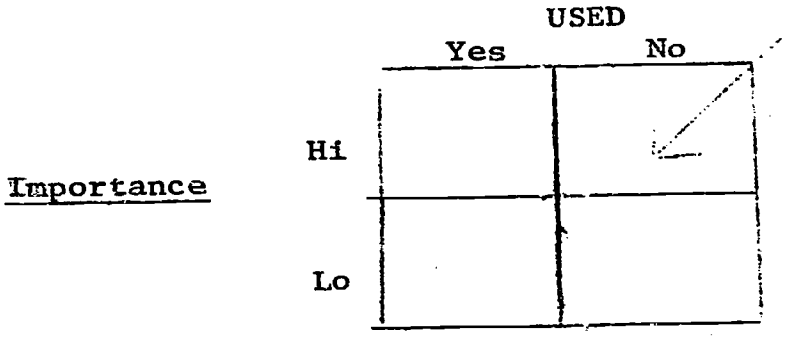
The purpose of the survey was to identify the "State of the Art" in Community college decision-making in Illinois. No attempt was made to determine quality of the programs.

In addition to the collection of data, materials were gathered from each college in the sample and from all the others to provide a data bank at Joliet Junior College. Guidelines, survey instruments,

evaluation forms, etc., were collected. (See Appendix K for a listing of materials collected.) These materials will be loaned to community colleges wishing to borrow them. A listing of all personnel either interviewed or providing data are contained in Appendix L.

Analysis of the Data

Walker (112) made suggestions for analyzing the data. He indicated that the data could be analyzed with a 2 x 2 crossbreak table as follows:



The hi-no cell would be the one that would be of greatest interest to us.

In analyzing the data, the following procedures could be followed:

A) The key decisions could be clustered and rank-ordered by the key decision-makers. These would indicate the criteria and the importance of the criteria in making decisions.

B) The differences could be summed for each major factor or item and a discrepancy index could be obtained

between the importance of the factor used and the ideal importance. To obtain the average discrepancy, the ratings would be summed and divided by the number of items.

C) In performing correlation analyses such as the Pearson Product-Moment Correlation Technique or the Spearman rank order, a determination could be made as to whether there is a correlation between the ratings by the different occupational areas; such as for automotive, electronics, and data processing. If the correlations are high, it can be assumed that the answers are homogeneous or that we are only dealing with "apples." If the correlations are low, we would be dealing with a heterogeneous product, such as "apples and oranges," which means the answers need to be treated differently. The obtaining of high or low correlations will affect the model design and the ensuing guidelines.

Walker pointed out the need to look at the red flags for program monitoring, such as idle machinery, A-V materials not used, complaints against instructors, etc. Most of the evaluation questions listed dealt with product and not process evaluation which is equally important. Walker stated that the project staff should determine the things which cause red flags to come into the dean's office from the faculty, students, and the community, as well as look particularly at the skema and channels of items moving vertically in the organiation.

The collected data were punched onto IBM cards for computer analysis. (The codebook for the arrangement of data on the IBM card is contained in Appendix M.) The data were punched onto IBM Cards as follows: the information on the right-hand side was placed on the first 13 columns of the card. Column 14 contains the phase of program development in which the activity was completed, such as Program Identification phase, Program and Course Development phase, or Program Evaluation phase. Columns 15-16 conta the time sequence in which the event occurred. For instance, under Program Identification there were listed ten time sequences. No. 1 would be the first thing that happened in the identification of the program, No. 2 refers to the second thing that happened, etc. Columns 17-80 contain information listed on the left-hand side of the matrix table as they are numbered. A separate card was punched for each time frame as listed across the top of the chart. For instance, under Program Identification there were ten time frames. If each of these were filled in, there would be ten cards punched for that program. The same was true for Program Development and for Program Evaluation.

The IBM cards were divided into two decks. Deck A, the primary deck, contained mainly the responses of the deans while Deck B contained the responses of others within the institution. At some institutions the deans were new and were not familiar with the development of the program; therefore, other college personnel had to be interviewed. Therefore Deck A contains responses of not only deans, but of other college personnel. The breakdown is shown in Chapter IV.

The following analyses were performed with the data:

1. Numbers and per cent of decision makers performing a particular activity, the type of decision made, activity completed, resources utilized in making the decision, and constraints if any.
2. Numbers and per cent as above except by program area. (Column 12)
3. Numbers and per cent as in one above except that, the cards were separated as to age of institution (Col. 3).
4. A summarization was made of the responses in Columns 3-13.
5. A tabulation of the responses by me frane 01 in the three phases, i.e., program identification, program development, and program evaluation. (Columns 14, 15-16)
6. Correlations between: program areas, new and developed institutions, and institutions with different enrollments.

CHAPTER IV

ANALYSIS OF THE DATA

This chapter describes the characteristics of the study sample in addition to the presentation of the analysis of the data collected.

Ages of Institutions

The ages of the different institutions included in the sample are contained in Table 4.1. An analysis of the table reveals that 50 per cent of the institutions were less than five years of age; however, there was a good representation among all the age categories.

TABLE 4.1

AGES OF THE ILLINOIS JUNIOR COLLEGES IN THE SAMPLE

Years of Age	Number of Institutions
1	0
2	3
3	6
4	3
5	2
6-10	3
11-15	3
16-20	0
21-25	3
OVER 25	4
TOTAL	27

Ages of the Present Campuses

The ages of the present campuses of the different junior and community colleges are contained in Table 4.2. As can be seen in the

table, over 50 per cent of the institutions have been at their present site for two years or less and 88 per cent have been at their present site for five years or less. Only one institution has been on its present site for more than ten years.

Considering the many new institutions pointed out in Table 4.1 and the newness of many of the present campuses shown in Table 4.2, the magnitude of problems faced by different administrators pertaining to facilities planning becomes very obvious. The facilities planning and new occupational program planning is an additional burden placed upon the administrators in addition to his regular duties and responsibilities; therefore, a systematic procedure to help alleviate this burden should be of great value.

TABLE 4.2

AGES OF PRESENT CAMPUSES

Years of Age	Number of Institutions
1	4
2	10
3	4
4	4
5	2
6-10	2
11-15	
16-20	
21-25	
OVER 25	1
TOTAL	27

Location of the Campuses

An analysis of the sample reveals that eight campuses were located in rural areas while five were located in a medium-sized city (25-100,000 population), and four were located in a large city (over 100,000), see Table 4.3.

TABLE 4.3

LOCATION OF CAMPUSES

Location	Number of Colleges
Rural Area	8
Located in small town (<10,000)	1
Located in the suburb of small town	1
Located in small city 10,000-25,000	2
Located in suburb of small city	1
Located in medium city 25,000-100,000	5
Located in suburb of medium city	4
Located in large city >100,000	4
Located in suburb of large city	0
Located in small town but suburb of a large city	1
TOTAL	27

Enrollment of the Colleges (FTE)

The enrollments of the colleges in the sample ranged from an FTE of 501 to over 4,500 as shown in Table 4.4. Six colleges had enrollments of 501-1000, while five had FTE enrollments of 1001-1500. Over one-half of the colleges in the sample had an enrollment of less than 2000 FTE.

TABLE 4.4

ENROLLMENT OF THE INSTITUTIONS (FTE)

Range of Enrollments Based on FTE	Number of Colleges
<500	0
501-1000	6
1001-1500	5
1501-2000	3
2001-2500	4
2501-3000	3
3001-3500	2
3501-4000	2
4001-4500	0
OVER 4500	2
TOTAL	27

Background of the Students

The background of the students attending the different community and junior colleges is contained in Table 4.5. Even though Table 4.3 revealed that eight institutions were located in a rural area, only one of these eight was classified as containing almost all rural students. All the other institutions contain a mix of students ranging from rural and suburban (nine institutions) to rural, suburban, urban, and innercity (five institutions).

TABLE 4.5

BACKGROUND OF THE STUDENTS

Background	Number of Colleges
Rural	1
Suburban	2
Urban	0
Innercity	1
Rural and Suburban	9
Rural, Suburban, Urban	5
Rural, Suburban, Urban, Innercity	5
Innercity, Urban	2
Suburban, Urban, Innercity	1
Urban and Suburban	1
TOTAL	27

Faculty Organization

The faculty at over two-thirds of the different colleges were neither organized into a union or teachers association while the faculty at seven colleges (approximately 25%) belonged to a union, see Table 4.6.

TABLE 4.6

FACULTY ORGANIZATION

Organization	Number of Colleges
Strong Union	4
Moderately Strong Union	3
Weak Union	0
No Union	0
Strong Teachers Association	1
Moderately Strong Teachers Association	2
Weak Teachers Association	0
No Teachers Association	0
No Union or Teachers Association	17
Strong Union and Teachers Association	0
TOTAL	27

Respondents Interviewed and Years In Present Position

The respondents interviewed and the years in their present position are contained in Table 4.7. A total of 49 personnel were interviewed of which two were deans of instruction, 23 were occupational deans, three were occupational department heads, four were occupational division heads, 14 were directors of specific programs and three were instructors.

The table also reveals that 27 of the respondents or 55 per cent were in their present position for two years or less while only one respondent was in his present position for seven years.

In addition to those respondents reported in Table 4.7, 27 other individuals at the different community and junior colleges were visited and a report was maintained of their comments in separate institutional visitation reports. A summary of comments from all personnel is contained later on in this chapter.

TABLE 4.7

NUMBER OF RESPONDENTS INTERVIEWED BY TITLE AND YEARS IN PRESENT POSITION

TITLE OF RESPONDENT	Years In Present Position							
	1	2	3	4	5	6	7	TOTALS
Dean of Instruction	1				1			2
Occupational Dean	6	5	7	1	2	1	1	23
Occupational Dept. Head		1	2					3
Occupational Div. Head	1	1	1	1				4
Director of Specific Programs	2	8	1	2	1			14
Lead Instructor								0
Instructor		2	1					3
TOTALS	10	17	12	4	4	1	1	49

Occupational Programs Included In The Sample

The eight occupational program areas included in the sample and a description as to age of the programs and whether new or adapted is contained in Table 4.8. The table reveals that all programs but two were entirely new while two were modified from existing programs. The table also shows that 10 programs were in their first year of operation, 15 were in their second year and 22 were in their third year and one was in its fourth year of operation.*

*Originally it was intended that all programs would be in their first or second year of operation; however, since the data was based on all programs approved since October 10, 1968, and since we did not survey until 1971, this accounted for some programs in their third year of operation. Due to the desire to have six programs in each program area, an inhalation therapy program was selected by a table of random numbers to add to the sample.

TABLE 4.8

OCCUPATIONAL PROGRAMS INCLUDED IN THE SAMPLE

Program	Stage of Development			Age of Program (Years)				
	Ent[a] New	New[b] Prog	Adapted[c]	1	1-2	2	2-3	4
Agriculture Business	5	0	1	1	1	0	4	0
Data Processing - Key Punching	6	0	0	0	1	0	5	0
Marketing - Mid Mgt.	6	0	0	1	3	0	2	0
Inhalation Therapy	6	0	0	2	1	0	2	1
Automotive Mechanic	6	0	0	2	3	0	1	0
Electronic Technology	5	0	1	2	2	0	2	0
Law Enforcement	6	0	0	1	2	0	3	0
Child Development	6	0	0	1	2	0	3	0
TOTALS	46	0	2	10	15	0	22	1

[a] Entirely new program (No related courses previously taught)

[b] [illegible]rogram (Some courses were taught previously)

[c] [illegible]ed (Many courses were previously taught but are now a part of the new program)

Activities Completed During The Program Identification Phase

A local manpower survey was completed during the Program Identification Phase in the establishment of 26 (54%) of the different occupational programs, and 3 programs (6.3%) utilized old manpower survey data. The number of potential target population was determined in the establishment of five (10.4%) of the occupational programs while the aspirations, characteristics, and interests of the potential target population was determined for one program. Also during the Program Identification Phase, four (8.3%) looked at programs in other institutions, one developed specific courses, five (10.4%) recruited staff, two (4.2%) hired staff, six (12.5%) planned facilities and one determined what equipment to buy, (See Table 4.9).

TABLE 4.9

ACTIVITIES COMPLETED DURING THE PROGRAM IDENTIFICATION PHASE

PROGRAM AREA [a]	Activities Completed										
	Completed Local Manpower Survey	Looked At Old Manpower Survey Data	Determined Potential Target Population	Determined Aspirations, Characteristics & Interest	Looked At Programs In Other Institutions	Developed Specific Courses	Recruited Staff	Planned Facilities	Determined What Equipment To Buy	Hired Staff	Determined A Budget
Agriculture Business	4		2		1		1	1			
Business Data Processing	3	1					2	1	1		1
Marketing-Mid Management	4										
Inhalation Therapy Aide	3		1			1		2			1
Automotive Mechanic	4			1	1						
Electronic Technology	3		1								
Law Enforcement	2		1		2		1	1		1	1
Child Development	3	2					1	1		1	1
T O T A L S No.	26	3	5	1	4	1	5	6	1	2	4
%	54.2	6.3	10.4	2.1	8.3	2.1	10.4	12.5	2.1	4.2	8.3

Resources Utilized During The Program Identification Phase

During the Program Identification Phase, junior college personnel utilized advisory committees and/or subcommittees in the establishment of 39 (81.3%) of the occupational programs. Interested businessmen and/or professional personnel were utilized in 19 (39.6%) of the programs. In addition, the following resources had inputs into the program identification phase: interested parents eight (16.7%) and state consultants seven (14.6%), (See Table 4.10).

TABLE 4.10

RESOURCES UTILIZED DURING THE PROGRAM IDENTIFICATION PHASE

PROGRAM AREAS[a]		Resources Utilized									
		Advisory Committee or Sub-Committee	Interested Parents	Faculty	Interested Businessman	State Consultants (also AMA)	Feasibility Survey	Curriculum Guidelines	Consultants from Other Institutions	Industry Taught a Seminar	
Agriculture Business		5	5		2	3					
Business Data Processing		6	2		2	2					
Marketing Mid-Management		4			2	1				1	
Inhalation Therapy Aide		6			5				1	1	
Automotive Mechanic		5	1	2	1	1					
Electronic Technology		3			1		1				
Law Enforcement		4			5			1	1		
Child Development		6			1		3				
TOTALS	NO.	39	8	2	19	7	4	1	2	2	
N=48	%	81.3	16.7	4.2	39.6	14.6	8.3	2.1	4.2	4.2	

Activities Completed During the Program and Course Development Phase

During the Program and Course Development Phase, programs in other institutions were either reviewed or studied by personnel of 34 (70.8%) of the 48 different occupational program areas (See Table 4.11). In addition, 33 (68.8%) recruited students, 32 (66.7%) recruited staff, 30 (62.5%) hired staff, and 21 (43.8%) planned facilities during the Program and Course Development Phase.

TABLE 4.11

ACTIVITIES COMPLETED DURING THE PROGRAM AND COURSE DEVELOPMENT PHASE

PROGRAM AREAS[a]		Activities Completed								
		Determined Potential Target Population	Determined Aspirations, Characteristics and Interests of Poten. Stu.	Looked at Programs in Other Institutions	Recruited Staff	Recruited Students	Planned Facilities	Determined what equipment to buy	Hired Staff	Determined a Budget
Agriculture Business				6	5	5	3		6	
Business Data Processing				6	5	2	2	1	1	1
Marketing Mid-Management				4	5	4	5		5	1
Inhalation Therapy Aide			1	3	2	4	2		4	1
Automotive Mechanic				5	3	4	2		3	
Electronic Technology				4	4	4	3		3	
Law Enforcement		1		2	4	4	1		3	1
Child Development				4	4	6	3		5	
T O T A L	No.	1	1	34	32	33	21	1	30	4
	%	2.1	2.1	70.8	66.7	68.8	43.8	2.1	62.5	8.3

[a] N = 48

Resources Utilized During The Program and Course Development Phase

Advisory committees and/or subcommittees were utilized by 45 (93.8%) of the forty-eight different occupational program areas during the Program and Course Development phase. In addition, interested businessmen and state consultants were utilized in three (6.3%)of the program areas; and faculty in one program area, (See Table 4.12).

TABLE 4.12

RESOURCES UTILIZED DURING THE PROGRAM AND COURSE DEVELOPMENT PHASE

PROGRAM AREAS[a]	Resources Utilized							
	Advisory Committee Sub-Committee	Faculty	Interested Businessmen	State Consultants (also AVA)	Feasibility Survey	Curriculum Guidelines	Local Money Available	Consultants from Other Institutions
Agriculture Business	6			1				
Business Data Processing	6					1		1
Marketing Mid-Management	6			1				
Inhalation Therapy Aide	5		2			2	2	1
Automotive Mechanic	6					2	1	
Electronic Technology	5			1		1		
Law Enforcement	5						1	
Child Development	6	1	1		1			
TOTAL NO.	45	1	3	3	1	6	4	2
%	93.8	2.1	6.3	6.3	2.1	12.5	8.3	4.2

[a] = 48

Types of Evaluation Activities Completed During the Program Evaluation Phase

During the Program Evaluation Phase, personnel of 34 (70.8%) of the occupational program areas evaluated their program either with the use of advisory committees or by staff. In addition, 25 (52.1%) of the program areas asked students to evaluate the program, and 15 (31.3%) had completed follow-up surveys of graduates, (See Table 4.13). (Since many of the programs were new, it would not be expected that the follow-up surveys would have been completed for all occupational programs.)

TABLE 4.13

TYPES OF EVALUATION ACTIVITIES COMPLETED DURING THE PROGRAM EVALUATION PHASE

PROGRAM AREAS[a]	Types of Evaluation Activities Completed				
	Follow-up Survey of Graduates	Survey of Dropouts	Student Evaluation of Program	Total Program Evaluation	Evaluation of Staff
Agriculture Business	2		3	5	
Business Data Processing	1		4	5	
Marketing Mid-Management	2		3	5	1
Inhalation Therapy Aide	2		2	5	1
Automotive Mechanic	1	1	3	4	
Electronic Technology	0		3	2	1
Law Enforcement	3		3	3	1
Child Development	4	1	4	5	1
TOTAL No.	15	2	25	34	5
%	31.3	4.2	52.1	70.8	10.4

Evaluators Utilized During the Program Evaluation Phase

In evaluating their occupational programs, advisory committees were utilized by junior college personnel in 38 (79.2%) of the program areas (See Table 4.14). In one program area, state consultants were utilized to assist with evaluation. In addition, eleven programs utilized employer evaluations.

TABLE 4.14

EVALUATORS UTILIZED DURING THE PROGRAM EVALUATION PHASE

PROGRAM AREAS[a]		Occupational Program Evaluators		
		Advisory Committee or Sub-Committee	State Consultants (Also AMA)	Employer Evaluations
Agriculture Business		6		3
Business Data Processing		6		2
Marketing Mid-Management		4		2
Inhalation Therapy Aide		5	1	3
Automotive Mechanic		4		
Electronic Technology		2		
Law Enforcement		6		
Child Development		5		1
TOTAL	NO.	38	1	11
	%	79.2	2.1	22.9

[a] N = 48

Identification of Decision Makers, Activities Completed, and Resources Utilized

Table 4.15 contains a tabulation of all the different decision makers, the activities completed by these decision makers, and the resources utilized in making the decisions. The data are tabulated in time frame sequence such as it was recorded during the personal interview. The frequency for each of the different items are recorded as they occurred under each of the different time frames. The purpose of Table 4.15 is to convey to the reader the sequence of activities completed and resources utilized by different decision makers in the identification, development, and evaluation of their occupational programs.

The data in Table 4.15 is a total frequency of occurrence, and the data will not correspond exactly with the data in the previous tables because in the development of the previous tables, any time an item was counted once during a phase of development, it was not counted again. In the development of Table 4.15 every time an activity was completed or a resource utilized during a phase of program development, it was counted. Therefore, many times, the figures will be larger in this table than in the preceding tables.

Table 4.15 shows that the origination of the idea to develop an occupational program (See Time Frame #1 under Program Identification) came from the following: (1) twenty of the program suggestions or program ideas came from different resources such as interested professional persons, interested students, some interested faculty, or state consultants, etc.; (2) the data also indicate that the local boards requested a program area three times, (3) the dean of instruction two times; (4) the occupational dean ten times; (5) divisional chairman four times; (6) department head once; (7) faculty from the different program areas seven times; and (8) the dean of research and development once.

TABLE 4.15

Identification of Decision Makers, Activities Completed, and Resources Utilized

ITEM	PHASE OF OCCURRENCE AND FREQUENCY BY TIME FRAME — Program Identification											Program Development													Program Evaluation				
	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8	9	10	11	12	13	1	2	3	4	5
Decision-Makers																													
17. I J C B, State Board & Specialty Boards					3	16	12	10	2		2	1		1	2	7	8	10	9	5	3	3	3	3					
18. Local Board	3				6	10	9	2		2					4	6	10	10	6	2	1	1	1	1					
19. President		4	3	12	18	13	3		2			2	5	3	9	11	10	7	2	3									
20. Dean of Instruction	2	3	7	5	9	1	3	3	2			4	4	4	7	4	4	4	3	4	3	3	3	3	1			2	
21. Occupational Dean	10	32	26	22	5	3	3	3	1	1		34	28	29	14	7	7	6	11	11	11	11	11	11	2	3	9	10	
22. Chairman of a Division	4	3	4	3	2			2		2		8	4	3	1	1	3	2	1		1	1	1	1	2	1	2	3	
23. Department Head (occupational)	1	3	5	3					1	1		4	7	3	1	4		2	4	4	4	4	4	4	10	9	9	4	4
24. Faculty	7		1												1	1			2	2					11	16	12	2	3
25. Curriculum Committee/Standing Committee				1	1								3	2	6		1	1							0				
26. Advisory Committee (formal)															1										0				
27. Pupil Services (guidance)		1										1							2	1	2	2	2	2	5	4			
28. Director of P.R.																									0				
29. Resource	20											1	1							1									
30. Dean R & D	1																												
31. Administrative Council																			1										
Activities Completed (doing)																													
36. Began to Explore the Occupational Area	38	21	2												1														
37. Completed Local Manpower Survey	5	16	7		1																								
38. Looked at Old Manpower Survey Data		2	1																										
39. Determined No. of Target Population	1	2	2						1										1										
40. Determined Aspirations, Char. & Interests							1								1														
41. Completed Job Analysis Survey																													
42. Looked at Programs in Other Institutions		1	2	1								34				1													
43. Held Meeting With:		11	14		2	3		2			2		4	1	3	1	1		2										
44. Report Sent for Approval		2	17	½	41	40	26	14	4	2		2	12	30	33	39	37	31	17	9	4	4	4	4					
45. Developed Specific Courses				1								41	7																
46. Recruited Staff				2				2	1			2	7	2	1		3	7	10	6	6	6	6	6					
47. Recruited Students												1		4			2	2	7	10	8	8	8	3					
48. Planned Facilities		1	1				2	1		1			16	6	1														
49. Determined What Equipment to Buy										1			1																
50. Hired Staff									2			3	3	1	6			2	4	8	7	7	7	7					
51. Completed Follow-up Survey of Graduates																									13	1	1		
52. Completed Survey of Drop-outs																										1	1		
53. Asked Students to Evaluate Program																									6	16	3		
54. Evaluation of Program																									12	13	15		
55. Evaluated Staff																										2	11	17	1
56. Employer Evaluations																											1	4	6
57. Did evaluation feedback into program?																													
58. Determined a Detailed Budget							1	1		2		1	2	1															
Resources																													
59. Advisory Committee/Sub-Committee	2	12	17	2	2	1	1	2		1		30	15	2	3	2			1	2	2	2	2	2	12	11	13	2	
60. Interested Parents	6																												
61. Faculty	1	1										1																	
62. Community Organizations																													
63. Ind. Relations & Other Related Committees																													
64. Interested Businessmen	13	3	4									2								1									
65. Union and Management Organizations																													
66. State Consultants	1	1	2			2	1					2	1		1										1				
67. Students Expressed an Interest																													
68. Feasibility Survey	4	1											1																
69. Curriculum Guidelines				1								3	1																
70. Manpower Data																			1										
71. Local Money Available													2	2			1												
72. State and Federal Money Available																													
73. Physical Facilities Available																													
74. Consultants From Other Institutions	1		1									1						1											
75. Industry Taught a Seminar		2	2																										
Constraints (influences affecting the decision)																													
76. Money																													
77. Political (influential people)																													
78.																													
79. ...ae																													
80.																													

In scanning Table 4.15 from left to right, it can be seen that most decisions concerning the identification, development, and evaluation of occupational programs were made by the occupational dean. The table also shows that in the program identification phase, most decision makers began to explore the occupational area and then formed an advisory committee and completed a manpower survey (See Time Frames one and two).

During the program and course development phase, most decision makers looked at programs in other institutions and relied on advisory committees to assist them in program development (See Time Frame one under program development).

Guidelines, Surveys, Forms, Catalogues, And Brochures Received From Occupational Personnel of the Different Illinois Junior and Community Colleges

Table 4.16 contains a tabulation of all the different materials received from the different junior colleges and junior college personnel. These materials are a part of a data bank of resource materials being established at Joliet Junior College and which can be loaned to other colleges or schools upon request. The table reveals that personnel at nine colleges (20%) are following some type of written guidelines in the development of occupational programs. In addition ten colleges (22%) have developed guidelines for the use of advisory committees. (The remainder of the table shows the materials given to the project and cannot be interpreted.)

TABLE 4.16

Guidelines, Surveys, Forms, Catalogues, and Brochures Received From Occupational Personnel of the Different Illinois Community and Junior Colleges

JUNIOR COLLEGES	Guidelines for the Establishment of Occupational Programs	Budget and Costs Sheets	Guidelines for Use of Advisory Committees	Advisory Committee Membership Sheets	High School Occupational Interest Survey	Adult Education Survey	Manpower Surveys -- All Occupations	Industry -- Cooperative Education Survey	Program Interest Survey	Occupational Analysis Survey	Telephone Survey	Comprehensive Area Survey	Follow-up Surveys of Graduates	Follow-up Surveys of Drop-outs	Student Evaluation of Instructors	Student Evaluation of Courses	Administration Evaluation of Staff	Administration Evaluation of the Program	Employer Evaluation of the Student	Supervisor Evaluation of Student On-the-Job Training	Training Agreements and/or Occupational Experience Records	Catalogues Received	Received Occupational Brochures of Programs	Manpower Surveys -- Selected Occupations
1. Amundsen-Mayfair College																								
2. Belleville Area College				X																		X	X	
3. Black Hawk East College																								
4. Black Hawk Main College	X	X										X	X									X	X	
5. Carl Sandburg College																						X	X	
6. College of DuPage	X		X					X							X						X	X	X	
7. College of Lake County	X		X	X					X	X												X	X	
8. Danville Junior College													X		X	X	X		X	X	X	X	X	
9. Elgin Community College																						X	X	X
10. Highland Community College																						X	X	
11. Illinois Central College																								
12. Illinois Valley Community College			X		X		X						X		X	X	X		X			X	X	X
13. John A. Logan College													X									X	X	
14. Joliet Junior College	X	X	X	X																		X	X	X
15. Kankakee Community College													X			X			X	X	X	X	X	
16. Kaskaskia College																						X	X	
17. Kennedy-King College																								
18. Kishwaukee College	X	X										X				X						X	X	
19. Lake Land College																X			X			X	X	
20. Lewis and Clark College																						X		X
21. Lincoln Land Community College																X			X	X	X	X	X	
22. Lincoln Trail College																								
23. Loop College																						X	X	
24. Malcolm X College		X					X						X											
25. McHenry County College																						X	X	X
26. Moraine Valley Community College	X	X	X	X							X				X	X		X		X		X	X	X
27. Morton College					X																	X	X	
28. Oakton Community College																						X	X	
29. Olive Harvey College	X																							
30. Olney Central College					X		X					X	X									X	X	X
31. Parkland College																						X	X	X
32. Prairie State College			X	X	X								X											
33. Rock Valley College																X			X			X	X	X
34. Rend Lake College	X		X		X										X							X	X	
35. Sauk Valley College			X												X							X	X	
36. Shawnee Community College					X								X		X			X				X	X	
37. Southeastern Illinois College		X			X		X								X				X	X	X	X	X	X
38. Southwest College																						X	X	X
39. Spoon River College		X			X									X	X									
40. State Community College of E. St. Louis													X	X								X	X	X
41. Thornton Community College			X												X							X	X	
42. Triton College	X	X	X	X	X	X		X				X	X	X		X						X	X	X
43. Wabash Valley College																								
44. Waubonsee Community College																								
45. William Rainey Harper College					X	X																		
46. Wright College												X	X									X	X	X

Summary of Visitations

A visitation report was completed by the intereviewer at the conclusion of each junior college or community college visit. The report of each college contains the persons visited, the program reviewed, and some of the highlights of the visit. Each report is somewhat different in that at times some community colleges did a procedure a little different from the others, and this was so recorded on the report. It is hoped that the data gathered during the visits will be useful to the project either in model development or in the identification and selection of junior colleges to participate in Phase III.

Summary of Responses From Interviewees

At times on the visits it was found that some personnel indicated a need which was similar to that expressed by junior college personnel of another college. Therefore, any item that was stated more than once contains a number in parenthesis following the particular item.

1. There is a need for occupational analyses and skills surveys from a State level.

2. There is a great need for a systematic system for both program development and evaluation of occupational programs (6).

3. At several of the institutions the new program was an outgrowth of a course or institute offered in the occupational area (4).

4. The systems model should anticipate future jobs and not just evaluate and survey for present jobs and present job openings.

5. Some of the different occupational deans indicated that they understand PERT and CPM (4).

6. Several of the deans pointed out that once they decide to develop an occupational program, an expert or specialist is hired to help with the program development (3).

7. Of primary importance in the development of a program is:

    - The needs of the student, and
    - The needs of the people with whom they will work.

8. It was pointed out that there was informal resistance to students taking Law Enforcement classes at several of the different junior colleges. This resistance came mainly from older policemen who would be forced either to (A) take classes, or (B) end up in a lower pay classification due to the step pay scale development to allow for higher salaries for those people completing classes at a junior college and/or an A. A. Degree (2).

9. Several of the department heads stated that new programs were begun because there were some:

- Money available
- Other junior colleges had started the program and the junior college wanted to keep up with the others (3).

10. Development of an occupational program in a new versus an established institution.

A. Established Institution

(1) In the development of a new program such as Law Enforcement, Dental Assistants, Police Science, Inhalation Therapy, and other areas such as these in an established institution, the Dean of Occupational Education does not have anyone to turn to in gathering data to substantiate the need for this new type of program, or to develop the courses. Therefore, the occupational dean must run the surveys and put the courses together. (8).

(2) In the development of a new but related program such as Mid-Management, the dean can rely on the department chairman and faculty to run a survey and put the courses together. In the development of related programs, usually many faculty members have the necessary competence to help run the survey and to put the courses together: whereas, in the development of a new program the faculty members either are not interested in the unrelated area or do not have the necessary occupational competence and desire to help develop these particular courses. (7)

B. New Institution

(1) In a new institution, in many instances, it was pointed out to me that the President and either the Dean of Instruction, or the President and maybe the Dean of Pupil Personnel Services had put many of the different programs and courses together with the use of an advisory committee. It was also pointed out to me that as a result of this type of procedure, many of the courses and programs had to be completely revamped when instructors were brought on board to teach these particular program areas. Many deans and department chairmen stated that there was a great need to hire faculty and especially program coordinators ahead of time to allow them time to revamp the particular classes and/or to even help establish the program and classes and to allow them sufficient time to order instructional materials in preparation for the opening of classes. (8).

11. Instructors or Program Coordinators should be hired at least six months before students enroll for classes. Ideally, staff should be on board to help develop the new occupational program. (5)

12. It is easier to establish programs than to evaluate them (3).

13. It is very difficult to follow up graduates and drop outs; especially after the graduate's first job. The reason for this, it was pointed out, is that the graduates do not respond any longer to surveys after their initial job. (2)

14. Some junior colleges are using a decision-making model and/or a systematic written procedure for program development and evaluation. (9)

15. When doing a survey, it is better if the forms are initiated and returned to a professional association of the members being surveyed than to the junior college initiating the survey (4).

16. One administrator pointed out that there is much merit in the involvement of the faculty and advisory committee members of a particular institution in the development of manpower surveys and other instruments in the establishment of a new program. He stated that without the initial involvement, it is very hard to involve people later on in program and course development and to generate interest and commitment to the program. The administrator went further and cautioned that the providing of instruments to community and junior colleges for their use should be prefaced with SAMPLE ONLY. He pointed out that it is important that the junior college personnel use the instruments only as a guide to develop their own instruments. If the personnel use an already existing instrument from another college, it may not be fully appropriate for one thing and by so doing may result in the college's inability to involve community and faculty members at a later date.

17. There is a rapid proliferation of courses by the many different community and junior colleges. The State has to slow down this trend, which may mean the removal of the 15 per cent requirement for occupational programs, or else change the reimbursement policies.

18. The personnel at one inner city college indicated that their occupational programs are more technically oriented than vocationally oriented. Most of their students who receive a two-year degree are interested in obtaining a four-year degree (1).

19. In the development of certain specialized programs such as nursing and inhalation therapy, a person developing a new program should be aware that these occupations have their own special accrediting agencies and the criteria for program development of these agencies must be met in the establishment of the program. If these criteria are not met, the State Board will turn down the program development request. Therefore, in the development of the systems model, the staff should account not only for the Vocational Board or the Illinois Junior College Board, but also for the different specialized accrediting agencies.

20. In the establishment of occupational programs one needs to utilize an active advisory committee (6). One administrator pointed out that in the development of a Police Science Program, advisory committee members should be composed of the following: from the judiciary bar association, all law enforcement agencies such as the sheriff's department, chiefs of police, FBI, attorneys representing the public defender and a district attorney, police commissioners, and people from the college who are interested in law enforcement.

21. Several administrators stated that they started to develop a child care program, but they did not proceed because they found that graduates could not make a living in the different child care occupations. They stated the same is true for an A.A. Degree in other health areas and public service areas. They stated that "we would be recruiting for poverty." One administrator also stated that the same was true with an A. A. Degree in Ecology (4).

22. The reason for the failure of the Chemical Technology Program was pointed out as being hard to recruit students and that the students usually will drop the program. Most of the institutions in the state have not filled the second year of the program ever since its inception. Additional comments were that if a student were smart enough to complete an A. A. Degree in Chemical Technology, he usually would go ahead and complete a four-year degree, and; therefore, not even enroll in this particular two-year program (3).

23. Many of the deans were enthusiastic about our model and indicated that they are having trouble determining manpower needs, both at the local and regional level and at the state level. They stated that they cannot obtain usable manpower data from the Illinois Employment Service. One stated, "We need a statewide system for manpower data collection."

24. It was pointed out that the AMA prefers payment of costs only to off-campus personnel and not pay large contractual amounts in the running of inhalation therapy programs.

25. A lack of money and personnel prevents many manpower surveys from being conducted (5).

26. The personnel at one college pointed out that with the present administrative structure of the central office and the branch separate colleges with a direct tie up, it takes approximately two years to get a new program approved. Such an administrative arrangement stymies both the development and evaluation of occupational programs.

CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

This chapter describes the summary of major findings, conclusions which can be made from the findings, and implications of the findings and conclusions toward a systems approach to curriculum development and evaluation in occupational education.

Summary of Major Findings

The following is a summary of the major findings:

Characteristics of the Sample

1. Fifty per cent of the institutions were less than five years of age.
2. Over fifty per cent of the institutions have been at their present site for two years or less and 88 per cent have been at their present site for five years or less.
3. Eight of the 27 colleges were located in rural areas, five were located in a medium-sized city (25 - 100,000 population), and four were located in a large city (over 100,000).
4. The enrollments of the colleges ranged from an FTE of 501 to over 4,500 with over fifty per cent having an enrollment of less than 2000 FTE.
5. Nine institutions had only rural and suburban students in attendance, five had rural, suburban, and urban, and five had rural, suburban, urban, and innercity students in attendance.

6. The faculty at over two-thirds of the different colleges were neither organized into a union nor a teacher's association. The majority of faculty at seven colleges (approximately 25%) belonged to a union.
7. A total of 49 respondents were interviewed of which two were deans of instruction, 23 were occupational deans, three were occupational department heads, four were occupational division heads, 14 were directors of specific programs and three were instructors. Twenty-seven other college personnel were also visited. Twenty-seven of the respondents (55%) were in their present position for two years or less and only one respondent was in his present position for up to seven years.
8. The eight occupational programs included in the sample were: agriculture business, business data processing -- key punching, marketing mid-management, inhalation therapy, automotive mechanic, electronics technology, law enforcement, and child development.
9. Ten of the programs were in their first year of operation, 15 were in their second year, 22 were in their third year, and one was in its fourth year of operation.

Survey Findings

Table 5.1 is a summary table which shows the activities completed and the resources utilized in occupational program development and evaluation. It was included here to facilitate reader understanding and is a tabulation of the totals from Tables 4.9 through 4.14. The following is a review of the findings.

Table 5.1

SUMMARY TABLE TO SHOW THE ACTIVITIES COMPLETED AND RESOURCES UTILIZED IN OCCUPATIONAL PROGRAM DEVELOPMENT AND EVALUATION

ITEM	Phase of Program Development					
	Program Identification Phase		Program & Course Development Phase		Program Evaluation Phase	
	No.	%	No.	%	No.	%
Activities Completed						
Completed Local Manpower Survey	26	54.2				
Looked At Old Manpower Survey Data	3	6.3				
Determined No. of Potential Target Population	5	10.4	1	2.1		
Determined Aspirations, Characteristics & Interests	1	2.1	1	2.1		
Completed Job Analysis Survey						
Looked At Programs In Other Institutions	4	8.3	34	70.8		
Recruited Staff	5	10.4	32	66.7		
Recruited Students			33	68.8		
Planned Facilities	6	12.5	21	43.8		
Determined What Equipment To Buy	1	2.1	1	2.1		
Hired Staff	2	4.2	30	62.5		
Completed Follow-up Survey of Graduates					15	31.3
Completed Survey of Drop-Outs					2	4.2
Asked Students To Evaluate Program					25	52.1
Evalution of Program					34	70.8
Evaluated Staff					5	10.4
Employer Evaluations					11	22.9
Determined A Budget	4	8.3	4	8.3		

TABLE 5.1 (Con't)

SUMMARY TABLE TO SHOW THE ACTIVITIES COMPLETED AND RESOURCES UTILIZED IN OCCUPATIONAL PROGRAM DEVELOPMENT AND EVALUATION

ITEM	Phase of Program Development					
	Program Identification Phase		Program & Course Development Phase		Program Evaluation Phase	
	No.	%	No.	%	No.	%
Resources Utilized						
Advisory Committee/Sub-Comm	39	81.3	45	93.8	38	79.2
Interested Parents	8	16.7				
Faculty	2	4.2	1	2.1		
Community Organizations						
Industrial Relations & Other Related Committees						
Interested Businessmen	19	39.6	3	6.3		
Union and Management Organizations						
State Consultants (Also AMA)	7	14.6	3	6.3	1	2.1
Students Expressed An Interest						
Feasibility Survey	4	8.3	1	2.1		
Curriculum Guidelines	1	2.1	6	12.5		
Manpower Data						
Local Money Available			4	8.3		
State and Federal Money Available						
Physical Facilities Available						
Consultants from Other Institutions	2	4.2	2	4.2		
Industry Taught A Seminar	2	4.2				

Program Identification Phase

1. A local manpower survey was completed in the establishment of 26 (54%) of the different occupational programs and three programs (6.3%) looked at old manpower survey data.
2. The number of potential target population was determined in the establishment of five (10.4%) of the occupational programs.
3. The aspirations, characteristics and interests of the potential target population was determined for one program area.
4. During the program identification phase, four (8.3%) looked at programs in other institutions, one developed specific courses, five (10.4%) recruited staff, and two (4.2%) hired staff, six (12.5%) planned facilities and one determined what equipment to buy.
5. Advisory committees and/or sub-committees were utilized in the establishment of 39 (81.3%) of the occupational programs. In addition, the following had inputs into the program identification phase: interested businessmen and/or professional personnel 19 (39.6%); interested parents 8 (16.7%) and state consultants 7 (14.6%).
6. Curriculum guidelines were utilized by one institution and the institutional feasibility survey was used by four (8.3%) during the program identification phase in the establishment of occupational programs.

Program and Course Development Phase

7. Programs in other institutions were either reviewed or studied in the establishment of thirty-four (70.8%) of the different occupational programs.

8. The number of potential target population was determined for one program area and the aspirations, characteristics, and interests of the potential target population was determined for another program area during the program and course development phase.
9. Staff were recruited for thirty-two (66.7%) of the program areas and students were recruited for thirty-three (68.8%) of the program areas during the program development phase.
10. Staff were hired in the establishment of thirty (62.5%) of the occupational programs.
11. Facilities were planned in the establishment of twenty-one (43.8%) of the program areas, a budget was determined for four (8.3%) of the program areas, and the equipment to buy was determined for one program area during the program and course development phase.
12. Advisory committees and/or sub-committees were utilized during the program development phase in the establishment of forty-five (93.8%) of the occupational programs. In addition, interested businessmen were utilized in three (6.3%) of the program areas; state consultants in three (6.3%) of the program areas; consultants from the institutions in two (4.2%) of the program areas; and faculty in one program area.
13. Curriculum guidelines were utilized in the establishment of six (12.5%) of the different occupational programs.
14. The local money available was determined by four program areas (8.3%) during the program development phase in the establishment of occupational programs.

Program Evaluation Phase

15. Personnel of thirty-four (70.8%) of the occupational programs completed some type of program evaluation.

16. Students evaluated twenty-five (52.1%) of the occupational programs.

17. Follow-up surveys were completed of graduates of fifteen (31.3%) of the occupational programs.

18. Employer evaluations were completed on those occupational programs where students were placed for cooperative work experience.

19. A survey of drop-outs was completed by two (4.2%) of the occupational programs.

20. Advisory committees were utilized in some type of capacity in evaluating thirty-eight (79.2%) of the occupational programs and state consultants were utilized to evaluate one program.

Other Survey Findings

21. Twenty or 41.6% of the ideas for the development of an occupational program came from different resources such as interested businessmen or professional personnel. Ten or 20.8% of the ideas for program development came from the occupational dean.

22. Personnel at nine colleges (20%) are following some type of written guidelines in the development of occupational programs.

23. Personnel at ten colleges (22%) have developed guidelines for the use of advisory committees.

24. In free response significant numbers of junior or community college personnel indicated:

    A. There is a need for occupational analyses and skills surveys from a state level.

    B. There is a great need for a systematic system for both program development and evaluation of occupational programs.

C. The systems model should anticipate future jobs.

D. An expert or specialist should be hired to help with program development.

E. Of primary importance in the development of an occupational program is the needs of the students and the needs of the people with whom the graduates will work.

F. New occupational programs were begun because there was:

(1) Money available, and

(2) Because other junior and community colleges had started a new program and they wanted to keep up with the others.

G. In the development of a new occupational program at an established institution, the dean of occupational studies does not have anyone to turn to in the development of the program.

H. In the development of a new but related occupational program in an established institution, the dean of occupational studies can rely on his division or department heads or faculty to run the necessary surveys and to develop the program and courses.

I. In a new institution, there is a need to hire occupationally competent people to assist with program and course development.

J. Instructors or program coordinators should be hired at least six months before students enroll for class.

K. It is very difficult to evaluate programs.

L. It is difficult to follow-up graduates.

M. When completing a survey, it is better if the forms are initiated and returned to the professional association of the members being surveyed.

N. There is merit in involving staff and advisory committees in the development of surveys, programs, courses, etc., and to use the sample surveys only as a guide.

O. There is a rapid proliferation of occupational courses.

P. Many deans are having trouble obtaining valid and reliable manpower supply and demand data.

Q. A lack of money and personnel prevents some manpower surveys from being conducted.

Conclusions and Implications

The following conclusions were drawn from the findings. The implications are based on the conclusions drawn from the data and on the recommendations of a jury of experts who rated activities obtained from the literature as to their importance. The data gathered in this study was not rated as to importance since the jury and the many different consultants indicated that the list of items amassed were "ideal" to follow in occupational program identification, development and evaluation. Therefore, comparing the activities and resources completed and/or utilized by the Illinois program planners with the ideal provides one a bases for drawing implications for occupational program planning and evaluation.

The implications listed below have been addressed in the preparation of the "Guidelines for Occupational Program Identification" and "Activity Manual for Occupational Program Identification" for use by local school administrators or occupational curriculum planners in occupational curriculum development and evaluation as prepared by the Illinois Occupation Curriculum Project.

The conclusions and implications of the study are:

1. More junior and community colleges should complete a manpower survey as a survey was completed in the establishment of 54.2% of the programs. In addition, personnel did look at old manpower survey data in the development of six per cent of the programs.

   Implication -- Without adequately assessing the manpower need with recent supply and demand data; the program planner is unable to adequately determine whether the need is sufficient to justify a new program or program change. In addition, the program planner is unable to determine priorities for program development without an adequate assessment of the need for the different occupational areas.

2. A concerted effort should be made to determine the potential target population as personnel in only 10.4% of the programs developed considered this item. In addition, more emphasis should be placed on determining the aspirations, characteristics and interests of the potential students as personnel in only 4.2% of the new occupational programs addressed themselves to this item.

   Implication -- Curriculum planners need to more accurately assess the potential number of students desiring training for a specific occupational area as well as the unique characteristics these students possess, as a basis for program development or improvement.

3. Job analysis surveys should be completed or utilized in occupational program planning. None of the programs included in this study utilized a job analysis survey as a means of gathering data for program development.

Implication -- Job analyses are recognized in the literature as a very legitimate and important technique for use in occupational program development. Many local school administrators indicated they had neither the time or expertise to complete such analyses.

Assistance should be available to local curriculum planners to facilitate the use of the job analysis technique. Some states have established a statewide mechanism to produce job analysis data for use in program planning by all institutions.

4. In the development of occupational programs and courses a majority of the personnel establishing a new program (70.8%) had looked at programs or reviewed programs of other institutions during the program development phase. It may be concluded that this is one of the primary methods by which junior college personnel determine the courses to include in their new programs.

Implication -- The willingness of curriculum planners to rely heavily on what is done in other institutions raises a serious concern for the extent to which programs are being established to serve local needs. In most instances this is due to the lack of a systematic planning process to gather local data for use in the program development.

Local school administrators should have adequate guidelines available to assist them in rationally and systematically monitoring local needs as a basis for program development and improvement.

5. Very little is being done to monitor occupational program drop-outs as college personnel in only two programs (4.2%) systematically surveyed these students.

Implication -- Opinions and judgments systematically gathered from drop-outs may give curriculum planners valuable tips for improving ongoing programs and/or providing suggestions for new occupational programs. Ultimately, this means of program evaluation should have a marked effect on the relevance of any occupational program.

6. Not all junior / colleges have developed a plan for systematically following up graduates, and personnel in only 31% of the programs had completed a follow-up survey.

(It is recognized that many of the programs studied were new and have very few if any graduates; however, other programs had graduates and a follow-up had not been completed on these students).

Implication -- All junior and community colleges should develop a plan for the systematic follow-up of program graduates. Follow-up studies are a State requirement and they provide a valuable input for occupational program development and evaluation.

7. In the identification, development and evaluation of occupational programs, advisory committees were utilized 81.3%, 93.8%, and 79.2% respectively. It may be concluded that advisory committees are one of the primary methods by which junior college personnel: (a) Identify occupational program areas; (b) Determine the courses to include in their new programs; (c) Evaluate the new programs.

Implication -- The extent to which occupational program planners utilized advisory committees for the identification, development, and evaluation of occupational programs demonstrates the contribution that such committees make. However, it seems apparent that in most

cases better use could be made of advisory committees were the curriculum planner in a position to provide adequate data for consideration, i.e., manpower survey data, follow-up of drop-outs and graduates, and job analysis data. Indications were that few of the programs studied were making use of such data and consequently advisory committee members are called upon to make recommendations on the basis of feeling as opposed to fact.

8. Curriculum guidelines are not being utilized to a great extent in the development of occupational programs as personnel in only seven programs (16.6%) had reported using them.

   Implication -- Many professional, governmental, and industrial agencies have prepared guidelines for the establishment of specific occupational programs. These guidelines are excellent sources of information and have been developed by knowledgeable people in business, industry, and the education profession. Guidelines are available from the U.S. Office of Education, The American Association of Junior Colleges, The Center For Vocational-Technical Education, The Ohio State University and most businesses and associations such as the Automobile and Manufacturer's Association. Local school and junior college administrators need to be aware of these guidelines and have them available for use in program planning.

9. Some junior college personnel indicated difficulty in determining an accurate budget for occupational programs as a detailed budget was determined for only 8 (16.7%) of the occupational programs.

Implication -- With increased concern for financial accountability a more thorough and adequate job of projecting resources for program development and implementation will have to be accomplished by school administrators.

10. More people (resources) should have inputs into the planning of occupational programs. Few of the studied institutions reported utilizing community organizations, industrial relations committees or union and management organizations and only 9 (16.7%) of the programs elicited opinions from interested parents. The different institutions did report the utilization of businessmen and professional personnel from different organizations.
Implication -- If occupational programs are to be operated in the context of the community or district, it is extremely important that school personnel maintain contacts and a dialogue with parents, students, businesses, associations, unions, etc. within a community.

11. Most of the decisions pertaining to occupational program identification and development were made by the occupational dean.
Implication -- Involvement of peers, division and/or department heads and faculty in program identification, development, and evaluation can lead to a better understanding of the importance and relevancy of occupational education programs. In addition, by delegating tasks to different members of the staff will free up more time for planning by the dean and will facilitate appropriate involvement of staff in occupational program planning, development, and evaluation.

12. With the rapid growth of junior and community colleges and the resultant growth of new occupational programs and courses, the responsibility for program development and evaluation has fallen on the shoulders of a few administrators within an institution. Much of this has been the result of budgetary problems. It is expected that this would continue to be the case in program development.

Implication -- Administrators need to be provided with a systematic means for occupational program development, modification or evaluation to allow them to do a better job in using their time and talent and the institutions money in making decisions pertaining to developing, executing and evaluating programs.

13. A lack of local resources prevents many local surveys from being completed. A systematic system for obtaining this data should help the local decision-maker in obtaining valid and reliable data.

Implication -- The State Board of Vocational Education and Rehabilitation should pursue the idea of developing a statewide information system which would supply local decision-makers with valid and reliable data and also provide state planners data upon which to make decisions concerning the establishment of new occupational programs or the modification or termination of existing occupational programs.

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APPENDICES

A P P E N D I X A

FACTORS AND PRACTICES IDENTIFIED FROM THE LITERATURE TO CONSIDER IN OCCUPATIONAL CURRICULUM DEVELOPMENT AND EVALUATION

A. Program Identification

1. Manpower Needs Information -- local, regional and state; present and future.

   a. The Occupational Employment Situation (business, industrial, and public service)

      (1) How many new persons are usually employed in each occupation; male, female; full-time, part-time?

      (2) What are the minimum and maximum ages of persons in each occupation?

      (3) How many persons have been separated from their employment in each occupation within the past 12 months? (does not include temporary layoffs)

         (a) Identify labor turnover

         (b) New positions

      (4) In what occupations are there current shortages of workers? What are the reasons?

      (5) In what occupations are there qualified workers who are unemployed? What are the reasons?

      (6) Which occupations are the most important to the economy of the community and the region?

      (7) Which occupations are growing in demand and for which is the demand diminishing?

      (8) Expansion and recession of occupations within the labor force and relationship to GNP.

(9) For what jobs would employers prefer employees to have specific training prior to initial employment?

(10) What kinds of occupational training do the firms think the schools should give?

(11) How many new workers have been imported from another community during the past twelve months?

(12) How many residents in the community commute to work in another community? What are the jobs in which these persons are employed and what is the number employed in each job?

(13) How and where do employers recruit new employees?

(14) What are the needs in terms of retraining and upgrading present employees?

(15) What are the needs for new and expanding industry?

(16)

b. Agriculture

(1) What is the number of full-time, established farm operators in the community and state?

(2) What is the number of persons employed at another occupation part-time and operating a farm part-time?

(3) What is the number of young farmers not yet fully established as sole operators of farms? Number working in partnership, number at home working for wages, etc?

(4) What is the number of persons employed on the farms full-time?

(5) What is the number and percent of turnover each year? What are the trends in turnover?

c. Homemaking

(1) What is the number of homes in the community?

(2) What is the number of married women working?

(3) What is the number of unmarried women working?

(4) What is the number of out-of-school young women at home and not working for wages?

2. Economic and Business Indicators for the State and Locality

a. Economic Data of Industries -- Departments of Commerce

(1) Average size of firm

(a) number of firms (19___)

(b) number of employees (19___)

(2) Average hourly earnings

(a) production workers (19__)

(3) Stability

(a) average annual manhours worked (19___)

(4) Growth

(a) percent by employment (19___ through 19___)

(5) Capital Investment

(a) total (19___)

(b) per employee (19___)

(6) Value Added

(a) per worker (19___)

b. Department of Labor (Employment Data)

(1) Number and percent employed in each occupational field.

(2) Number and percent of additional workers hired each year in each occupational field.

(3) Projected employment in 19___ by occupational field.

(a) annual employment

(b) annual withdrawal

(c) replacement rates by occupational classification

(d) annual demand of existing employers by occupational field

c. Sources of Data

(1) State and local employment agencies

(2) State and local industrial development groups

(3) Local housing authority

(4) State and local planning groups

(5) Municipal zoning groups

(6) Agricultural extension service personnel

(7) Local realtors

(8) Chamber of Commerce

(9) Local utilities (electricity, telephone, water, etc.)

(10) Local service agencies

(11) Elected public officials

(12) Bureau of Business and Econimic Research of Public Universities

(13) Householder polls

(14) Officers of local civic clubs (League of Women Voters, etc.)

(15) Local general advisory committee for occupational education (not craft committees)

(16) Personnel or industrial relations department of area industries

(17) Public agencies - health, welfare, farm, etc.

(18) Businesses

(19) Industrial firms

(20) Service firms - drycleaning, tree service, etc.

(21) Institutions - mentally and physically handicapped, correctional, etc.

(22) Public servants - policemen, firemen, etc.

(23) Federal and State manpower reports

(24) US Census Reports

(25) State educational agencies

(26) Bureau of Vital Statistics

(27) Surveys

3. Demographic Nature of the State and Community

a. Size of the population and density

b. Age, stratification and sex of the population

c. (Male-female ratio)

d. Income of the population

e. Source of income

f. Education of the population

g. Percentage of the population gainfully employed

h. Occupations engaged in by the population

i. Trends in occupational employment

j. Population mobility

k. Birth rates (births minus deaths)

l. Socio-Economic, Ethnic, Racial Characteristics

4. Power Structure of the Community -- community leaders (official) and influential community leaders (unofficial)

5. Community Group -- views and goals -- philosophy toward education and occupational education

6. Potential Student Clientele

a. Age

b. Sex

c. Present educational interests

d. Father's and mother's occupations

e. Plans for college and occupational interests beyond high school

f. Types of course interests

g. Parents' educational background

7. Student Interests and Needs

a. What are the secondary school enrollments in each occupational and practical arts course?

b. What is the number, percentage, and occupational choices of school drop-outs over the past 10 years?

c. What are the occupational choices of students currently enrolled?

d. What are the students' plans after high school graduation?

e. What are the student aspirations?

8. Parental Aspirations and Preferences

9. Community Resources

10. Political Implications and Political Forces

B. Program Development

1. Definition of Clientele (characteristics of students interested in the program)

a. Number interested in attending a junior college

b. Age

c. Sex

d. Attitudes

e. Interests

f. Abilities

g. Prior Education

h. Needs of each group that may be served

(1) students

(2) adults

(3) disadvantaged

2. Development of the Curriculum

a. Curricular content

b. Curricular context

(1) Purposes to be achieved

(a) to produce narrowly trained specialists

(b) to produce persons who are educated and who are occupationally competent

(c) to train for transfer and advancement

(d) to train for job entry only

(2) Specific courses developed

(3) Specific course objectives developed

3. Program and Course Planning

a. Various levels of courses for:

(1) skilled

(2) semi-skilled

(3) technical workers

b. Ability of students

(1) superior

(2) average

(3) below average

4. Determine the boundaries which have been established as an attendance area.

5. Collect current statistical data regarding the training and occupational education programs available in existing high schools within the attendance area.

6. Collect current statistical data regarding the offerings of occupational education programs in junior colleges within the area and the state. (especially of similar programs in the region)

7. Collect data concerning enrollment trends in grade schools, high schools, junior colleges, and senior colleges.

8. Financial Base of the District (which operations lend themselves to handling by the district with its financial base)

9. Instructional Materials

   a. Needed for the new program

   b. Kinds of materials available in terms of:

      (1) content

      (2) number

      (3) age

      (4) condition

      (5) quality

10. Facilities and Equipment

    a. Needed for the new program

    b. Kinds of facilities and equipment available in terms of:

        (1) variety

        (2) amount

        (3) condition

11. Characteristics of the Program Staff

    a. Age

    b. Work experience

    c. Teaching experience

    d. Teaching abilities

    e. Teacher availability

    f. Certification - requirements of the state

12. Sources of Support for the Program in Terms Of:

    a. Money

    b. Work stations

    c. College administrative attitude

    d. Industry attitude

    e. Community attitude

    f. Parental aspirations (which occupations are most likely to be accepted?)

13. Existing Occupational and Educational Offerings in the Junior College

14. Geographic Mobility of the Graduates

15. Union and Management Activities and Policies

16. Determine the legal basis and procedure that must be followed in order to establish a new program.
    a. Local -- formal and informal
    b. State -- formal and informal

17. Determine the limitations that are imposed by the state for funding a new program. Are there exceptions? Will they only fund several programs in the state?

18. Labor Needs
19. Current Federal and State Legislation which Affect Development and Operational Considerations
20. State Reimbursement
21. Planned Capital Outlay
    a. Construction costs - building and shop area size (sq. feet)
    b. Equipment costs
22. Operational Costs

23. Instructional Areas Being Considered

    a. Objectives

        (1) instructional

        (2) manpower development

        (3) administrative

24. Availability of Federal Aid and State Aid

25. Planned Capacity Enrollment

26. Estimated Opening Enrollment

27. Student Selection Procedure

28. Site Selection - justification

29. Board Members' Attitude

30. The Adult Education Program

31. What are the jobs for which organized training programs are being conducted by employers?

32. What other occupational-training agencies are there in the community? for what occupations?

    a. Availability for on-the-job work experience

    b. Availability to use equipment

33. How adequate are the programs and facilities of the junior college and other occupational education facilities on meeting the needs as revealed by the survey?

34. Advisory Committee Action

35. Acceptance by Employers

36. Future Career Possibiliti

37. Socio-Economic Value

38. Resources Cost per Student

39. School Organization
    a. Organized into the existing structure
    b. Proper administrative control
40. Community Context
41. Physical Plant
42. Personnel Services
    a. Counseling
    b. Finance
    c. Placement
43. Specially Tailored Courses in Related Subjects
44. Licensing - some occupations are licensed and graduates must be prepared to pass the licensing test
45. Accrediting
    a. State agencies
    b. Regional
    c. National

C. Program Implementation

1. Finalize curriculum format
2. Develop specific courses and course sequence
3. Develop specific course objectives
4. Identify instructional staff competencies needed and secure instructional staff
5. Scheduling
6. Specially tailored courses in related subjects
7. Recruitment of professional personnel
    a. Teachers recruited from business and industry with special training

b. College educated staff with industry background

c. Special teachers

d. Clerical staff

8. Terms of employment of professionsl personnel

9. Non-professional personnel

10. Transfer of credits

11. Equipment and audio-visual and curriculum materials

a. Hardware

b. Software

12. Regulations regarding the use of equipment

13. Financial aids for students

14. Consultant help

15. Records and reports

16. Public information and relations

a. To keep public informed

b. To attract students to a new program or existing program

c. Relationships with business, industry, government, and labor

17. Research and Development

a. Local funds earmarked for R & D

b. State and federal funds

18.

D. Program Execution

1. Check out the facilities and equipment

2. Receive the films, textbooks, and other audio-visual and curriculum materials

3. Students begin classes

   a. Number enrolled in program

   b. Number enrolled in each class

E. Program Evaluation

1. Transaction or process data would include the following:

   a. Specification of curricular content, sequences of courses, and learning experiences, time allocations, etc.

   b. Description of communication flow among participants and staff

   c. Participant observation data on courses and learning experiences

   d. Social climate in the program

   e. Descriptions of unintended events or variations

2. Outcome or product data would include the following:

   a. Student performance data on:

      (1) skills developed (motor, affective and cognitive)

      (2) student achievement in terms of course objectives

      (3) attitudes

      (4) ability to perform

      (5) effects on teachers

      (6) institutional effects

(Data would be obtained periodically throughout the program from teacher evaluations, self-evaluations, and special evaluations by the evaluator(s)).

   b. Changes in program staff

c. Description of products of the program: papers, books, and course guides

d. Follow-up studies of the program participants to determine their behavioral adequacy in job situations

e. Cost-benefit data of the program in terms of people, time, and dollars

3. Recycle

a. Adjustment

b. Improvement

4. In evaluating the program, the following should be done:

a. Develop the evaluation objectives -- the criteria and procedures for evaluation

b. Identify who will evaluate and what he will evaluate

c. Evaluation should be completed to:

(1) determine comparison between data and goals

(2) determine the effect of occupational education programs on:

(a) performance of graduate in industry

(b) employment and salary levels of graduates

(3) determine relative cost/effectiveness

d. Reports of the evaluation should be made to the governing boards.

APPENDIX B - 1

INITIAL SURVEY INSTRUMENTS

IDENTIFICATION OF FACTORS WHICH INFLUENCE CURRICULUM DECISION-MAKING

A Survey of Illinois Junior Colleges

Part I

Name of Respondent (faculty, deans, department heads, presidents):

_____

Title: _____

Institution: _____

Address: _____

_____

Phone: ( ) _____
area code

Total Years As An Educator		(5) 3. Total Years In Present Position	
0 - 3	_____(1)	0 - 3	_____(1)
4 - 6	_____(2)	4 - 6	_____(2)
7 - 10	_____(3)	7 - 10	_____(3)
11 - 15	_____(4)	11 - 15	_____(4)
Over 15	_____(5)	Over 15	_____(5)

e would like for you to trace the development of the new occupational program n chronological order from the first inception of the idea until implementation t your college. Please identify the people who were involved, decisions ade, etc., in initiating and implementing the new program.

ROGRAM IDENTIFICATION

.. Where did the request for a new program or curricula in occupational education originate from? Who initiated the request and what was his relationship to the institution? When was the request initiated?

(9) 5. What was your function or role in originating and developing the new program or curriculum?

(10) 6. Why was the request for a new program made?

(11) 7. What supporting data (data which showed a need) was used for beginning the program?

(12) 8. What was the source of the data? (If a survey, of whom and questions asked. Can we have a sample copy of the survey.)

(13) A. Specific Groups Sampled
When were they sampled?

(14) B. Sampling Technique Used

(15) C. Percentage of Return

(16-17) D. Step-by-Step Prodedure That Was Followed In Collecting and Analyzing The Supporting Data

(18-19) 9. Outline the institutional curriculum development and/or approval process that was followed in your institution in order to establish the new program.

10. What are your feelings about the administrative structure and the approval process in your institution? (please qualify the answer)

(20) A. Does it hinder change?

(21) B. Does it foster innovations?

(22) C. Are many of your new program ideas overridden?

(23) D. Is a reward system built into the administrative structure?

(24) E. Does the occupational dean or director report directly to the president? /__/Yes /__/No If no, who does he report to concerning administrative decisions related to curriculum development and evaluation?

(25-26) F. Do you like such a set-up? What would you recommend?

28) 11. Who supported the program? Identify people from the community, faculty, parents, and students.

30) 12. What role did the people identified in "11" above play in developing the program? Which individual(s) or group was the most influential?

32) 13a. What feasibility studies were conducted or considered from an institutional standpoint? (such as staff needed, cost of the program, student interest, resources available, etc.)

13b. How do you feel about the adequacy of the information with which you made your decisions to develop a new program?

PROGRAM DEVELOPMENT

33) 14a. What were the factors which caused the decision to develop the occupational program and who made the decision?

14b. What were the factors which caused the decision to implement the program and who made the decision? (Identify specific contributing factors.)

14c. Who determined the courses to be included in the program? Who is or was responsible for the program? When were these courses determined?

34) 15. How did the person in "14" determine the courses to include in the program?

35) 16. Who determined the course objectives and how were they determined?

36) 17. To what extent was an attempt made to relate the courses of the program to: a) the needs of the occupation; b) the role the graduate will operate in; and c) the tasks he will perform on the job?

(37) A. Who was responsible for this?

(38) B. How was it done?

39) 18. At what point in the establishment of the program (and how) was it determined how the program would be administered in the institution?

(40) A. How was the course sequence determined?

(41) B. How was it determined when to offer the classes; i.e., day or evening classes, etc.

42) 19. How was the instructional staff identified and who identified them?

43) 20. Who planned the instructional facilities? How were the facilities developed? Were they planned before the program? When were they planned?

21. Recruitment

(44) A. How were students recruited?

(45) B. Who was involved in the recruiting?

22. Students

(46) A. How many students were initially enrolled in the program?

(47) B. How many students are enrolled now?

(48) C. What is the projected enrollment?

(49) D. What is your drop-out rate (relative to the new program)?

PROGRAM EVALUATION

50) 23. What mechanisms were set up for on-going evaluation?

24. What provisions were made or what kind of continuing monitoring do different personnel do to see that the new occupational curriculum is related to the changing needs?

(51) A. Needs of Students

(52) B. Industry Needs

53) 25. Were manpower or follow-up surveys conducted? ☐ Yes ☐ No
If yes, whom did you survey?

(54-57) 26. Which tasks are most important for different people (i.e., instructors, department heads, deans, presidents) in developing a new occupational education program?

(58-59) 27. Of all the decisions made in developing the new program in occupational education, which decisions were the most critical (and by whom). In other words, which decisions if not made would have resulted in the non-successful establishment of the new program?

(60) 28. What pressure groups affected each of the critical decisions?

(61) 29. How do you identify community leaders (opinion leaders) in your district?

30. How do you feel about the considerations being given by your junior college and others in the region concerning the development of programs? In other words, if another junior college in the region has a program to meet an established need, how does this affect your program development?

31. How would you characterize each of the following of your institution? (Please circle the number of your answer.)

Administrative Characteristics								
(62)	A.	Attitude Toward Curriculum Change	Highly Favorable 5	4	Favorable 3	2	Unfavorable 1
(63)	B.	Average Age of Administrative Staff	Over 50 Very Old 5	4	50 - 30 Middle-Aged 3	2	Under 30 Very Young 1
(64)	C.	Attitude Toward Curriculum Decision-Making	Authoritarian 5	4	Democratic 3	2	Laissez-faire 1
(65)	D.	Attitude Toward Occupational Education	Highly Favorable 5	4	Favorable 3	2	Unfavorable 1
(66)	E.	Attitude Toward Faculty	Highly Favorable 5	4	Favorable 3	2	Unfavorable 1
Faculty Characteristics								
(67)	A.	Attitude Toward Curriculum Change	Highly Favorable 5	4	Favorable 3	2	Unfavorable 1
(68)	B.	Average Age of Faculty	Over 50 Very Old 5	4	50 - 30 Middle-Aged 3	2	Under 30 Very Young 1
(69)	C.	Attitude Toward Administration	Highly Favorable 5	4	Favorable 3	2	Unfavorable 1
(70)	D.	Attitude Toward Occupational Education	Highly Favorable 5	4	Favorable 3	2	Unfavorable 1
(71)	E.	Unionization of Faculty	Strong Teacher Union 5	4	3	2	No Union 1
Occupational Education Faculty								
(72)	A.	Attitude Toward Curriculum Change	Highly Favorable 5	4	Favorable 3	2	Unfavorable 1
(73)	B.	Average Age of Faculty	Over 50 Very Old 5	4	50 - 30 Middle-Aged 3	2	Under 30 Very Young 1
(74)	C.	Attitude Toward Administration	Highly Favorable 5	4	Favorable 3	2	Unfavorable 1

A P P E N D I X B - 2

INITIAL SURVEY INSTRUMENTS

IDENTIFICATION OF FACTORS WHICH INFLUENCE CURRICULUM DECISION-MAKING

A Survey of Illinois Junior Colleges

Part II

To Be Completed By Deans and Department Heads

Attached is a compiled list from the literature of the practices and decisions considered by different occupational personnel in the development of an occupational education program. In completing this phase of the questionnaire, please follow these directions.

DIRECTIONS

1. Carefully read each of the practices and decisions and place a check mark in the column labeled CHECK IF DONE for each practice which you actually considered or performed in developing your new occupational education program.

2. After having identified the practices which you performed, return to the beginning of the list and indicate the importance of the practices which you checked and how important you feel the practices are in developing a new occupational education program.

   A. In the column labeled IMPORTANCE OF PRACTICES CHECKED, place the number (1 - 5) which most closely describes the importance that was necessary for you to put on each of the practices which you actually completed.

   B. In the column labeled IMPORTANCE OF PRACTICES TO CONSIDER, place the number (1 - 5) which most closely describes how important you feel each of the present practices is in developing an IDEAL occupational education program in a junior or community college. Please rate each one regardless of whether or not you actually followed or considered it in the development of your new program. Use the following importance scale in making your decisions:

Of Extreme Importance (5)	Those items that in your opinion are essential or crucial to the proper operation of the program; or in other words, absolutely necessary.
Of Considerable Importance (4)	Those items which have much importance but cannot be classified as absolutely necessary.
Of Some Importance (3)	Those items which can be classified as important but would only be performed if the time and effort needed for their completion would hinder the completion of items classified as extremely important or of considerable importance.
Of Limited Importance (2)	Those items which have some value but would have little effect upon the success of the overall program.
Of No Importance (1)	Those items which you feel should not be undertaken because they would bring no benefit to the program and in some cases they may have an undesirable effect.

3. At the end of any of the five major subdivisions, please add and rate any present practices you do or which you feel should be done and which are not listed.

IDENTIFICATION OF THE PRACTICES AND DECISIONS CONSIDERED IN OCCUPATIONAL EDUCATION CURRICULUM DEVELOPMENT, THE IMPORTANCE OF THE PRACTICES CONSIDERED, AND THE IMPORTANCE OF ALL PRACTICES LISTED

ctices and Decisions	Check If Done	Importance of Practices Checked	Importance of Practices to Consider
Program Identification Manpower Needs Information 1. Identification of Job Openings Per Year By Occupation a. labor turnover			
b. new positions			
2. Identification of Occupations With Current Shortages of Workers			
3. Identification of Needs In Terms of Re-training and Upgrading Present Employees			
4. Identification of Projected Job Openings Per Year By Occupation a. labor turnover			
b. new positions			
Economic and Business Indicators 1. Identification of the Growing and Expanding Occupations and Those For Which The Demand Is Diminishing			
2. Identification of the Rate of Growth of The Industries a. in terms of numbers employed			
b. in terms of GNP or value added			
c. in terms of capital investment			
3. Identification of the Stability of The Occupations Based Upon Average Annual Manhours Worked (steady employment throughout the year)			

·actices and Decisions	Check If Done	Importance of Practices Checked	Importance of Practices to Consider
At What Levels Were the Manpower Needs And Economic and Business Indicator Data (A & B) Identified? (check one) 1. At The Local Level Only			
2. At The Regional Level Only			
3. At The Local and Regional Level			
4. At The State Level Only			
5. At The Local, Regional, and State Level			
6. At The National Level Only			
7. At The Regional and National Level Only			
8. At The Local, Regional, State, and National Level			
Others: (please list) 9.			
What Were the Sources of Your Data in A & B? 1. Formal Manpower Surveys of Local Businesses and Industries			
2. State and Local Employment Agencies			
3. Local Occupational Advisory Committees			
4. Visited With Several Personnel Directors of Area Industries			
5. Reviewed Federal and State Manpower Reports			
6. Reviewed US Census Reports			
7. From Community Special Interest Groups			
8. From Faculty Interest Groups			
9. From Groups of Interested Parents			
10. From Community Pressure Groups			
From the Board of Trustees			

ctices and Decisions	Check If Done	Importance of Practices Checked	Importance of Practices to Consider
2. From Interested Educators			
thers: (please list) 3.			
4.			
5.			
Demographic Nature of the Community and Junior College District -- Determination of: 1. Number of People Residing in the District			
2. Age Stratification and Sex of the Population			
3. Income of the Population			
4. Source of Income of the Residents			
5. Education of the Population			
6. Percentage of the Population Gainfully Employed			
7. Population Mobility			
8. Ethnic and Racial Characteristics			
9. Birth Rates (Births Minus Deaths)			
Power Structure of the Community (other than political) -- Identification of: 1. Union and Management Activities and Policies to Make Sure New Program Will Be Consistent With Their Philosophy			
2. Civic Leaders			
3. Chamber of Commerce Leaders			
4. Manufacturing Association Leaders			
5. Community Opinion Leaders			
Others: (please list)			

actices and Decisions	Check If Done	Importance of Practices Checked	Importance of Practices to Consider
Determination of the Political Implications And Political Forces of the Community And the State			
Community Views and Goals -- Determination of: 1. General Citizenry Philosophy Toward Education			
2. General Citizenry Philosophy Toward Occupational Education			
Potential Student Clientele -- Determination of: 1. Age			
2. Sex			
3. Present Educational Interests			
4. Student Aspirations			
5. Types of Course Interests			
6. Plans for College and Occupational Interests Beyond High School			
7. Father's and Mother's Occupations			
8. Parents' Educational Background			
9. Parental Aspirations and Preferences			
10. Number Interested in Attending Junior College			
Identification of Possible Programs -- Factors To Consider: 1. Determination of the Adequacy of the Existing Programs and Facilities of the Junior College and Other Occupational Education Facilities in the Region on Meeting the Needs as Revealed by the Survey			
2. Determination of Compatibility With Existing Occupational And Educational Offerings, Facilities, Equipment, and Courses in the Junior College			

ractices and Decisions	Check If Done	Importance of Practices Checked	Importance of Practices to Consider
3. Identification of Other Occupational Training Agencies in the Community and/or Region			
4. Collection of Current Statistical Data Regarding the Enrollment and Training and Occupational Education Programs Available in Existing Secondary Schools (public and/or private) Within the Attendance Area			
5. Collection of Current Statistical Data Regarding the Enrollment Offerings of Occupational Education Programs in Junior Colleges and Other Post-Secondary Institutions Within the Area and the State (especially of similar programs in the region)			
6. Determination of Current Federal and State Legislation Which Affect Development And Operational Considerations			
7. Review of State Reimbursement Procedures			
8. Determination of Availability of Federal and State Aid			
9. Determination of Limitations That Are Imposed By the State for Funding This Program (Are there exceptions? Will they only fund several programs in the state?) a. registry or licensing requirements			
b. accreditation requirements (1) state agencies			
(2) regional agencies			
(3) national agencies			
10. Determination of the General Requirements of the Program a. development of a description of the total credits necessary for completion of the program for certificate or associate degree			

actices and Decisions	Check If Done	Importance of Practices Checked	Importance of Practices to Consider
b. determination of duration of program			
c. determination of planned capacity enrollment			
d. determination of needed licensing for graduate (some occupations are licensed and graduates must be prepared to pass the licensing test)			
11. Determination of Legal Basis And Procedure That Must Be Followed In Order To Establish A New Program a. local -- formal and informal			
b. state -- formal and informal			
12. Determination of Planned Capital Outlay a. construction costs			
b. equipment costs			
13. Determination of Operational Costs a. direct costs			
b. indirect costs			
14. Determination of Cost Per Student Credit Hour of Instruction			
15. Determination of Initial Cost to Implement the Program			
16. Determination of Financial Resources Assignable To This Program			
17. Determination of Supporting Personnel Services And Other Services Needed And Available a. counseling			
b. financial aids			
c. placement			
d. other special services needed			

ıctices and Decisions	Check If Done	Importance of Practices Checked	Importance of Practices to Consider
Feasibility Test 1. Is the given program compatible with the junior college philosophy?			
2. Is there sufficient support for and acceptance of the program from the following: a. college administrative staff			
b. local industries			
c. local community			
d. local students			
e. labor organizations			
f. junior college governing board members			
3. Is there available sufficient financial resources, classrooms, laboratories, and equipment, or can they be obtained?			
4. Is there a legitimate need for trained manpower in this occupation now and in the immediate future?			
5. What is industry and other schools in the local district, the region, or the State of Illinois doing to supply employable people for satisfying the given need?			
6. Is it possible for the junior college to employ a qualified instructional staff for execution of the occupational program?			
7. Is there sufficient student interest or can it be generated for this type of program?			
8. After completion of the program, can a graduate be placed in a position of adequate renumeration?			
ıers: (please list)			

...ctices and Decisions	Check If Done	Importance of Practices Checked	Importance of Practices to Consider
Program Development Definition of Potential Clientele (characteristics of the students interested in the new occupational program other than those listed ... p. 4) -- Identification of: 1. Abilities of the Students			
2. Prior Education			
3. Needs of Each Group That May Be Served a. students			
b. adults			
c. disadvantaged			
Development of Program Objectives -- Factors To Consider: 1. Amount of Technical Knowledge and Skills Needed By the Persons in Area of Intended Training In Order To Obtain An Entry-Level Job			
2. Amount of General Education Necessary to Work in the Particular Role			
3. Licensing, Certification, or Union Standards			
4. Consideration of Self-Improvement For Technological Advancement			
5. Job Cluster Concept			
Development of Tentative Curriculum Format -- Determination of: 1. Various Levels of Courses For: a. skilled			
b. semi-skilled			
c. technical			

ctices and Decisions	Check If Done	Importance of Practices Checked	Importance of Practices to Consider
2. General Ability of Students a. superior			
b. average			
c. below average			
3. Purposes to be Achieved With the Curriculum a. to produce narrowly-trained specialists (certificate)			
b. to produce persons who are educated and who are occupationally competent (AA Degree)			
c. to train for transfer and advancement			
d. to train for job entry only			
4. Resources Utilized in Curriculum Development a. state and national curriculum guidelines			
b. State Department of Vocational Education Consultants			
c. Professional Association Consultants			
d. occupational personnel from other junior colleges			
e. occupational curriculums from other junior colleges			
Instructional Materials (software) Needed For the New Program -- Identification of: 1. Instructional Methodology and Preference			
2. Materials Commercially Available or Locally Produced			
3. Inventory of Materials on Hand			
Others: (please list) 4.			

actices and Decisions	Check If Done	Importance of Practices Checked	Importance of Practices to Consider
Facilities and Equipment (hardware) Needed For the New Program -- Identification of: 1. Equipment Needed Per Student			
2. Number of Student Work Stations			
3. Newness and Relevancy of the Equipment			
4. Source and Cost of Equipment			
5. Time Lag (time until delivery)			
6. Feasibility of Fabricating Own Equipment			
Others: (please list) 7.			
8.			
Characteristics of the Program Staff Available -- Determination of: 1. Age			
2. Relevant Work Experience			
3. Recent Work Experience			
4. Teaching Experience			
5. Teaching Abilities			
6. Teacher Availability			
7. Educational Requirements -- degreed or non-degreed			
8. Cost of Instructors			
Identification of Specific Courses and Specific Course Objectives -- Utilization of: 1. State and National Curriculum Guidelines			
2. State Department of Vocational Education Consultants			
3. Professional Association Consultants			

ıctices and Decisions	Check If Done	Importance of Practices Checked	Importance of Practices to Consider
4. Occupational Personnel From Other Junior Colleges			
5. Occupational Curricula From Other Junior Colleges			
6. Local Occupation Education Faculty			
Others: (please list) 7.			
8.			
Follow-Up Records and Reports 1. Development of Mechanism For Follow-up of: a. graduates			
b. drop-outs			
2. Determination of Information To Be Kept on Students a. grades			
b. student progress			
c. job completion record			
Others: (please list) 3.			
Who were consulted in determining the equipment to buy? (hardware and software) 1. Consultants			
2. Occupational Faculty			
3. Occupational Dean			
4. Company Representative			
5. Personnel With Spec Sheets From Other Programs			
hers: (please list)			

ractices and Decisions	Check If Done	Importance of Practices Checked	Importance of Practices to Consider
. Program Implementation			
. Finalize the Curriculum Format -- Determination of:			
1. Specific Courses to Include			
2. Credits Allotted For Each Course			
3. Time Spent in Laboratory and Lecture			
4. Course Scheduling			
5. Instructors Needed			
6. Sequence of Course Completion			
. Securing Instructional Staff and Support Personnel (clerical and technicians) -- Determination of:			
1. Number of Staff Needed Based Upon the Estimate of Opening Enrollment			
2. Number of Technicians and Clerical Staff Needed Per Instructor			
3. Number of Counselors and Special Services Personnel Needed			
4. Whether to Recruit Nationwide Through Colleges and Universities or Through Businesses and Industries			
. Student Selection Procedures -- Determination of Requirements:			
1. Past Education			
2. Interest in the Occupation			
3. Aptitude and Ability			
Student Recruitment -- Public Information and Relations Program:			
1. Design Recruitment Brochure			
2. Contact Area Counselors			

actices and Decisions	Check If Done	Importance of Practices Checked	Importance of Practices to Consider
3. Use Media -- Radio, TV, Newspaper			
4. Plan Special Open-House			
5. Send Letters to Key Persons In Business and Industry			
6. Visit High Schools and Meet With Counselors and Teachers			
hers: (please list)			
Program Execution -- Determination of: Whether Equipment Has Been Received and Readied For Classroom Use			
Whether Educational Films and Other Audio-Visual and Curriculum Materials Has Been Received, Catalogued, and Readied for Classroom Use			
. Whether Student Programs Have Been Written			
. Whether Students Have Been Counseled and Placed in Appropriate Courses			
. Whether Personnel Have Been Hired			
. Whether Physical Facilities Have Been Readied for Classroom Use			
thers: (please list)			
. Program Evaluation . Identification of Evaluation Objectives (criteria and procedures for evaluation) -- Determination of: 1. Who will evaluate?			
2. What will be evaluated?			
3. When?			
4. Records and Reports To Be Made			

Practices and Decisions	Check If Done	Importance of Practices Checked	Importance of Practices to Consider
5. How will evaluation be completed?			
B. Collection of Outcome or Product Data -- Determination of:			
1. Skills Developed (motor, affective, and cognitive)			
2. Student Achievement In Terms of Course Objectives			
3. Student Attitudes			
4. Performance of Graduate in Industry (follow-up survey)			
5. Number and Per Cent of Graduates Employed			
6. Salaries of Employed Graduates			
7. Determination of Relative Cost/ Effectiveness			
8. Cost Benefit Data of the Program To Student and Community in Terms of People, Time, and Dollars			
C. Application of Evaluation Information To:			
1. Adjust the Program			
2. Terminate the Program			

Is the procedure which was followed in setting up this new occupational program the same as is or was followed in setting up other occupational programs? ☐ Yes ☐ No

If no, what was different?

APPENDIX C

JURY OF EXPERTS

William Gooch) Richard Petrizzo)	College of DuPage
Don Green	Elgin Community College
Martin E. Leddy	Illinois Central College
John Hawse	Illinois Valley Community College
John Corradetti) Bob Jurgens) Joseph Borgen) Dwight Davis) David Anderson) Urban Oen)	Joliet Junior College
Robert Van Raes	Moraine Valley Community College
Clifton Matz	Parkland College
Ron Hallstrom	Rock Valley College
William E. Reynolds) James Galloway) Robert K. Gray) Ronald McCage)	State Board of Vocatical Education and Rehabilitation
Lee Thompson	Waubonsee Community College

COVER LETTER SENT TO JURY OF EXPERTS

JOLIET JUNIOR COLLEGE
DISTRICT 525

November 16, 1970

Dear Jury Member:

Joliet Junior College is conducting a research and development project in occupational education entitled: "The Development of Process Models for Decision-Making in Curriculum Development and Evaluation." The purpose of the project is to develop a model which can be used in developing occupational (vocational-technical) educational curriculums, especially at the junior college level.

One phase of the project is the identification of practices and decisions considered in occupational education curriculum development and evaluation. The purposes of this phase of the study are:

1. To identify the curriculum decisions made and the decision-making processes followed in junior colleges in Illinois at the program and the course level.
2. To identify how decisions are made and the people who make curriculum decisions.
3. To identify the importance of the curriculum decisions of the different personnel.
4. To identify those decisions or factors which are most crucial in making curriculum decisions.
5. To identify the philosophy, rationale, and organizational structure of the development and administration of junior college occupational education curriculums.
6. To identify the extent that junior college personnel are doing or following the tasks and practices which were listed in the literature.
7. To prepare a report on those tasks, practices, curriculum decisions, and factors considered essential in developing and evaluating occupational education curriculums.
8. To incorporate the essential factors into the curriculum and systems model.

The procedure of the study will be as follows:

1. To identify from the literature the current tasks and practices used in occupational education curriculum development and evaluation.

2. To identify those junior and community colleges in Illinois which have begun similar programs in occupational education during the past two years.

3. To personally interview, using the enclosed instruments or interview forms, the presidents, occupational deans, occupational department heads, occupational faculty, and occupational advisory committee members who were involved in the development of the new occupational education programs.

Would you please review the instruments and indicate any items which are unclear or unnecessary and add any items which you feel have been omitted. Evaluate the instruments from an administrative standpoint and in terms of decisions to be made in setting up or evaluating occupational programs. Please evaluate and rate each item as to how essential or important it is to include and consider in our study of occupational program development and evaluation. (In evaluating Part II, only rate the last column and not the first two.) Use the five-point scale listed in Form Part II, page ii. Your ratings will enable us to determine which items are important for the successful completion of this phase of the project.

We will meet with you on November 20, 1970, from 10:00 a.m. to 2:00 p.m. in the Harper Administration Building, Joliet Junior College, to review the instruments. Please bring the instruments with you. Please park in the Visitor Parking Lot (see enclosed map).

Sincerely,

Urban T. Oen
Research Coordinator

UTO:mg
encl.

APPENDIX E-1

FIRST DRAFT – DECISION-MAKING SURVEY INSTRUMENT

IDENTIFICATION OF OCCUPATIONAL EDUCATION CURRICULUM DECISION-MAKING

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Decision-Makers																							
1. I.J.C.C.																							
2. Local Board																							
3. President																							
4. Dean of Instruction																							
5. Occupational Dean																							
6. Department Heads (occupational)																							
7. Faculty																							
8. Curriculum Committee																							
9. Advisory Committee																							
10. Community Members																							
Types of Decisions																							
1. Original																							
2. Contingent																							
3. Collective																							
4. Authority																							
Basis of Decision or Factors Considered																							
1. Program Identification																							
A. Appropriate Manpower Data																							
(1) Local Survey																							
(2) Manpower Reports																							
(3) Advisory Committee																							
(4) Felt Need																							
(5) Other Sources of Trained Personnel																							
(6) Others: (Please list)																							
B. Target Population; Determination Of:																							
(1) Number to be Served																							
(2) Aspirations																							
(3) Interests																							
(4) Characteristics																							
(5) Others: (Please list)																							
C. Institutional Resources																							
(1) Financial																							
(2) Physical Facilities (Space)																							
(3) Major Supporting Equipment																							
(4) Faculty and Staff																							
(5) Existing Educational Offerings																							
(6) Others: (Please list)																							
D. Interest or Influence Groups																							
(1) Parents (aspirations, etc.)																							
(2) Community Organizations (views and goals)																							
(3) Civic Groups																							
(4) Union and Management Activities and Policies																							
(5) Informal Power Structure																							
(6) Others: (Please list)																							
2. Program Development																							
A. Curriculum Development																							
(1) Job Analysis Survey																							
(2) Looked at Programs in Other Institutions																							
(3) Used AA-C Guidelines																							
(4) Local Advisory Committee																							
B. Course Development																							
(1) Specific Courses to Include																							
(2) Credits/Course																							
(3) Time in Lab and Lecture																							
(4) Course Scheduling																							
3. Program Implementation																							
A. Student Recruitment																							
(1) Brochure																							
(2) Media																							
(3) Through High Schools																							
B. Staff Recruitment																							
(1) Other Junior Colleges																							
(2) Through High Schools																							
(3) Through 4-Year Colleges																							
4. Program Evaluation																							
A. Placement (Job, 4-Y Employed)																							
B. Follow-up Surveys																							
(1) Short-range																							
(2) Long-range																							

APPENDIX E-2

SECOND DRAFT - DECISION-MAKING SURVEY INSTRUMENT

IDENTIFICATION OF OCCUPATIONAL EDUCATION CURRICULUM DECISION-MAKING	PROG. IDENTIFICATION										PROG. DEVELOPMENT										PROG. EVAL.		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Decision-Makers																							
1. I J C B																							
2. Local Board																							
3. President																							
4. Dean of Instruction																							
5. Occupational Dean																							
6. Department Heads (occupational)																							
7. Faculty																							
8. Curriculum Committee																							
9. Advisory Committee (formal)																							
10.																							
Types of Decisions																							
1. Optional																							
2. Contingent																							
3. Collective																							
4. Authority																							
Activities Completed (doing)																							
1. Local Manpower Survey																							
2. No. of Target Population																							
3. Aspirations, Characteristics & Interests																							
4. Job Analysis Survey																							
5. Programs in Other Institutions																							
6. Developed Specific Courses																							
7. Recruited Staff																							
8. Recruited Students																							
9. Planned Facilities																							
10. Hired Staff																							
11. Completed Follow-up Survey																							
12. Student Evaluation																							
13.																							
14.																							
15.																							
16.																							
Resources																							
1. Advisory Committee																							
2. Interested Parents																							
3. Faculty																							
4. Community Organizations																							
5. Union and Management Organizations																							
6.																							
7. Curriculum Guidelines																							
8. Manpower Data																							
9. Local Money Available																							
10. State & Federal Money Available																							
11. Physical Facilities Available																							
12.																							
13.																							
Constraints (influences affecting the decision)																							
1. Money																							
2. Political (influential people)																							
3. Time																							
4. Expertise																							
5.																							
6.																							
7.																							
Criteria (measures																							
1.																							
2.																							
3.																							
4.																							

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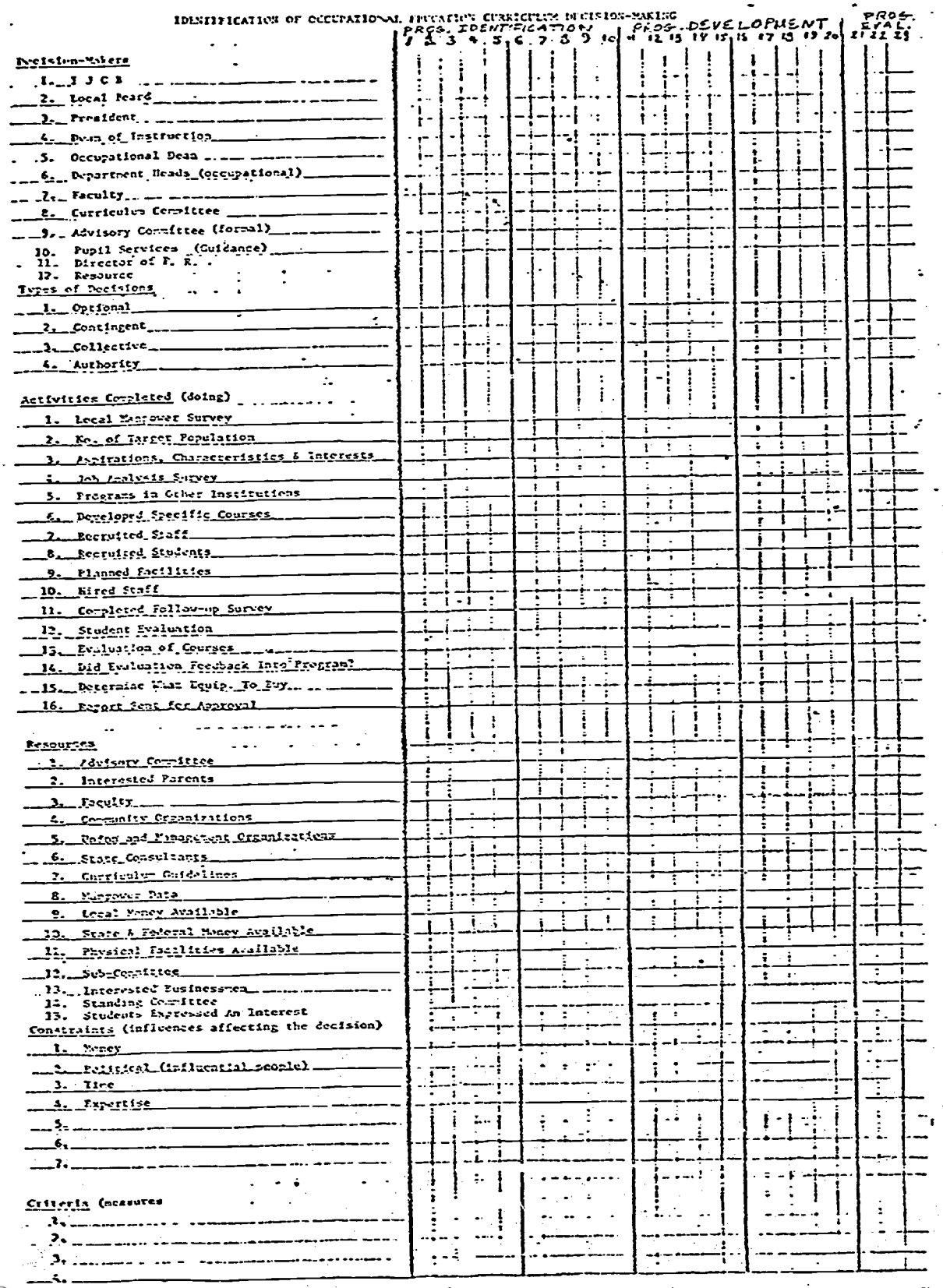
Rev. 1/23/71

APPENDIX E - 3

THIRD DRAFT - DECISION-MAKING SURVEY INSTRUMENT



(1) 1. Program Identification 2. Program and Course Development 3. Program Evaluation
(2-3) Institution _____ (4) Age of Institution _____ (5) Age of Present Campus _____
(6) Enrollment of Institution (FTE) _____ (7) Location of Institution _____ (8) Student Background R U I
(9) Unionization of Faculty SU U NU (10) Age of Occupational Programs _____ (11) Name of Respondent _____
(12) Title of Respondent _____ (13) Years in Present Position _____ (14) Program Area _____
(15) New 1. or Adapted 2.

JMT Status Report - Form I
Rev. 1/22.71

APPENDIX E - 4

FINAL DRAFT - DECISION-MAKING SURVEY INSTRUMENT

(1-2) Institution _____ (3) Age of Institution _____ (4) Age of Present Campus _____
(5) Enrollment of Institution (FTE) _____ (6) Location of Institution _____ (7) Student Background _____
(8) Unionization of Faculty _____ (9) Age of Occupational Programs _____ Name of Respondent _____
(10) Title of Respondent _____ (11) Years in Present Position _____ (12) Program Area _____
(13) New ___ or Adapted ___

IDENTIFICATION OF OCCUPATIONAL EDUCATION CURRICULUM DECISION-MAKING

	Program Identification					Program Development					Program Evaluation				
	1-2	3-4	5-6	7-8	9-10	1-2	3-4	5-6	7-8	9-10	1-2	3-4	5-6	7-8	9-10
Decision-Makers															
17. I.J.C.E., State Board & Specialty Boards															
18. Local Board															
19. President															
20. Dean of Instruction															
21. Occupational Dean															
22. Chairman of a Division															
23. Department Head (occupational)															
24. Faculty															
25. Curriculum Committee/Standing Committee															
26. Advisory Committee (formal)															
27. Pupil Services (guidance)															
28. Director of P.R.															
29. Resource															
30.															
31.															
Types of Decisions															
32. Optional															
33. Contingent															
34. Collective															
35. Authority															
Activities Completed (doing)															
36. Began to Explore the Occupational Area															
37. Completed Local Manpower Survey															
38. Looked at Old Manpower Survey Data															
39. Determined No. of Target Population															
40. Determined Aspirations, Char. & Interests															
41. Completed Job Analysis Survey															
42. Looked at Programs in Other Institutions															
43. Held Meeting With:															
44. Report Sent for Approval															
45. Developed Specific Courses															
46. Recruited Staff															
47. Recruited Students															
48. Planned Facilities															
49. Determined What Equipment to Buy															
50. Hired Staff															
51. Completed Follow-up Survey of Graduates															
52. Completed Survey of Drop-outs															
53. Asked Students to Evaluate Program															
54. Evaluation of Program															
55. Evaluated Staff															
56. Employer Evaluations															
57. Did evaluation feedback into program?															
58. Determined a Budget															
Resources															
59. Advisory Committee/Sub-Committee															
60. Interested Parents															
61. Faculty															
62. Community Organizations															
63. Industrial Relations & Other Related Committees															
64. Interested Businessmen															
65. Union and Management Organizations															
66. State Consultants															
67. Students Expressed an Interest															
68.															
69. Curriculum Guidelines															
70. Manpower Data															
71. Local Money Available															
72. State and Federal Money Available															
73. Physical Facilities Available															
74.															
75.															
Constraints (influences affecting the decision)															
76. Money															
77. Political (influential people)															
78. Time															
79. Expertise															

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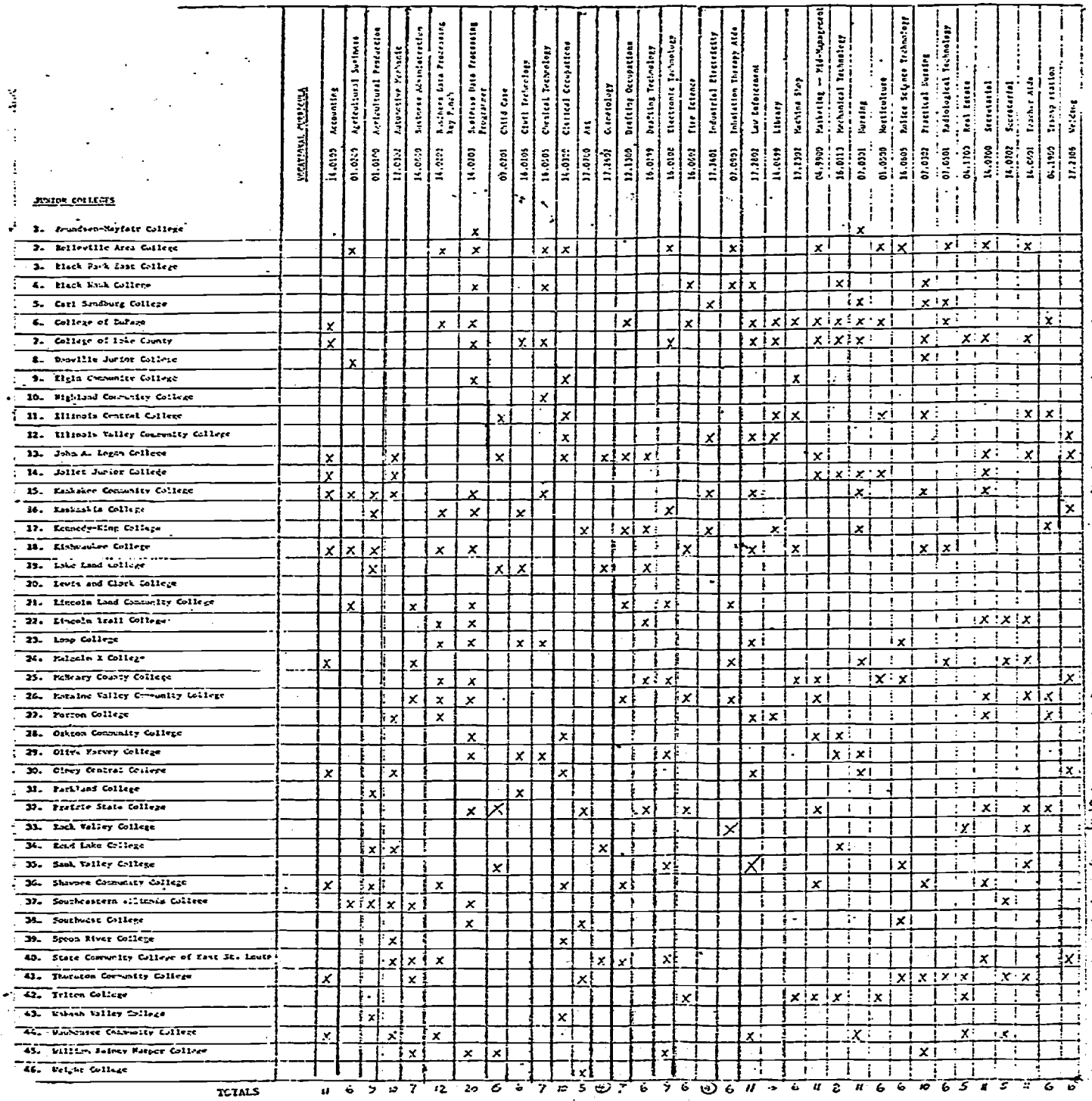
APPENDIX F

JUNIOR COLLEGE PROGRAMS APPROVED BY THE STATE BOARD *



* The table is a tabulation of programs approved at five or more institutions.

APPENDIX G

OCCUPATIONAL PROGRAMS SELECTED FOR THE STUDY SAMPLE

Selected Illinois Junior College Programs Ranked By A Table of Random Numbers From A Stratified Sample

Applied Biological and Agricultural Occupations

1. Agriculture Business*
2. Agriculture Production
3. Horticulture

Business, Marketing, and Management Occupations

1. Business Data Processing-Key Punch*
2. Marketing Mid-Management*
3. Business Data Processing-Programmer
4. Clerical Occupations
5. Business Administration
6. Secretarisl 14.0702
7. Secretarial 14.0700
8. Accounting
9. Real Estate
10. Teacher Aide

Health Occupations

1. Inhalation Therapy Aide *
2. Nursing
3. Radiological Technology
4. Practical Nursing

Personal and Public Service Occupations

1. Law Enforcement*
2. Child Development*
3. Library
4. Police Science Technology
5. Cosmetology
6. Transportation
7. Fire Science

Industrial Oriented Occupations

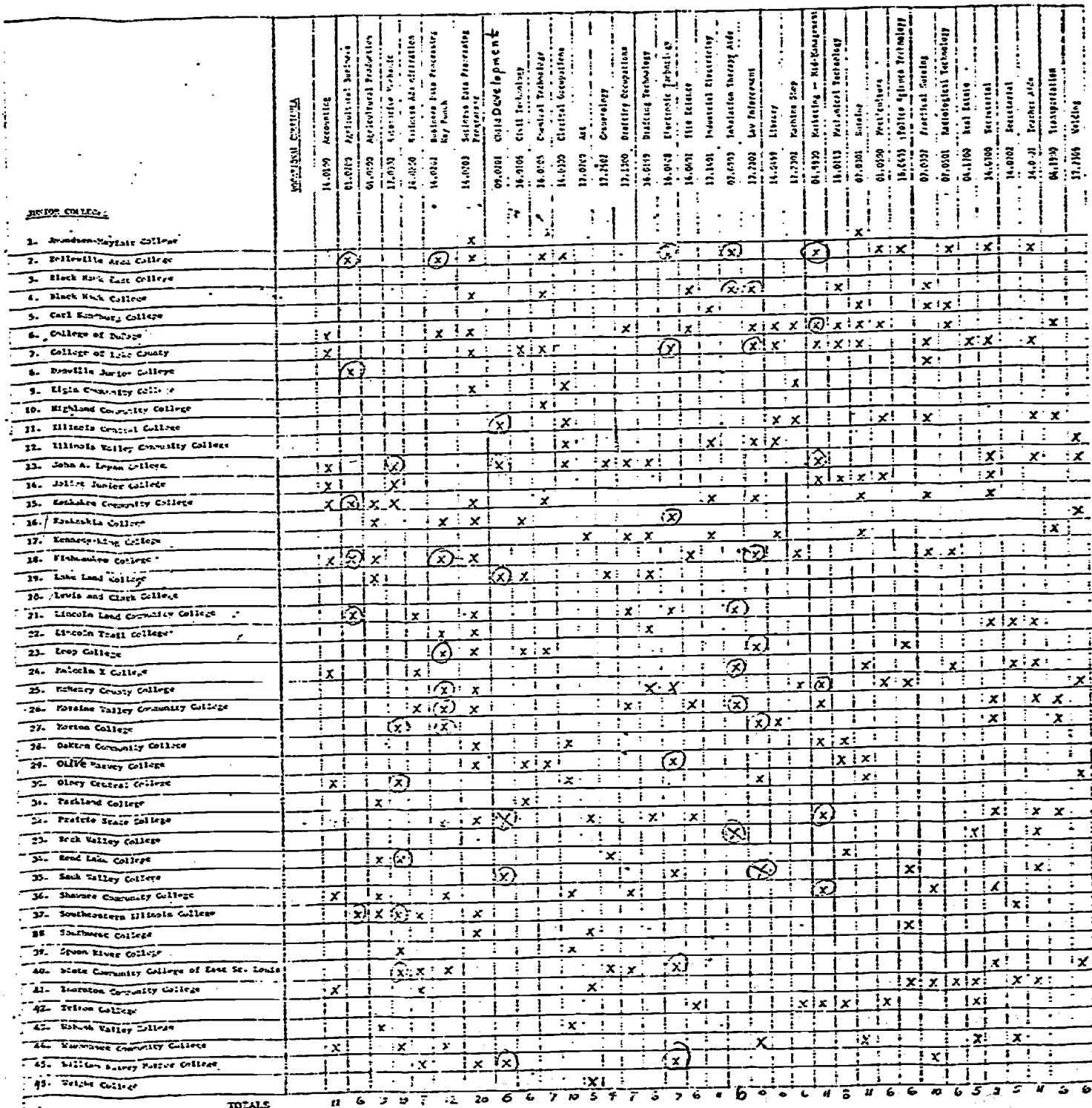
1. Automotive Mechanic*
2. Electronic Technology *
3. Drafting Occupations
4. Drafting Technology
5. Machine Shop
6. Chemical Technology
7. Welding
8. Mechanical Technology
9. Civil Technology
10. Industrial Electricity
11. Art

Code:

* = Programs included in the sample for interviewing

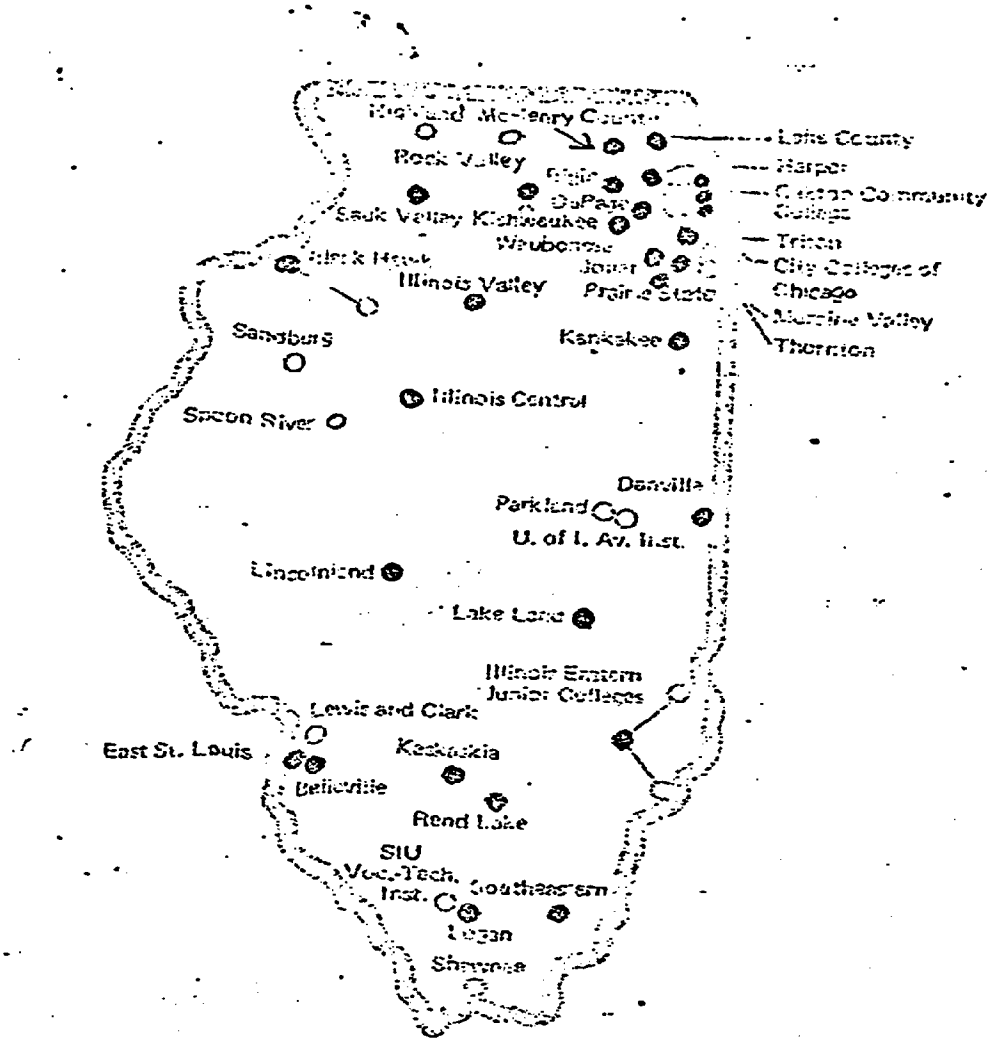
APPENDIX H-1

INSTITUTIONS AND OCCUPATIONAL PROGRAMS INCLUDED IN THE SAMPLE



APPENDIX H - 2

INSTITUTIONS AND OCCUPATIONAL PROGRAMS INCLUDED IN THE SAMPLE



APPENDIX I

PARTIAL INSTITUTIONAL VISITATION SCHEDULE

FOR FEBRUARY, 1971

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	7	8	9	10	11	12	13
AM						10:00 - Prairie State	
PM		1:00 - Kishwaukee Malta					
	14	15	16	17	18	19	20
AM	Leave in a.m.	9:00 - East St. Louis	9:00 - Rend Lake	9:00 - Southeastern	9:00 - Olney Central	10:00 - Lincoln Land	
PM		3:30 - Belleville	1:00 - Kaskaskia	1:00 - Logan	1:00 - Lake Land	3:00 - Danville	
	21	22	23	24	25	26	27
AM		10:00 - Olice Harvey, Chicago	10:00 - Malcolm X	9:00 - Morton College	10:00 - Kankakee	9:00 - Harper	
PM		2:30 - DuPage	2:30 - McHenry College	2:30 - College of Lake County		1:00 - Morraine Valley	

A P P E N D I X J

STANDARD FORMAT AND KEY QUESTIONS USED DURING THE PERSONAL INTERVIEWS

A research and development project currently in progress at Joliet Junior College is directing its efforts toward the initial development of systems models designed to assist administrators in decision-making related to development and evaluation of occupational education programs. Steps are being taken to help insure that the models will be adaptable to different institutional situations and also that they will be useful to administrators in the real world, making every day, but critical, decisions. To help insure this, many personnel from Illinois junior and community colleges are being asked to make contributions and evaluations of the project.

The project is funded by the State Board of Vocational Education and Rehabilitation, Division of Vocational and Technical Education, Research and Development Unit, State of Illinois.

One objective of the project is to identify those people making decisions, the different decisions made, and by whom. Another objective is to identify all those factors which are considered in making decisions. A third objective is to identify the philosophy, rationale, and organizational structure of the development and administration of junior college occupational education curriculums. In order to do this, we are interviewing deans and department heads of occupational education concerning the recent establishment of different occupational education programs. In order to get at how you go about your processes here at your institution, where the key decisions are made, what some of the key activities are, we would like to ask you questions that fall into these kinds of areas. These different areas are: (1) Program Identification; (2) Program and Course Development; (3) Program Evaluation. We realize that not everybody does this in this same type of procedure. In general, everybody goes through an activity where they have to identify the kinds of programs that the institution is going to be involved in. Then they move into the development of that particular area. And after it is laid out and the decision is made, they stop to develop it; in so doing, there are a number of considerations that need to be considered before the specific decision of execution is made.

If you are indicating to me that you did a manpower survey, etc., could you at times please tell me why you did it? In other words, at the time that you are telling me that you did a particular activity or function and you considered certain factors, it would be helpful to us in determining why you made a particular decision if this will not interrupt your telling me the story of how you developed that particular program. While you are talking about a specific area, I may have some specific questions for each of the areas. (The data are confidential).

KEY QUESTION APPROACH

A. Program Identification

1. How was_____identified as a potential area at_____College?
2. Who was involved in doing this?
3. When was it done?
4. How was it done?

B. Program and Course Development

1. What I mean by program and course development is who put the program and courses together, how were they put together; who planned the facilities, who laid out how the students were to be recruited, etc.
2. What did you do to look further into this area to determine whether or not you should go ahead and plan program and courses,etc?
3. Who did you consult?
4. Who was involved in helping you go ahead and develop this program?
5. When you determined that you were going ahead to develop this program, who was involved in the development of the courses? Who put them together?
6. Who helped plan the facilities?
7. Who helped recruit students?
8. When were these done?
9. Did you use advisory committees, curriculum guides, etc., in setting up the courses?
10. Were the facilities here, or did you have to plan and build new facilities?

C. Program Evaluation

1. What have you done in terms of evaluation of this program, or what has or is being planned
2. Who will be involved?
3. What kinds of factors are you going to consider?

NOTE: At the conclusion of the interview, ask for the college organization structure, survey forms used, copies of occupational brochures, copies of program planning, copies of notes on use of advisory committees, copies of evaluation and follow-up forms, etc.

Guidelines, Surveys, Forms, Catalogues, and Brochures Received From Occupational Personnel of the Different Illinois Community and Junior Colleges

JUNIOR COLLEGES	Guidelines for the Establishment of Occupational Programs	Budget and Costs Sheets	Guidelines for Use of Advisory Committees	Advisory Committee Membership Sheets	High School Occupational Interest Survey	Adult Education Survey	Manpower Surveys -- All Occupations	Industry -- Cooperative Education Survey	Program Interest Survey	Occupational Analysis Survey	Telephone Survey	Comprehensive Area Survey	Follow-up Surveys of Graduates	Follow-up Surveys of Drop-outs	Student Evaluation of Instructors	Student Evaluation of Courses	Administration Evaluation of Staff	Administration Evaluation of the Program	Employer Evaluation of the Student	Supervisor Evaluation of Student On-the-Job Training	Training Agreements and/or Occupational Experience Records	Catalogues Received	Received Occupational Brochures of Programs	Manpower Surveys -- Selected Occupations
1. Amundsen-Mayfair College																								
2. Belleville Area College				X																		X	X	
3. Black Hawk East College																								
4. Black Hawk Main College	X	X										X	X									X	X	
5. Carl Sandburg College																						X	X	
6. College of DuPage	X		X					X							X						X	X	X	
7. College of Lake County	X		X	X					X	X												X	X	X
8. Danville Junior College													X		X	X	X		X	X	X	X	X	
9. Elgin Community College																						X	X	
10. Highland Community College																								
11. Illinois Central College																						X	X	
12. Illinois Valley Community College			X		X		X						X		X	X	X		X			X	X	X
13. John A. Logan College													X									X	X	
14. Joliet Junior College	X	X	X	X																		X	X	X
15. Kankakee Community College													X			X			X	X	X	X	X	
16. Kaskaskia College																						X	X	
17. Kennedy-King College																								
18. Kishwaukee College	X	X										X				X						X	X	
19. Lake Land College																X			X			X	X	
20. Lewis and Clark College																						X		X
21. Lincoln Land Community College																X			X	X	X	X	X	
22. Lincoln Trail College																								
23. Loop College																						X	X	
24. Malcolm X College		X					X						X									X	X	X
25. McHenry County College																						X	X	X
26. Moraine Valley Community College	X	X	X	X							X				X	X		X		X		X	X	
27. Morton College					X																	X	X	
28. Oakton Community College																								
29. Olive Harvey College	X																					X	X	X
30. Olney Central College					X		X					X	X									X	X	X
31. Parkland College																								
32. Prairie State College			X	X	X								X									X	X	X
33. Rock Valley College																X			X			X	X	
34. Rend Lake College	X		X		X										X							X	X	
35. Sauk Valley College			X															X				X	X	
36. Shawnee Community College					X								X		X				X	X	X	X	X	X
37. Southeastern Illinois College		X			X		X								X							X	X	X
38. Southwest College																								
39. Spoon River College		X			X									X	X							X	X	X
40. State Community College of E. St. Louis																						X	X	
41. Thornton Community College			X												X							X	X	X
42. Triton College	X	X	X	X	X	X			X				X	X	X		X					X	X	X
43. Wabash Valley College																								
44. Waubonsee Community College																								
45. William Rainey Harper College					X	X							X	X								X	X	X
46. Wright College																								

APPENDIX L

PERSONNEL INTERVIEWED AND/OR WHO SUPPLIED MATERIALS FOR THE RESOURCE CENTER

Junior College	Personnel Interviewed
1. Belleville Area College	Dr. Clyde I. Washburn, Dean Occupational Programs
	Mr. Louis A. Reibling, Supervisor Health Related Occupations
	Mr. Fred B. Barber, Jr., Coordinator Agricultural Programs
	Mr. John Coday, Coordinator Mid-Management Programs
	Mr. Tony Otruk, Coordinator Data Processing
	Mrs. Jane Manwaring, Supervisor Business Occupations Programs
2. Black-Hawk College - Main	Mr. Ronald F. Moon Dean of Technology
	Dr. Harold L. Little, Director Personnel and Public Services Program
	Miss Marilyn Keener, Director Health Occupations
3. Carl Sandburg College*	Dr. William D. Masters, Dean Occupational Education
4. College of DuPage	Mr. William Gooch, Dean Engineering and Technology
	Mr. Richard Petrizzo, Director Vocational-Technical Education

5. College of Lake County	Mr. James E. Seitz, Assistant Dean Career Programs
	Mr. James L. Chase Electronics Instructor
	Mr. Richard Wild, Coordinator Law Enforcement
	Dr. R. Ernest Dear, Dean Instruction
	Dr. Harold Garner, Assistant Dean Instruction
6. Danville Junior College	Mr. Robert E. Griggs, Dean Vocational-Technical Education
	Mr. Jerald Binkley, Department Head Agriculture Programs
7. Elgin Community College	Mr. Donald Green, Dean Occupational Education Programs
	Mr. Vernon Bashaw, Head Business Department
8. Illinois Central College	Mr. Martin E. Leddy, Director Technical and Vocational Education
	Dr. Jean C. Aldag, Chairman Division of Health and Community Servic
9. Illinois Valley Community College	Dr. John E. Hawse, Dean Technology
	Mr. Donald Wiechman, Head Agriculture Technology
	Mr. Carlo F. Olivero, Department Head Business Education

10.	John A. Logan College	Mr. Robert H. Irvin, Associate Dean Vocational-Technical Education
11.	Joliet Junior College	Mr. Joseph A. Borgen, Dean Occupational and Technical Studies
		Mr. John Corradetti, Dep't Chairman Business Education
		Mr. Robert Jurgens, Acting Dep't Head Agriculture Programs
		Mrs. Helen M. Tea, Director Nursing Education
		Mr. Charles Warthen, Dep't Chairman Technical Education
12.	Kankakee Community College	Mr. Ron Kruppa, Dean Career Programs
		Mr. Jack Hacker, Head Agriculture Department
		Mr. Klet Mitchell, Instructor Auto Farm Equipment, Technology
13.	Kaskaskia College	Mr. Derrell Darling, Director Vocational-Technical Education
		Mr. D. Rennie Minton, Counselor Vocational-Technical Education
14.	Kishwaukee College	Dr. Norman L. Jenkins Executive Dean
		Mr. John F. Tidgewell Law Enforcement
		Mr. Chris A. Swanson, Director Data Processing Services
		Mr. Donald Higgs, Head Agriculture Programs
		Mr. Richard DeLano Horticulture Instructor

15.	Lake Land College	Mr. Dale Roberts, Dean Vocational-Technical Education
		Mrs. Roberta Hollada, Dep't Chairman Home Economics
16.	Lincoln Land Community College	Mr. Orell R. Vanderwater, Asso. Dean Vocational-Technical Programs
		Mr. William R. Craig Agriculture Instructor
		Mr. Ralph P. Gies, Division Chairman Life and Health Sciences
17.	Loop College	Dr. Salvatore Rotella, Vice-Pres. & Dea Occupational-Technical Programs
		Mr. Jacques Boyer, Chairman Public & Community Services
		Mr. Richard Mickey Assistant to Vice-President
		Dr. Kay Barnard Professor of Business
18.	Malcolm X College	Mr. John W. Henry, Jr., Dean Career Programs
		Miss Clare Gibes, Administrative Coordi Careers Programs
		Mrs. Christine Allen, Director Nursing
19.	McHenry County College	Dr. Marvin Lieske, Dean Instructional Services
		Mr. Maury L. Bynum, Assistant Dean Instructional Services
20.	Moraine Valley Community College	Mr. John Swalec, Asso. Dean Instruction
		Mr. William E. Piland, Director Business Related Programs

	Mr. Richard Loschetter, Asso. Professor Business and Data Processing
	Dr. Sr. Marie Sanders, Director Health Science Services
21. Morton College	Mr. Edward T. Kosell, Acting Dean Instruction
	Mr. Charles Ferro, Acting Occupational Dean
	Mr. Michael G. Kolessar, Director Data Processing
22. Olive Harvey College	Mr. Paul E. Rupprecht, Dean Sciences and Technical Occupations
	Mr. William Tanholt Technical Coordinator
23. Olney Central College	Mr. Jesse H. Keyser, Dean Vocational-Technical Education
	Miss Beverly J. Shelton Vocational Guidance Counselor
24. Prairie State College	Mr. Nello Petersanti, Dean Occupational Services
	Mr. Ray Stark, Director Mid-Management Programs
	Mr. Roger Atz, Dep't Head Business
25. Rock Valley College	Dr. Ronald Hallstrom, Dean Occupational Education Programs
26. Rend Lake College	Mr. Ardell Kimmel, Dean Vocational-Technical Education
27. Sauk Valley College	Mr. Phillip S. Osborn Academic Dean
	Mr. Fred Nesbit, Chairman Division of Social Sciences & Public Services

28.	Shawnee Community College	Mr. Charles W. Cole, Dean Occupational Programs
29.	Southeastern Illinois College	Mr. Robert I. Gregg, Dean Technology
		Mr. Sam Jones Agriculture Instructor
		Mr. Grover Brickert Agriculture Instructor
		Mr. George Cox Automotive Instructor
30.	Spoon River College*	Mr. Harold Huber, Dean Occupational Programs
31.	State Community College of East St. Louis	Mr. Frank T. Lyerson, Director Vocational, Technical and Occupational Programs
32.	Thornton Community College*	Mr. Joseph E. Gutenscn, Dean Instructional Programs
33.	Triton College*	Mr. Vernon A. Magnesen, Dean School of Career Education
34.	William Rainey Harper College	Dr. Robert Cormak, Dean Occupational Education
		Mr. John Warren, Division Chairman Engineering and Related Technology
		Mr. Larry King, Chairman Social Sciences Division
		Mr. Roger Mussell, Instructor Electronics Technology
		Dr. John Lucas, Director Planning and Development
		Dr. Omar Olson, Dean Continuing Education

* = Personnel from these colleges were not interviewed but they did supply materials for the resource center.

APPENDIX M

SURVEY CODEBOOK

Identification of Occupational Education Curriculum Decision-Making

Column Number(s)	Coded Number	Item - Junior and Community Colleges in Illinois
1-2	01	Amundsen-Mayfair College
	02	Belleville Area College
	03	Black Hawk East College
	04	Black Hawk College
	05	Carl Sandburg College
	06	College of DuPage
	07	College of Lake County
	08	Danville Junior College
	09	Elgin Community College
	10	Highland Community College
	11	Illinois Central College
	12	Illinois Valley Community College
	13	John A. Logan College
	14	Joliet Junior College
	15	Kankakee Community College
	16	Kaskaskia College
	17	Kennedy-King College
	18	Kishwaukee College
	19	Lake Land College
	20	Lewis and Clark College
	21	Lincoln Land Community College
	22	Lincoln Trail College
	23	Loop College
	24	Malcolm X College
	25	McHenry County College
	26	Moraine Valley Community College
	27	Morton College
	28	Oakton Community College
	29	Olive Harvey College
	30	Olney Central College
	31	Parkland College
	32	Prairie State College
	33	Rock Valley College
	34	Rend Lake College
	35	Sauk Valley College
	36	Shawnee Community College
	37	Southeastern Illinois College
	38	Southwest College
	39	Spoon River College
	40	State Community College of East St. Louis
	41	Thornton Community College
	42	Triton College
	43	Wabash Valley College
	44	Waubonsee Community College
	45	William Rainey Harper College
	46	Wright College

Column Number(s)	Coded Number	Item - Age of Institution (years)
3	0	1
	1	2
	2	3
	3	4
	4	5
	5	6 - 10
	6	11 - 15
	7	16 - 20
	8	21 - 25
	9	Over 25
		Age of Present Campus (years)
4	0	1
	1	2
	2	3
	3	4
	4	5
	5	6 - 10
	6	11 - 15
	7	16 - 20
	8	21 - 25
	9	Over 25
		Enrollment of Institution (FTE)
5	0	Less than 500
	1	501 - 1,000
	2	1,001 - 1,500
	3	1,501 - 2,000
	4	2,001 - 2,500
	5	2,501 - 3,000
	6	3,001 - 3,500
	7	3,501 - 4,000
	8	4,001 - 4,500
	9	Over 4,500
		Location of Campus
6	0	Rural Area
	1	Located in a small town (under 10,000)
	2	Located in the suburb of a small town
	3	Located in a small city (10,000 - 25,000)
	4	Located in the suburb of a small city
	5	Located in a medium-size city (25,000 - 100,0
	6	Located in the suburb of a medium-sized city
	7	Located in a large city (over 100,000)
	8	Located in the suburb of a large city
	9	Located in a small town but in suburb of a large city

Column Number(s)	Coded Number	Item - Background of Students
7	0	Rural
	1	Suburban
	2	Urban
	3	Inner-city
	4	Rural and suburban (small town)
	5	Rural, suburban, and urban
	6	Rural, urban, suburban, and inner-city
	7	Inner-city and urban
	8	Suburban, urban, and inner-city
	9	Urban and suburban
		Faculty Organization
8	0	Strong union
	1	Moderately strong union
	2	Weak union
	3	No union
	4	Strong teachers' association
	5	Moderately strong teachers' association
	6	Weak teachers' association
	7	No teachers' association
	8	No union or teachers' association
	9	Strong union and teachers' association
		Age of the Occupational Program
9	0	Less than 1 year
	1	1 - 2 years
	2	2 years
	3	2 - 3 years (In third year)
	4	4th year
		Title of Respondent
10	0	Dean of Instruction
	1	Occupational Dean or Dir. of Occup. Programs
	2	Occupational Department Head
	3	Occupational Division Head
	4	Director of Specific Programs
	5	Lead Instructor
	6	Instructor
	7	Years in Present Position (Respondent)
11	0	1
	1	2
	2	3
	3	4
	4	5
	5	6 - 10
	6	11 - 15
	7	16 - 20
	8	21 - 25
	9	Over 25

Column Number(s)	Coded Number	Item - Program Area
12	1	Agriculture Business
	2	Business Data Processing - Key Punching
	3	Marketing - Mid-Management
	4	Inhalation Therapy Aide
	5	Automotive Mechanic
	6	Electronic Technology
	7	Law Enforcement
	8	Child Development
		Program Development
13	1	Entirely new program (no related courses previously taught)
	2	New Program (some courses were taught previous
	3	Adapted (many courses were previously taught but are now a part of the new program)
	4	
	5	
		Phase of Program Development
14	1	Program Identification Phase
	2	Program and Course Development Phase
	3	Evaluation Phase
		Time Frame of the Different Decisions
15 - 16	01 - 99	— if needed for each respondent
		Decision-Makers
17	1 *	I J C B, State Board & Speciality Boards
18	"	Local Board
19	"	President
20	"	Dean of Instruction
21	"	Occupational Dean
22	"	Chairman of a Division
23	"	Department Head (occupational) or Program Coor
24	"	Faculty (Faculty Asso.) or one instructor
25	"	Curriculum Committee/Standing Committee
26	"	Advisory Committee (formal)
27	"	Pupil Services (guidance)
28	"	Director of P.R.
29	"	Resource & (District Citizens Advisory Committe
30	"	(Dean of R & D)
31	"	(Administrative Council)

* A "1" is punched if done. If not done, it is left blank.
"2" will do - have instruments
"3" say they will do

Column Number(s)	Coded Number	Item - Types of Decisions
32	1 *	Optional
33	"	Contingent
34	"	Collective
35	"	Authority
		Activities Completed
36	"	Began to Explore the Occupational Area
37	"	Completed Local Manpower Survey
38	"	Looked at Old Manpower Survey Data
39	"	Determined No. of Target Population
40	"	Determined Aspirations, Char. & Interests
41	"	Completed Job Analysis Survey
42	"	Looked at Programs In Other Institutions
43	"	Held Meeting With:
44	"	Report Sent for Approval
45	"	Developed Specific Courses
46	"	Recruited Staff
47	"	Recruited Students
48	"	Planned Facilities
49	"	Determined What Equipment to Buy
50	"	Hired Staff
51	"	Completed Follow-up Survey of Graduates
52	"	Completed Survey of Drop-outs
53	"	Asked Students to Evaluate Program
54	"	Evaluation of Program
55	"	Evaluated Staff
56	"	Employer Evaluations
57	"	Did evaluation feedback into program?
58	"	Determined a Budget
		Resources
59	"	Advisory Committee/Sub-Committee
60	"	Interested Parents
61	"	Faculty
62	"	Community Organizations
63	"	Industrial Relations & Other Related Committee
64	"	Interested Businessmen
65	"	Union and Management Organizations
66	"	State Consultants also AMA
67	"	Students Expressed an Interest
68	"	Feasibility Survey
69	"	Curriculum Guidelines
70	"	Manpower Data
71	"	Local Money Available
72	"	State and Federal Money Available
73	"	Physical Facilities Available
74	"	Consultants from other institutions
75	"	Industry taught a seminar

SURVEY CODEBOOK

Column Number(s)	Coded Number	Item - Constraints
76	1 *	Money
77	"	Political (influential people)
78	"	Time
79	"	Expertise
80	"	Request Denied

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