

DOCUMENT RESUME

ED 199 520

CE 028 349

AUTHOR Dunn, James A.
 TITLE Student Decision-Making. ISSOE: Managing Student Progress.
 INSTITUTION Cornell Univ., Ithaca, N.Y. Inst. for Research and Development in Occupational Education.
 SPONS AGENCY New York State Education Dept., Albany. Div. of Occupational Education Supervision.
 PUB DATE [80]
 GRANT 79-3A-891-GS; 79-3C-889-GS; 80-3A-1114-GS
 NOTE 35p.; For related documents see CE 028 346.

EDRS PRICE MF01/PC02 Plus Postage.
 DESCRIPTORS Aptitude Tests; Career Awareness; *Career Choice; Career Guidance; Competency Based Education; Decision Making; *Decision Making Skills; Educational Research; Individualized Instruction; *Instructional Materials; Interest Inventories; *Models; Secondary Education; Student Evaluation; Students; *Vocational Education

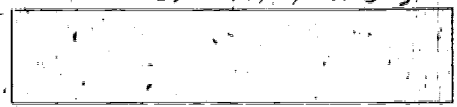
IDENTIFIERS *Instructional Support System Occupational Educ

ABSTRACT

The Instructional Support System for Occupational Education (ISSOE) project, conducted in New York, focused on (1) review of individualized education systems, (2) selection of appropriate occupational clusters, and (3) development and field testing of a system and materials. A product of the Managing Student Progress series of the ISSOE program, this booklet was designed to assist educators in helping students formulate goals and plans related to career and occupational decision-making. The booklet explains where decision making fits into an occupational education program, and identifies and clarifies the ISSOE educator's role in career guidance. The booklet contains three sections. The first section outlines three basic models of the decision-making process and provides the reader with a philosophical foundation upon which decision making rests. The second section explains briefly five different types of supplementary teaching materials or programs which may be used to assist students in improving their decision-making skills. The third section compares nine commonly used paper-and-pencil instruments to measure interests, skills, and abilities. These instruments may assist both the student and the teacher/counselor in selecting areas of study which will meet the student's needs. By applying some of the programs and tests contained in the latter two sections, it is hoped that students will be better able to make career and occupational decisions. (KC)

 * Reproductions supplied by EDRS are the best that can be made *
 * from the original document. *

79-3A-09165
79-30-55965
82-3A-711465



Managing Student Progress

10/31/81
NY 7713314

ED199520

Student Decision-making

01028347

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

J. A. Miller

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

* * * * *

This booklet was prepared by the Cornell Institute for Occupational Education, a component of the State Research Coordinating Unit, Division of Occupational Education Planning, Research and Evaluation, with funds provided by the Division of Occupational Education Supervision, on the terms of Grants numbered 79-3A-891-GS, 79-3C-889-GS and 80-3A-1714-GS funded from the Vocational Education Amendments of 1976.

* * * * *

PROJECT STAFF

Robert Frank

Dennis Ridley

Mary Margaret Carmichael

PRINCIPAL INVESTIGATOR

James Dunn

ACKNOWLEDGEMENTS

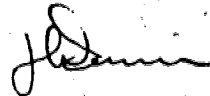
Many persons at the Cornell Institute for Occupational Education have assisted in the development of this ISSOE User's Guide. For the past few years, CIOE/ISSOE project activities were under the general direction of Drs. Alan Edsall and Vernon Beuke, Research Associates at the Institute. For the last year, Dr. Robert Frank has functioned as Institute Coordinator for ISSOE projects. He has been instrumental in developing and implementing previously conceived support materials and field test plans.

Dr. Frank was also solely responsible for the literature review and materials evaluation which led to the production of this guide. I am deeply appreciative of his assistance in both phases of the CIOE/ISSOE field tests.

Completion of this guide, however, would not have been possible without production assistance and coordination by Madeline Dean, Sharon Bobnick, Susan Alexander, Cindy Moore, and Lois Snyder, secretaries in the Institute; fiscal coordination by Lynn Rycroft, Institute Business Manager; and editorial assistance from Johanna Pank and Eva Kaufman.

Finally, thanks must be extended to the many occupational education teachers in New York State who assisted in the review and critique of this guide.

James A. Dunn



Institute Director and
Principal Investigator

Life is a continuous process of decision-making. Unfortunately, when confronted with the need to decide, we are almost never in possession of all the facts needed to aid us in making a truly objective choice. To complicate the matter further, we must also realize that even possession of all these facts does not guarantee an objective interpretation of them. Consequently, when it is necessary to act in order to meet the demands of our environment, we must make the best decision possible to us at the time. We must reduce that which is unintelligible to us to some sort of manageable order....

(Dreikurs and Grey, 1968)

TABLE OF CONTENTS

INTRODUCTION	1
CAREER GUIDANCE IN ISSUES: WHERE IT FITS IN	5
MODELS FOR DECISION-MAKING	11
<u>Jackson-Egner Model</u>	13
<u>Cronbach and Gleser Model</u>	14
<u>Gelatt Decision-Making Model</u>	15
Common Elements of the Models	16
SUPPLEMENTAL MATERIALS FOR CAREER DECISION-MAKING	19
<u>Self-Assessment and Career Development</u>	21
<u>Career Skills Assessment Program</u>	22
<u>Planning Ahead for Career Choice</u>	23
<u>Computer Assisted Guidance in New York City High Schools</u>	24
<u>Articulated Career Guidance Project</u>	25
<u>Guidance Program for Project PLAN</u>	26
Paper and Pencil Measures	27
Content	27
Administration	28
Scoring and Interpretation	28
SUMMARY	31
REFERENCES	33

INTRODUCTION

For an occupational education program to be effective, teachers and counselors need to help students improve their decision-making and career-planning abilities. The selection of occupations for investigation is in itself a monumental task--the Dictionary of Occupational Titles includes over 20,000 occupational choices.

There is a vast assortment of materials for career planning, guidance and decision making. These materials should prove tremendous assets to occupational educators and their students.

Educators must first, however, determine the role of the teachers and the materials in guiding students' choices of careers. Essentially, five options are available.

- First, little or no guidance may be offered. This level may consist of simply asking the student what he or she would like to do for a career and matching the program with the response. The program would be designed to train the pupil for the job, no matter how unrealistic the student's choice. Or the teacher may simply assign a pupil to a particular program of study without any consultation.

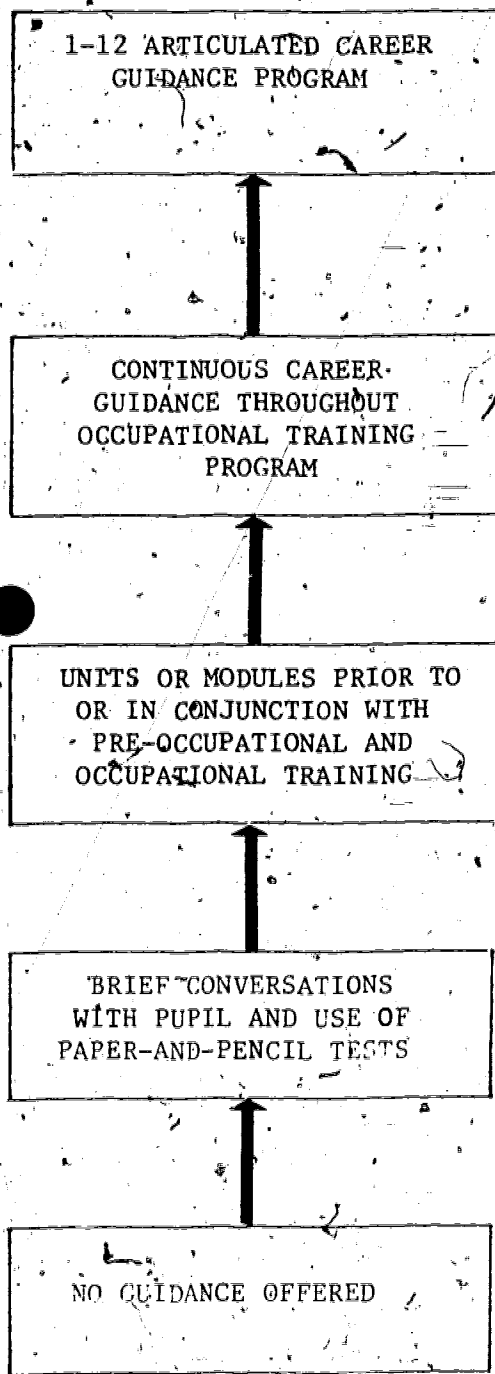
Although both of these decisions are highly undesirable, there is no doubt that choices are occasionally made by precisely these methods.

- A second level involves brief conversations between teacher and pupil regarding career aspirations. These can be supplemented with short paper-and-pencil tests to afford the student a better insight into interests, aptitudes, etc. Guidance at this level is usually considered the bare minimum which may be expected of teachers. Although some "guidance" may be offered to the student, generally the career decision is still a "shot in the dark."

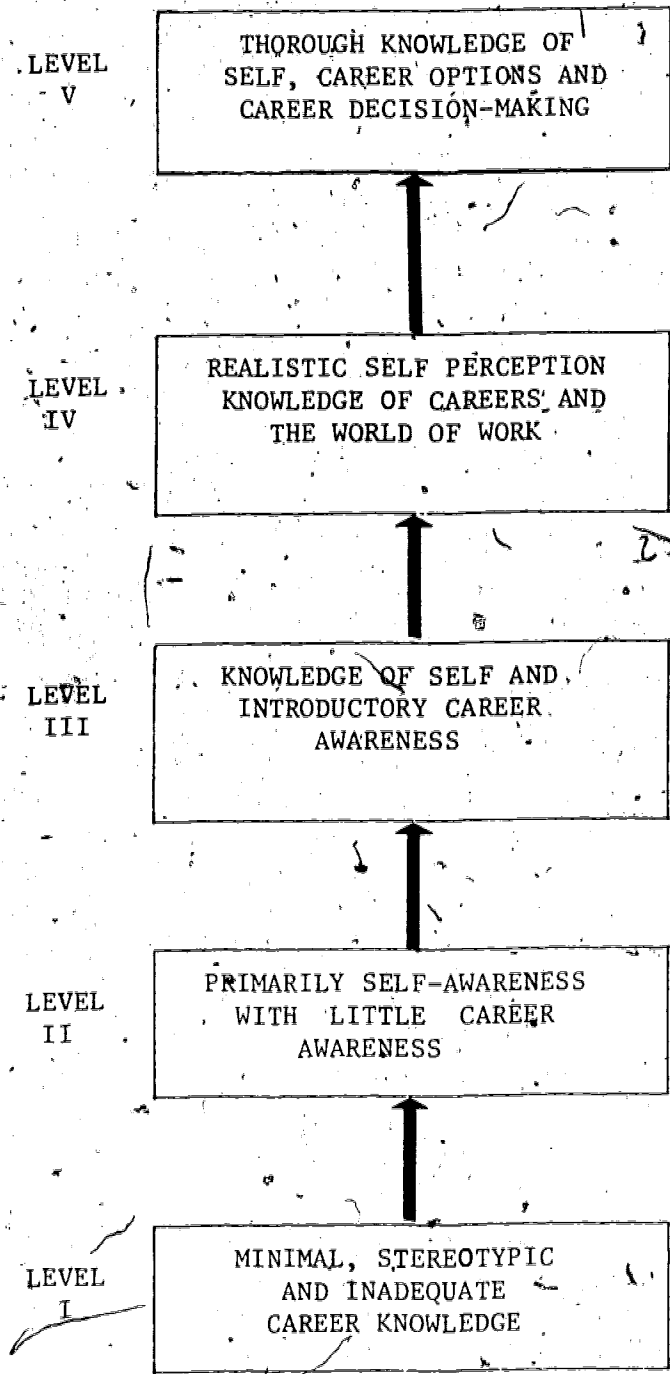
- The third level offers planning units or modules about choosing a career, making career decisions, etc. This may happen prior to or in conjunction with pre-occupational or occupational training. This type of guidance has met with great success in several programs. It provides information on career and self-awareness when it is needed most. Further, it makes no extreme demands upon the teacher. This level of guidance is highly recommended for occupational education program students and teachers.
- The fourth level involves an intensive and on-going program of counseling, planning and decision-making throughout the entire pre-occupational and occupational training program. This programming may consist of aptitude and interest paper-and-pencil self-reports; exercises in goal formation; information about educational and occupational career-related opportunities, the world of work, and so on. This sort of program would be highly desirable. Many occupational educators, however, feel that career planning is properly the job of the school counselor and therefore tend to avoid these types of intensive programs.
- The fifth level is a school-district wide, 1-12 program in career guidance. At this level students would receive career information in every grade and subject matter. In science classes the students could study various types of scientific professions, what different scientists do, prerequisite training, etc. Students in social studies could explore job supply and demand, changing job requirements and unemployment. Math classes could teach students how to interpret employment tables, and in English classes students could learn how to write application letters, prepare a resume or conduct an interview.

The chart on the next page summarizes these levels and compares what they can offer in career and self knowledge.

LEVELS OF CAREER GUIDANCE



KNOWLEDGE OF CAREERS, OCCUPATIONS AND SELF



LEVEL V
LEVEL IV
LEVEL III
LEVEL II
LEVEL I

It is imperative that some guidance be offered to all pupils, not just those in occupational education programs. Students in college-track programs also need assistance, in order to determine what type of schooling they will seek upon graduation from high school. Therefore, the fifth level, school-wide, 1-12 career guidance, although the most complex, will be the best for all students. But for teachers concerned with just those students who are in vocational/occupational training programs, the third level, modules taught prior to and in conjunction with pre-vocational and vocational training, is the preferred choice.

This booklet explains where decision-making "fits into" an occupational education program. Models which relate to career decision-making will also be outlined. This will be followed by a description of some materials and programs available to educators which assist the teaching of career/vocational decision-making.

The booklet will identify and clarify the ISSOE educator's role in career guidance. It provides information to help students make career choices by improving their knowledge of themselves and their ability to make career decisions.

CAREER GUIDANCE IN ISSOE : WHERE IT FITS IN

Assuming that some guidance is to be offered, that the guidance is in addition to that offered by the school counselor, and the guidance is NOT of the articulated 1-12 type, when is such assistance most appropriate for occupational education students? It would be best if the service were offered before the student ever elected to enroll in cosmetology or auto mechanics, but this type of counseling is usually delegated to the school counselors. So, previous guidance is irrelevant to the ISSOE teacher; the student is in the vocational education class and may need additional services.

Within the first few weeks of school, each student in the class should be given a copy of ISSOE Form 1, Student Program Planning Information/Teacher Planning Worksheet (see pages 7-9). Students should complete their portion of the sheet as soon as possible. They should first indicate whether they would want and/or expect to become employed in any of the jobs listed under Question 1. Should none of those be satisfactory, pupils can indicate, on the spaces provided, their preferred occupations. Each student should proceed to answer Questions 2 through 5 as best he/she can.

When the student's portion of the form is completed it should be given to the teacher for evaluation. The teacher should plan to spend a few minutes discussing the student's responses with him or her prior to completing the Teacher Planning Worksheet (see page 9). Of primary importance to the teacher is Question 3, "Who helped you select your job goal?" The teacher needs to determine if the student received adequate job and career related information prior to making the career choice. For instance, if a student indicates that he or she alone made the choice, the teacher might wish to counsel the student personally, send the student to the school counselor, or ask the student to sample some of the materials summarized in the next section of this booklet. Teachers should not believe that all students are inept at making career decisions and need help; many students are fairly skilled and successful at this task.

However, high school students are often not decision-makers because others (parents, teachers, counselors) have always made decisions for them. Some career and self-exploration might help such students in selecting job goals.

The student may have discussed career goals with parents, teachers and/or counselors. In such a case the teacher might offer additional assistance or simply let the matter rest.

Thus, it is when the student has just entered the program, and has not had an Individual Education Plan prepared, that the teacher should assess the amount of additional career guidance needed. These services should be indicated under Question 3 of the Teacher Planning Worksheet.



Student Program Planning Information

(1) Indicate whether you would want and/or expect to become employed in each of the jobs listed below after graduation from high school. Mark the appropriate response.

Job Title	I would like	I would consider	I would dislike
Pumper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Apprentice Pumper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Learn grade or insulator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maintenance Pumper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(3) Who helped you select your job goal? Check all those that apply.

My father My counselor
 My mother My friends
 My teacher Others (please specify) _____

(4) Indicate how you think your grades compare to your classmates in each subject below.

Subject	Above ave	Ave	Below ave
Reading & lang arts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mathematics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social studies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(2) Five years from now, I would like to be employed as:

First choice: _____ (Job title or kind of work)

Second choice: _____ (Job title or kind of work)

(5) Briefly indicate your experience in working in areas related to the jobs marked in sections 1 and 2. Include paid and unpaid work. Also, indicate any additional information which you think may help in the planning of your program.

Teacher Planning Worksheet

(1) I recommend that the student prepare for the following job titles:

_____ Title or area _____ Title or area _____ Title or area

(2) I concur with the student's choices of occupational careers: Yes _____ No _____

- (3) List any additional student services you would recommend for this student:
- Counseling _____
 - Career information _____
 - Academic tutoring _____
 - Feeding _____
 - Music _____
 - Other Specify _____

(4) This IEP was prepared on _____ and should be reviewed in _____ weeks.

(5) Comments: _____

Teacher's Signature _____ Date _____ Student's Signature _____ Date _____ Parental Signature _____ Date _____

STUDENT PROGRAM PLANNING INFORMATION (SPPI)



NAME: _____ GRADE: _____ STUDENT NO.: _____ DATE: _____

Student Program Planning Information

(1) Indicate whether you would want and/or expect to become employed in each of the jobs listed below after graduation from high school. Mark the appropriate response.

Job Title	I would like	I would consider	I would dislike
Plumber	_____	_____	_____
Apprentice Plumber	_____	_____	_____
Lawn Sprinkler Installer	_____	_____	_____
Maintenance Plumber	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

(2) Five years from now, I would like to be employed as:

First choice: _____
(Job title or kind of work)

Second choice: _____
(Job title or kind of work)

(3) Who helped you select your job goal? Check all those that apply.

- My father My counselor
 My mother My friends
 My teacher Others (please specify) _____

(4) Indicate how you think your grades compare to your classmates in each subject below:

Subject	Above ave.	Ave.	Below ave.
Reading & lang. arts	_____	_____	_____
Mathematics	_____	_____	_____
Science	_____	_____	_____
Social studies	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

(5) Briefly indicate your experience in working in areas related to the jobs marked in Sections 1 and 2. Include paid and unpaid work. Also, indicate any additional information which you think may help in the planning of your program.

TEACHER PLANNING WORKSHEET (TPW)

Teacher Planning Worksheet

(1) I recommend that the student prepare for the following job titles.

_____ (Title or area) _____ (Title or area) _____ (Title or area)

(2) I concur with the student's choice(s) of occupational career(s). Yes _____ No _____

(3) List any additional student services you would recommend for this student.

Counseling _____
Career Information _____
Academic Tutoring in _____
Reading _____
Math _____
Other (Specify) _____

(4) This IEP was prepared on _____ and should be reviewed in _____ weeks.

(5) Comments _____

Teacher's Signature Date Student's Signature Date Parent(s) Signature Date

MODELS FOR DECISION-MAKING

This section briefly describes three models of decision-making. All three models require an assessment of available options, a self-analysis of abilities and aptitudes, the formation of a plan, options for recycling information and, finally, the making of a decision. The purpose in showing these models is to verify, from a philosophical perspective, the need for the student to gain as much information as possible about him/herself and careers, along with learning how to analyze that information so as to eventually reach a decision. The decision may simply be investigatory; at least the decision is founded upon a thorough analysis of available information and is not a "hit or miss" proposition.

Jackson-Egner Model

Jackson and Egner's model (1976) is based upon the assumption that two basic ingredients are required in order to make the best possible career decision. These are self-awareness and occupational knowledge.

Information on self-awareness may be obtained through values clarification activities, and vocation and interest inventories.

Occupational data must generally be obtained from outside sources such as school counselors, teachers, job catalogs, and first-hand work experience.

These two sources of information, in conjunction with an awareness of available options, are continually analyzed and synthesized until a definite decision is made.

Jackson and Egner believe that, until a decision is actually made, all new information is recycled and compounded with previous data. This affords the decision-maker with the maximum amount of information prior to the making of a decision.

Additional information regarding this model may be found on page 29 of this booklet. For a more complete description of course materials based upon this model, please see page 23 of this booklet.

see also:

D.J. Jackson. Planning Ahead for Career Choice. Ithaca, Cornell Institute for Occupational Education, 1976.

Cronbach and Gleser Model

A second model for the decision-making process is offered by Cronbach and Gleser (1957). Their model contains similar components to those offered by Jackson and Egner.

Information about the individual is analyzed and assessed, and a plan of action or a strategy is developed.

The individual may choose a particular course of action which leads to some specific performance, that is, investigating a particular occupation. Such a decision is considered terminal. If the person feels that (s)he does not have enough information to choose an occupation for investigation, the present data are recycled along with additional data. This provides the individual with more information to assist in the decision-making process.

This process is classified as an "Investigatory Decision." It is important to note that a terminal decision may also be cyclical, as even the result of a terminal decision may lead to additional information being generated for the individual. This information may in turn modify the "Terminal Decision."

For additional information on this model, see:
Cronbach, L.J., and G.C. Gleser. Psychological Tests and Personnel Decisions. Urbana: University of Illinois Press, 1957.

Gelatt Decision-Making Model

A third model of the decision-making process is offered by Gelatt (1962). It also presents the decision-making process in cyclical terms, whether the decision be investigatory or terminal.

The objective or purpose of the decision-making process is viewed as the formulation of an appropriate plan of study to satisfy the individual's needs. Acquired data consist of the test results, grades in school-related work, interest surveys, etc., that are available to the student or the counselor. A strategy is then developed wherein the individual determines the available alternatives, the results of each alternative and the probability that such results will occur.

These alternatives are evaluated according to the individual's value system. The final decision is made on the basis of a criterion chosen for the particular purpose or objective.

For additional information on this model, see.

Gelatt, H.B. "Decision-Making: A Conceptual Framework of Reference for Counseling." Journal of Counseling Psychology, 9: iii (1962).

Common Elements of the Models

These models for decision-making have six elements in common:

Each model requires an assessment of all available options or alternative actions prior to making a decision.

Information related to the individual's values needs to be obtained in order to determine which choice(s) will most closely coincide with the person's desires.

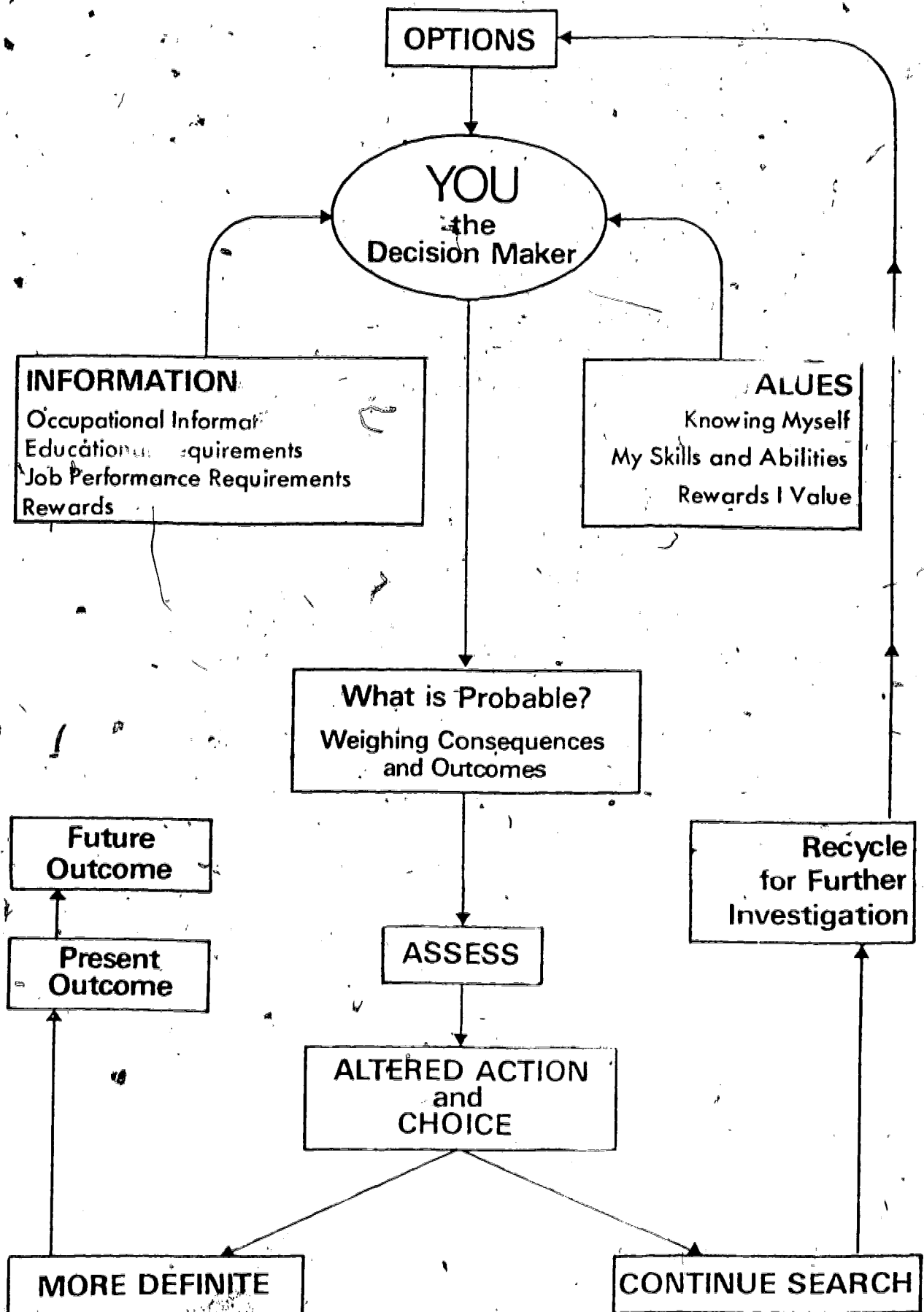
Data regarding the student's cognitive abilities, aptitudes and occupational awareness need to be gathered and analyzed to insure the student an adequate data/information base before determining a course of action.

A plan needs to be prepared which will assess the probability of a result actually occurring.

An option for recycling information should be integrated into the plan.

Finally, a decision, whether terminal or investigatory, is made.

The Jackson-Egner model is presented on the next page to offer a graphic representation of these components.



SUPPLEMENTAL MATERIALS FOR CAREER DECISION-MAKING

The purpose of this section is to inform educators of some of the materials that may be used from high school through college in order to improve student decision-making skills. Six programs are analyzed. All are considered supplementary material in the sense that they are to be used in class in addition to the regular classroom instruction. Most of the materials presented do not constitute an entire semester or year course in decision-making or career planning.

A brief one-page outline for each of the six programs is offered. It is hoped that this presentation will assist counselors, teachers and administrators in understanding what is available for use. It may also help in the assessment of their usefulness in particular situations.

Self Assessment and Career Development

This book was written, according to its authors, for people who wish to take an active part in determining their career. The authors feel that people often make career decisions with far less care and expertise than that which is used in the purchase of a home appliance or the planning of a vacation.

The book consists of four main sections. The first concerns self-assessment and primarily involves written exercises for self-exploration. A 24-hour diary, a self-interview, and exposure to the Strong-Campbell Interest Inventory are examples of the activities which are included.

The second part of the book deals with career development; the units concentrate on job-hunting, career stages and lifetime management of a career.

The third section contains appendixes related to the previous sections. Two of these appendixes are examples of self-assessments. The third contains sources of information on selected industries and career opportunities. The fourth appendix consists of sources of information on developing job opportunities.

The final section contains a workbook which is to be used in conjunction with the first two sections.

The book can be used with an entire class or with individuals. The authors indicate that the course has been used in college classes and has been found very effective. There appears to be no reason why the course cannot be used with high school juniors or seniors.

For additional information on this book, please ...

Self-Assessment and Career Development, by John F. Kottler, Victor A. Faux and Charles C. McArthur. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1978 (336 pages)

Career Skills Assessment Program

This program combines guidance in individual career planning and decision-making, self-assessment of career skills, and staff evaluation of individual success and overall program effectiveness. It consists of six skill areas that are considered to be central to successful career development. These six skill areas are:

1. Self-Evaluation and Development
2. Career Awareness
3. Career Decision-Making
4. Employment Seeking
5. Work Effectiveness
6. Personal Economics

Each unit or area may be used independently and schools need not purchase all six units.

Within each unit the following are included:

1. Exercise Booklet (reusable) containing pre-test questions related to the content covered in the unit.
2. Response Sheet (for self-scoring)
3. Self-Instruction Guide--to provide the student with additional content related to the specific area or unit under study.

The CSAP can be used with students in eighth grade through college sophomores. The materials can be used either individually or with an entire class. Administration time is about 2-3 hours per skill area, but the skill area need not be completed within one class period.

see The Career Skills Assessment Program, available from the College Board, 888 7th Ave., New York, N.Y., 10019.

Planning Ahead for Career Choice: A Career Decision-Making
Mini-Course for High School Students

The purpose of the Mini Course is to move toward more effective implementation of career decision-making. The course is based on Peter Blau's Model of Occupational Choice and the Jackson-Egner Model which has previously been outlined in this booklet.

The Mini Course is for use with 10th, 11th or 12th grade students in making career choices. It may be offered as an elective course for 1/2 to 1 full semester, or as supplemental material to other related courses. It is based on the premise that the majority of high school students have not acquired the skills necessary to choose a career.

The materials of the Mini Course are contained in three units. The first deals with individual values, the second with Occupational Information and the third with making a decision (Decision Point). A total of fifteen modules or capsules comprise the entire Mini Course. They are:

- Capsule 1: Who Am I?
- Capsule 2: My Interests and Occupation
- Capsule 3: My Other Characteristics that may Influence Employment
- Capsule 4: My Skills and Academic Strengths
- Capsule 5: Rewards I Want from My Occupation
- Capsule 6: Values Summary
- Capsule 7: Exploring Occupations
- Capsule 8: Necessary Education and Experience
- Capsule 9: Qualifications for Satisfactory Job Performance
- Capsule 10: Rewards Present in the Occupation
- Capsule 11: Do my Other Characteristics Meet the Requirements of the Occupation?
- Capsule 12: Do I have the Skills and Abilities to Meet the Requirements of the Occupation?
- Capsule 13: Are Rewards Present in the Occupation Important to Me?
- Capsule 14: What is Probable?
- Capsule 15: Where do I go from here?

see Planning Ahead for Career Choice by Peter Blau and Jackson Egner
Ithaca: Cornell Institute for Occupational Education
1976.

Computer-Assisted Guidance in New York City High Schools:
A Demonstration of Feasibility and Impact on Students

With financial assistance from the First National City Bank, a program was conducted both to demonstrate and to evaluate a computer-assisted counseling project in five New York City public schools. A computer terminal was used in each of the participating schools for fifteen months to provide students with factual information on careers and colleges. The program was available for use by 11th and 12th grade students. Four separate data files were available for searches by the computer. These were: a four-year college file containing information on about 1600 colleges nationwide; a two-year junior and community college information file on about 1000 institutions; third, an occupational information file on about 1300 occupations; and a scholarship information file.

Some of the interesting results include: that automated equipment could be used in city high schools without theft, misuse or security problems if the equipment were properly located in the school; and that the computer needed to be available only one day per week per school for maximum efficiency. It was found that the computer was used more in the spring than in the fall. The system was used less in schools which have large advisory offices and large numbers of college-bound students. The computer program seemed to improve student decision-making ability, but there was a shortage of information on emerging occupations and financial aid information. Finally, it was noted that over 4000 students used the system more than 6700 times during the course of the year, averaging 1.6 uses per student.

For more information on this program, please see:

Computer-Assisted Guidance in New York City High Schools
by Barbara Heller and Linda Ghitayat. Institute for
Research and Development in Occupational Education,
City University of New York, November 1976 (Report
CASE-41-76).

Articulated Career Guidance Program

This project was developed by the Rochester, New York, Public Schools for use in junior and senior high schools. The project is used in grades 7-12, each grade building upon the foundations laid by previous experience with ACGP. The program is primarily based upon self- and career-awareness concepts linked with personal decision-making processes. The backbone of the ACGP is the belief that the students' greatest need is in implementing personal career strategies. Briefly, each grade's content is structured around these topics:

- 7th grade--adjust to the new environment
- 8th grade--broaden self-awareness and develop a career plan
- 9th grade--orientation to the high school
- 10th grade--summarize career ideas in relation to job "families"
- 11th grade--review of previous information; consider a career
- 12th grade--put career plans into action

Each individual unit in the ACGP consists of the following parts:

1. Grade and Unit Information
2. Title which states Unit's theme
3. Behavioral objectives for the Unit
4. Intent of the Unit
5. Preparation (necessary preparation that needs to be accomplished prior to the class session)
6. Action (steps for presenting information)
7. Activity (what is to be done during the session)
8. Reaction story, (used to develop group discussions)
9. Evaluation (to measure the concepts of the Unit)
10. Related activities (films, etc.)

For additional information on this project, please see:

The Articulated Career Guidance Project. Rochester, New York:
Division of Instruction, City School District, 1977
(216 pages).

Guidance Program for Project PLAN

Project PLAN was a massive effort aimed at individualizing education. It was developed by private industry, private research and public schools. For a more detailed description of the entire Project PLAN system, see the ISSOE booklet on "Planning Student Programs."

The PLAN system involves the full range of academic education for grades 1-12. The guidance component of PLAN is aimed at both the individualization of curriculum content and the integration of career guidance with regular classroom instruction. The guidance component of PLAN consists of seven main elements. These are:

1. Curriculum Planning and Coordination: the integration of guidance with traditional instruction and content.
2. Orientation and Study Skills: familiarizing the student with the PLAN system and assisting students in developing strategies for test taking, listening skills and study management skills.
3. Career/Vocational Information: information about educational and occupational opportunities, the world of work, etc. Different activities are offered at the elementary, intermediate, and secondary levels.
4. Student Long-Range Goal Formulation Program: aimed at improving students' long-range goal formulation skills so they may arrive at decisions based on informed choice.
5. Individual Program Planning: through the assistance of a computer, the student's long-range goals, interests and abilities are analyzed and an individualized program is generated.
6. Progress Assessment and Monitoring: consists of academic history along with learning characteristics, completed at various times throughout the year.
7. Post-Secondary Guidance: prepares the student for the transition from high school.

For additional information on this project; please see:

The Guidance Program in the PLAN System of Individualized Education, by James A. Dunn. Palo Alto, Calif.: American Institutes for Research, 1972.

This concludes the review of supplemental materials and/or programs which may be used in secondary schools to improve student decision-making as it relates to career and vocational planning. The programs presented are only a representative sample of the types of materials which are available. Interested readers should consult textbook publishers, professional career and school counselors and professional counseling associations should additional programs be desired.

Paper and Pencil Measures

Nine paper-and-pencil self-report tests were analyzed in terms of eight criteria. The analysis is presented in tabular form (p. 29).

The criteria were (1) content measured, (2) age of the population which may take the test, (3) the length of time it takes to administer the test, (4) who may administer the test, (5) who may (should) score the test, (6) who may (should) interpret the results, (7) whether the test may be administered to groups, individuals or both, and (8) the approximate cost of the test materials.

Although the table is basically self-explanatory, some brief clarification of terms may help in achieving maximum use of the information.

Content

This section reflects the area(s) which are measured and/or analyzed by the particular inventory. Some of the tests measure only the subject's interests, while others measure career development. Before deciding which instrument to use, the counselor or teacher should obtain a test manual to ascertain if the specific test meets his/her goals and/or needs.

Administrator

There are three options available to the teacher interested in helping students make career decisions. First, the test may be self-administering, that is, students may take the test without assistance from a counselor or teacher. Second, the test may need another person for administration, but that person need not be trained in test administration. (This is generally the case where a self-administering test is given to a group of students and the administrator functions as a proctor.) The third option involves administration by professionally trained personnel only. This usually refers to the school counselor or psychologist but may include teachers or administrators who have the required training in testing.

Scoring and Interpretation

Scoring and interpretation may also be accomplished through three means. Some of the instruments are scored and interpreted by the student without additional assistance. Some are scored by the school counselor or another trained person who must interpret the results with the student. Most of the tests require that the answer sheet be returned to the test publisher for scoring. The interpretation should then involve both the student and the counselor.

As in the administration of almost any test, these tests require that the counselor and/or student have a goal in mind prior to taking the test. A careful analysis of the needs of the individuals and the results that are required should be undertaken before the selection of a career planning assessment aid.

CAREER PLANNING ASSESSMENT AIDS

Kuder DD Occupational Interest Survey
 Assessment of Career Development
 Ohio Vocational Interest Survey

Career Skills Assessment Program
 Hall Occupational Orientation Inventory

Career Planning Program
 Career Maturity Inventory

Self-Directed Search
 Strong-Campbell Interest Inventory

CONTENT	Interest Survey	Core Aspects of Career Development	Interest Survey	Career Development Skills (6)	Personal Needs and Job Concerns	Career Assessment and Guidance	Measures Decision-Making Maturity	Self-evaluation and Job-Desires	Interest Survey
AGE	11th gr- College Senior	8th-12th Grade	8th-12th Grade	8th Grade- College Sophomore	8th Grade- Adults	8th-11th Grades (4)	6th Grade Reading Ability- College Seniors	15 years and older	16 years and older
ADMINISTRATION TIME	30 - 45 minutes (1)	2 1/2 hours	1 - 1 1/2 hours (1)	2 - 3 hours	30 minutes (1)	1 - 2 hours	2 1/2 hours	40 - 60 minutes (1)	30 - 60 minutes
ADMINISTRATOR	Self or Another Person	Trained Personnel Only (5)	'Another Person'	Self or Another Person	Self or Another Person	Trained Personnel (5)	Self or Another Person	Self	Self or Another Person
SCORING	by SRA (2)	by Houghton-Mifflin (3)	by Harcourt, Brace and Johanovich (3)	self/school personnel, or through the publisher	by self, another person or through S.T.S.	by Houghton-Mifflin (2)	by hand or through McGraw-Hill	Self	by Stanford University Only (3)
INTERPRETATION	Self or with Another Person	by Trained Personnel Only (5)	Self or with Another Person	Self or with Another Person	Self or with Another Person	By Trained Personnel Only (5)	Student with Trained Personnel (5)	Self	Student with Trained Personnel
INDIVIDUAL OR GROUP ADMINISTRATION	Both	Group	Group	Both	Both	Both	Both	Individual	Both
APPROXIMATE COST	\$40.00 per 20 tests	\$19.00 for 25 tests & answer sheets (4)	\$18.00 for 35 tests & answer sheets (7)	\$25.00 for 25 books per skill area	\$18.00 for 20 tests & answer sheets (7)	\$3.75 per test	\$23.45 for 35 tests & answer sheets	\$14.00 for 25 tests	\$10.00 for 25 tests & answer sheets (7)

- No set time requirement. This is the average test-taking time.
- No extra cost. Costs extra.
- For Students going to post-secondary educational institutions.
- Could be counselors, principals, teachers, etc.
- See additional information on page 22 of this booklet.
- Tests and answer sheets may be purchased separately.

29

32

33



SUMMARY

This booklet was designed to assist educators in helping students formulate goals and plans related to career and occupational decision-making.

The booklet contains three sections related to this topic. The first section outlined three basic models of the decision-making process and provided the reader with a philosophical foundation upon which decision-making rests. The second section briefly explained five different types of supplementary teaching material or programs which may be used to assist students in improving their decision-making skills. The third section compared nine commonly used paper-and-pencil instruments to measure interests, skills and abilities. These instruments will assist both the student and counselor in selecting areas of study which will meet the student's needs. By applying some of the programs and tests contained in the latter two sections, students will be better able to make career and occupational decisions.

REFERENCES

- American College Testing Program Career Planning Program. Boston: Houghton Mifflin Company, 1974.
- American College Testing Program Assessment of Career Development. Boston: Houghton Mifflin Company, 1974.
- College Board Career Skills Assessment Program. New York: The College Board, 1977.
- Crites, J.O. Career Maturity Inventory. Monterey: CTB/McGraw Hill, Inc., 1973.
- Cronbach, L.J. & Gleser, G.C. Psychological Tests and Personnel Decisions. Urbana: University of Illinois Press, 1957.
- D'Costa, A.G. Ohio Vocational Interest Survey. New York: Harcourt, Brace, Jovanovich, Inc., 1969.
- Dreikurs, R. & Grey, L. A New Approach to Discipline: Logical Consequences. New York: Hawthorn Books, Inc., 1968.
- Gelatt, H.B. "Decision-Making: A Conceptual Frame of Reference for Counseling," Journal of Counseling Psychology, Vol. 9 (3), 1962.
- Hall, L.G. Hall Occupational Interest Inventory. Bensenville: Scholastic Testing Service, Inc., 1971.
- Holland, J.L. Self-Directed Search. Palo Alto: Consulting Psychologists Press, Inc., 1972.
- Jackson, D.J. Planning Ahead for Career Choice. Ithaca: Cornell Institute for Research and Development in Occupational Education, 1976.
- Kuder, E.F. Kuder DD Occupational Interest Survey. Chicago: Science Research Associates, Inc., 1970.
- Strong, E.K., Jr. & Campbell, D.P. Strong-Campbell Interest Inventory. Palo Alto: Consulting Psychologists Press, Inc., 1976.