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The Ohio Vocational Interest Survey (OVIS) has two aims: (1) to assist youth in understanding themselves in relation to the world of work and, (2) as a result, to provide a background for career choice. To do so, OVIS provides a functional system for relating an individual's interests into broad homogeneous clusters of jobs. OVIS consists of a six-item Student Information Questionnaire and a 280-item Interest Inventory, and is appropriate for use at the eighth grade level and above. A unique value of OVIS lies in its compatability with the following occupational information and guidance tools: (1) Directory of Occupational Titles, (2) The Occupational Outlook Handbook, (3) National and state labor market and occupational information publications and (4) the General Aptitude Test Battery. It is concluded that OVIS is an important tool for school guidance and counseling programs. (LS)

ED029343

ORIENTING STUDENTS TO THE WORLD OF WORK USING THE DATA-PEOPLE-THINGS CONCEPTUAL FRAMEWORK AND THE OHIO VOCATIONAL INTEREST SURVEY

Presented by David W. Winefordner, Assistant Director
Division of Guidance and Testing, Ohio Department of Education
at the American Personnel and Guidance Association Convention
Las Vegas, Nevada, April 1, 1969

Today, in a period of growing concern for the optimum development and use of human resources, increased emphasis is being placed upon the role of the school system in providing experiences to assist youth in career exploration and planning. This emphasis is highlighted by the recent passage of the Vocational Education Amendments of 1968 which clearly state the need for improved and expanded programs of vocational guidance.

Many of the experiences being provided in present programs are at the high school level and are characterized by short-term approaches which lack coordination and continuity. In contrast, career development theory and research indicate that the developmental approach is necessary. Thus, any program designed to orient students to the world of work will be effective only to the extent that it is based on a sound conceptual framework - a framework which is sufficiently basic and elementary to permit introduction in the primary grades and yet comprehensive enough to provide meaningful experiences as students' insights, understandings and needs develop (10).

The third edition of the Dictionary of Occupational Titles, 1965, (7) provides a natural base for the development of a conceptual framework for the world of work. This edition replaced the two classification structures of the previous edition with a single structure which provides more pertinent information regarding occupational groupings and worker traits and skills. The single occupational code structure, plus a change in emphasis to the analysis of jobs in terms of worker characteristics, results in a more meaningful system for recording and reporting occupational information.

How useful is this system of occupational information for a school guidance and counseling program? Perrone (5), in reporting a national study on the use of

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occupational information by school staff members, recommended that greater attention be given to making information available by using the job cluster format of the Dictionary of Occupational Titles (D.O.T.) with the basic elements of work, data-people-things, depicted. However, Reilley (6), in reporting on a recent study of the "Availability and Usefulness of Occupational Materials," indicated that although a majority of the counselors he surveyed had the third edition of the D.O.T., few of them found it useful. This would seem to indicate that counselors recognize the value of the D.O.T. as a reference tool but have not been able to utilize the system or materials in the school guidance program.

As was indicated earlier, the D.O.T. provides a natural base for the development of a conceptual framework for the world of work. The aspect of the D.O.T. system and rationale most compatible to the development of a program of orientation to occupations is the Data-People-Things hierarchies which form the basis for assigning the last three digits of the six-digit occupational code to all jobs. Much of the information in the D.O.T. is based on the premise that every job requires a worker to function in relation to data, people, and things in varying degrees. The degree of involvement with each of these basic elements of work varies with the job. These varying patterns of involvement provide a framework for grouping jobs into clusters which have significance for educational and vocational planning and career development programs.

Just as the data-people-things hierachies provide a logical framework for examination of the world of work, this same conceptual framework can also be used as the basis for individual self-study. Use of this approach has the distinct advantage of facilitating self-understanding within a framework which is parallel and compatible with one's understanding of the world of work.

The Ohio Vocational Interest Survey (2), which has been developed from the Cubistic Model of Vocational Interests (1), is designed to help students explore their vocational interests using the job cluster format of the D.O.T. with the data-people-things elements depicted as recommended by Perrone.

As was described by D'Costa (3), the 114 Worker Trait Groups were plotted in the three dimensional framework, using the D.O.T. data-people-things values. The resulting clusters form the 24 OVIS scales, which are homogeneous in terms of their level of involvement with data-people-things. Figure 1 lists the 24 OVIS scales and the level of involvement of each scale with data, people, and things. The scales are also homogeneous with respect to related worker characteristics such as aptitudes, interests, temperaments, specific vocational preparation requirements, and general educational development. The 114 Worker Trait Groups form sub-clusters of jobs within the OVIS scales. In writing the OVIS scale descriptions, the D.O.T. format describing the Worker Trait Groups was used. The scale descriptions include:

- Work Performed,
- Worker Requirements,
- Clues for Relating People to Requirements,
- Training and Method of Entry,
- Worker Trait Groups Belonging to Scale,
- Qualifications Profile,
- Typical Jobs.

The scale descriptions were written by reviewing the descriptions of the section in question for each Worker Trait Group belonging to the scale, and identifying the elements common to them. These common elements were used to write that section of the OVIS scale description. OVIS scales describe the cluster of jobs (Worker Trait Groups) belonging to it in the same D.O.T. Worker Trait Group format. (See Figure 9 for an example).

The Cubistic Model of Vocational Interests and the Ohio Vocational Interest Survey provide a functional system for relating an individual's interests to broad homogeneous clusters of jobs (OVIS scale descriptions). The structure of the OVIS scales then facilitates use of the D.O.T. for studying scale sub-clusters (Worker Trait Groups) or the individual job descriptions in Volume I. Thus, OVIS can make the D.O.T.a <u>useful</u> source of occupational information for school guidance and counseling programs by providing a meaningful link between the individual and the D.O.T.

FIGURE 1

DATA-PEOPLE-THINGS RATINGS OF OVIS SCALES

OVIS Scales	Data	People	Things
1. Manual Work	L	L	A
2. Machine Work	L	L	H
3. Personal Services	L	A	L
4. Caring for People or Animals	L	A	A
5. Clerical Work	A	L	L
6. Inspecting and Testing	A	L	A
7. Crafts and Precise Operations	A	L	H
8. Customer Services	A	A	L
9. Nursing and Related Technical Services	A	A	A
10. Skilled Personal Services	A	A	H
11. Training	A	H	L
12. Literary	H	L	L
13. Numerical	H	L	L
14. Appraisal	H	L	A
15. Agriculture	H	L	H
16. Applied Technology	H	L	H
17. Promotion and Communication	H	A	L
18. Management and Supervision	H	A	L
19. Artistic	H	A	H
20. Sales Representative	H	A	H
21. Music	H	H	L
22. Entertainment and Performing Arts	H	H	L
23. Teaching, Counseling, and Social Work	H	H	L
24. Medical	H	H	H

Key: H - High
A - Average
L - Low - (No Significant Relationship)

OVIS

The Ohio Vocational Interest Survey consists of two parts: a 6-item Student Information Questionnaire and the 280-item Interest Inventory, both in machine-scorable form. The reading level has been carefully controlled so that OVIS is appropriate for use at the eighth-grade level and above. There is no set time limit for administration, but high school students usually complete OVIS in approximately 80 minutes.

The Student Information Questionnaire gathers information about the student's:

- expressed vocational plans,
- subject area preferences,
- high school program plans,
- post-high school plans
- vocational course interests.

In addition to these standard questions, the local school has an opportunity to ask others. Thus, locally important questions may be asked which will be useful in individual counseling or as survey information related to educational and vocational planning or curriculum expansion. The answers to the Student Information Questionnaire are reported in a Group Summary Report as well as on each students' Report Folder.

The Interest Inventory consists of 280 job activity items. Students respond to each item in terms of "Like very much," "Like," "Indifferent to," "Dislike," and "Dislike very much." They are to consider each activity as something that would be done as part of a full-time job.

OVIS REPORTS

The results of the Ohio Vocational Interest Survey are presented in the form of Student Report Folders and school system summaries. The Student Report Folder contains the student profile chart, student questionnaire information, directions on how to read the profile chart, and the brief descriptions of the 24 OVIS scales. Figure 2 illustrates the profile chart included in the Student Report Folder.

FIGURE 2

OVIS STUDENT PROFILE CHART

OVIS PROFILE CHART

Date of Testing

Grade Age yrs. mos. Sex

Reference Group

Scale Number	Scale Name	Scale Score	%ile Rank	Stanine Profile Low 1 2 3	Average 4 5 6	High 7 8 9	Scale Clarity Index

REDUCED FOR ILLUSTRATION PURPOSES

*Too many questions omitted for a score to be reported.

Page 2

Page 3

Name

School

Counselor

Student Questionnaire Information

1. Occupational Plans

   First Choice

   Second Choice

2. Best Liked Subjects

   First

   Second

3. High School Program

   First

4. Post-High School Plans

   First

5. Interest in Vocational Programs

6. Vocational Program Choice

   First

   Second

7. Local Survey Information

A B C D E F G H

— — — — — — — —

DIRECTIONS: How To Read Your Profile Chart

The Profile Chart on page 2 is a graphic picture of your interests in the 24 general work areas covered by the OVIS Interest Scales. Look at your **Scale Scores** in the third column of the Profile Chart. Note that these scores are ranked from high to low. They show you the relative strengths of your interests in the job activities described in OVIS. In other words, you have shown more interest in the job activities that make up the scales at the top of the list than you have in the job activities that make up the scales at the lower end of the list.

Now look at the **Percentile Ranks** (%ile Ranks) in the next column. These scores show you how your interests compare with those of other students in your reference group. For example, if you had a percentile rank of 56 on the *Manual Scale (Scale 1)*, this would mean that you have shown more interest in manual activities than have 56 percent of the students in your group. The reference group to which you are being compared appears at the top of page 2.

The **Stanines** in the Profile Chart are based on a STAndard NINE-point scale ranging from 1 (low) to 9 (high). Like the percentile ranks, stanines show how your interest scores compare with those of your reference group. Stanine scores of 1, 2, and 3 represent low interest; 4, 5, and 6, average interest; and 7, 8, and 9, high interest. To plot your stanine scores, draw a straight line from each stanine value to the one following.

Look at the overall pattern of high and low stanines. Are there noticeable differences in your stanine scores from scale to scale? Consider only stanine differences of two or more points as being important.

The **Scale Clarity Indexes** reported in the Profile Chart show how consistent you were in responding to the activities in each scale. A Scale Clarity Index of "H" means that you were *highly consistent* in the way in which you marked your answers to the statements which make up the scale. That is, you marked most of your answers with the same degree of "like" or "dislike." A Scale Clarity Index of "F" means that you were *fairly consistent* in the way in which you marked your answers. A Scale Clarity Index of "I" means that you were *inconsistent* in the way in which you marked your answers; you may have liked some of the job activities but disliked others.

You may wish to explore further the occupations covered by any scale for which you have a Scale Clarity Index of "L." It is quite possible that you may have a strong interest in one or more jobs covered by a scale and little interest in the other jobs described by that scale.

Your answers to the *Student Questionnaire* are reported below your name block. Look at **1. Occupational Plans.** Listed there are the two job areas which you chose as best representing the types of work you would like to do for a living. How do your scores on the 24 interest scales compare with your job choices and with the other information from the questionnaire?

Your interests should play an important part in your educational and vocational planning, but you should also consider school grades, special abilities, and other important information. You will want to investigate further the specific occupations that make up the scales in which you have shown the greatest interest. Your counselor has additional information about each of the OVIS scales to help you as you explore these occupations.

The Student Profile Chart reports the following:

- print-out of the OVIS scales in a rank order based upon scale scores.
- scale scores which express the strength of the student's interest.
- percentile ranks and stanines which enable comparisons of the student's interest scores with those of students in the norm group.
- scale clarity index which shows how consistent the student's responses are within each scale.
- the student's responses to the information questionnaire items.

The Student Questionnaire Information responses are reported as part of the Profile Chart. This can be a valuable counseling aid in checking on the consistency between measured and expressed vocational interests, as well as a consistency check between a student's educational plans and his vocational direction.

In addition to reporting the Student Questionnaire Information on the student Profile Charts, a separate Summary Report provides the number and per cent of students, by six, choosing the various options to the Student Information Questionnaire items. These summary data will provide the school administrator with valuable information related to student plans and curriculum development, along with providing meaningful information for group guidance classes. Figure 3, illustrates the OVIS Summary Report.

OVIS, in addition to serving as a link between the student and the D.O.T. system of occupational information, can serve as a stimulator and catalyst for educational and vocational planning.

FIGURE 3

OVIS SUMMARY REPORT

STUDENT INFORMATION QUESTIONNAIRE

SCHOOL SYSTEM
BUILDING

GRADE SEX

1. OCCUPATIONAL PLANS

	FIRST CHOICE Number	%	SECOND CHOICE Number	%
1. Manual Work				
2. Machine Work				
3. Personal Service				
4. Care People-Anim.				
5. Clerical Work				
6. Inspect-Testing				
7. Crafts				
8. Customer Service				
9. Nursing				
10. Skilled Per. Serv.				
11. Training				
12. Literary				
13. Numerical				
14. Appraisal				
15. Agriculture				
16. Applied Tech.				
17. Promotion-Comm.				
18. Management				
19. Artistic				
20. Sales Represent.				
21. Music				
22. Entertainment				
23. Tech-Coun.-Soc. W.				
24. Medical				
OMITS				
TOTAL				

2. BEST LIKED SUBJECTS

	FIRST CHOICE Number	%	SECOND CHOICE Number	%
1. Mathematics				
2. English				
3. Social Studies				
4. Science				
5. Foreign Lang.				
6. Music				
7. Art				
OMITS				
TOTALS				

3. HIGH SCHOOL PROGRAM

	Number	%
1. College Preparatory		
2. Business-Commercial		
3. Vocational-Technical		
4. General		
5. Other		
OMITS		
TOTAL		

4. POST-HIGH SCHOOL PLANS

	Number	%
1. Voc.-Tech. School		
2. Business School		
3. Nursing School		
4. Junior College		
5. College - University		
6. Military		
7. Apprenticeship		
8. None		
9. Undecided		
OMITS		
TOTAL		

5. INTEREST IN VOCATIONAL PROGRAM

	Number	%
1. Already Enrolled		
2. Interested		
3. Not Interested		
OMITS		
TOTAL		

6. VOCATIONAL PROGRAM CHOICE

	FIRST CHOICE Number	%	SECOND CHOICE Number	%
1. Gen. Agriculture				
2. Horticulture, etc.				
3. Office Practices				
4. Secretarial				
5. Data Processing				
6. Bookkeeping				
7. Distributive Ed.				
8. Food Services, etc.				
9. Practical Nursing				
10. Dental Asst., etc.				
11. Home Economics				
12. Auto Body Repair				
13. Mechanics				
14. Building Trades				
15. Printing, etc.				
16. Commerical Art				
17. Cosmetology				
18. Drafting				
19. Machine Shop				
20. Sheet Metal, etc.				
21. Electronics				
22. Appliance Repair				
23. Tailoring, etc.				
24. Undecided				
OMITS				
TOTALS				

7. LOCAL SURVEY INFORMATION

Questions A-D

CHOICE NO.	A Number	A %	B Number	B %	C Number	C %	D Number	D %
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
OMITS								
TOTALS								

REDUCED FOR ILLUSTRATION PURPOSES

Questions E-H

CHOICE NO.	E Number	E %	F Number	F %	G Number	G %	H Number	H %
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
OMITS								
TOTALS								

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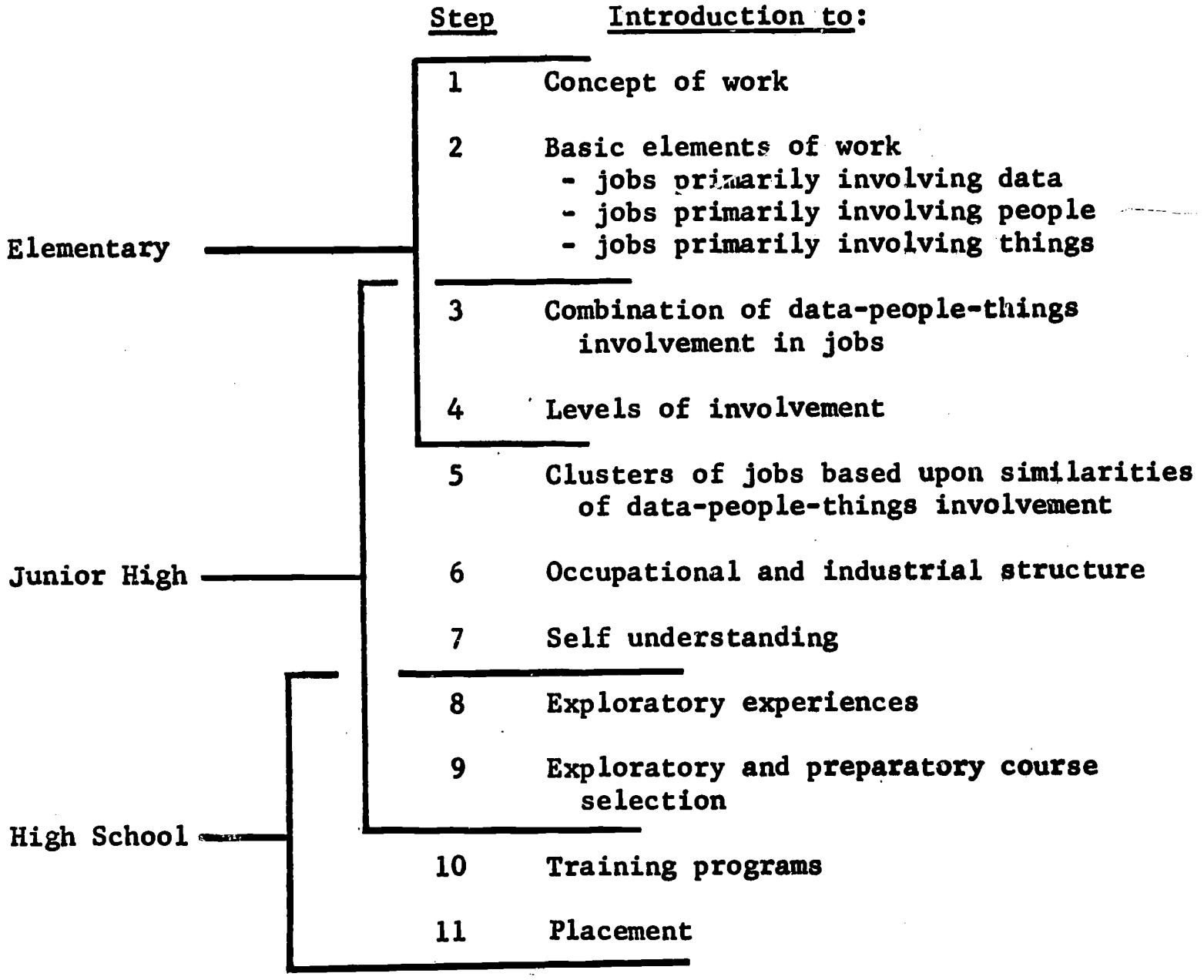
Data-People-Things Model for Career Exploration

The basic elements of work (data-people-things), which provide the three dimensional structure for the Cubistic Model of Vocational Interests, can also be used as a framework for providing a program of career exploration in grades K-12. Figure 4, which presents a Data-People-Things Model for Career Exploration, attempts to illustrate a logical developmental sequence for the introduction of career exploration activities throughout the elementary, junior high, and senior high school.

FIGURE 4

DATA - PEOPLE - THINGS MODEL FOR CAREER EXPLORATION



The remaining sections of this paper expand the outline of the Data-People-Things Model for Career Exploration illustrated above, with each of the eleven steps being discussed in sequence.

Concept of Work (Step 1)

The early concepts of work are appropriate for introduction at the primary

school level. These early concepts include not only the development of an awareness of work but also the development of positive attitudes toward work and a recognition of the relationship between school and work.

Basic Elements of Work (Step 2)

The introduction of the three basic elements of the world of work -- Data-People-Things -- may be done through a variety of approaches, including the traditional approach of studying the workers in the families of pupils and then developing concepts of the community and its workers. At this point, the jobs which should be emphasized should involve, primarily, just data, people, or things. Examples of such jobs, as they relate to the clusters of jobs identified by the Cubistic Model and OVIS scales are shown in Figure 5.

FIGURE 5

EXAMPLES OF JOBS PRIMARILY INVOLVING DATA, PEOPLE, OR THINGS

DATA	PEOPLE	THINGS
Clerical Work - File Clerk - Typist - Bookkeeper	Personal Services - Maid - Stewardess - Usher - Elevator Operator - Flagman - School Crossing Guard	Manual Work - Janitor - Groundskeeper - Machine Feeder - Farm Hand - Longshoreman
Literary - Poet - Literary Writer - Claim Examiner		Machine Work - Truck Driver - Bulldozer Operator - Offset Pressman - Structural Steel Worker - Lens Grinder
Numerical - Accountant - Meteorologist - Appraiser		

Combination of Data-People-Things Involvement in Jobs (Step 3)

Following the introduction of jobs primarily involving data or prople or things, the next step would be to introduce the concept of the combination of Data-People-Things involvement in jobs. Examples of job clusters (OVIS scales) and some typical jobs to illustrate this concept are shown in Figure 6.

FIGURE 6

EXAMPLES OF JOBS WITH DATA, PEOPLE, AND THINGS INVOLVEMENT

Nursing & Related Technical
- Nurse
- X-ray Clerk
- Physical Therapist

Skilled Personal Service
- Barber
- Cosmetologist
- Tailor

Artistic
- Artist
- Photographer
- Decorator

Sales Representative
- Sales Engineer
- Insurance Salesman

Medical
- Surgeon
- Doctor
- Dentist
- Veterinarian

Levels of Involvement (Step 4)

Students should also develop an understanding of the differences among jobs in terms of their levels of involvement with data, people, and things, using the D.O.T. structure. The data, people, things hierarchies are shown by the last three digits of the six-digit D.O.T. occupational code (Figure 7), and may be introduced by selecting and studying jobs in terms of their highest level of involvement with each of the three basic elements of work.

FIGURE 7

D.O.T. OCCUPATIONAL CODE SYSTEM

Occupational Group Arrangement				Data, People, Things Hierarchies		
Category	Division	Group		Data	People	Things
2	0	2	.	3	8	8

Figure 8, illustrates the D.O.T. levels of involvement with data, people, and things and the converted levels as used in the Ohio Vocational Interest Survey. The last three digits of the Occupational Code express the level of complexity at which the job requires the worker to function in relation to data, people, and things. The specific relationship of jobs to data, people, and things can be arranged in a hierarchy of involvement from simple to complex. Thus, the last three digits can express the total complexity at which the job requires the worker to function.

FIGURE 8

OVIS -- D.O.T. RELATIONSHIPS

OVIS Rating	Level of Involvement	D.O.T. Levels of Involvement and Functions		
		DATA	PEOPLE	THINGS
High	Complex ↑	0 Synthesizing 1 Coordinating 2 Analyzing	0 Mentoring 1 Negotiating 2 Instructing 3 Supervising 4 Diverting	0 Setting-Up 1 Precision Working 2 Operating-Controlling 3 Driving-Operating
Average		3 Compiling 4 Computing 5 Copying 6 Comparing	5 Persuading 6 Speaking-Signaling 7 Serving	4 Manipulating 5 Tending 6 Feeding-Offbearing 7 Handling
Low	Simple	7, 8 No significant relationship	8 No significant relationship	8 No significant relationship

Cluster Approach (Step 5)

The next step in the sequence would be the study of the world of work using the cluster approach. Here again, the clusters as defined by the Cubistic Model and the OVIS scales could be used. The OVIS scales listed in Figure 1 are clusters of jobs which are homogeneous in terms of their involvement with data, people, and things. Also, they are similar in terms of work performed, related interests, temperaments, and aptitudes. The OVIS "Customer Services" scale (Figure 9), illustrates how the OVIS scales could be used to study job clusters.

FIGURE 9

8. Customer Services

Work Performed

Work activities in this group involve providing services to people in the course of a variety of business situations. Such operations as receiving money and keeping records of the transactions; transporting passengers or merchandise; collecting, collating and dispensing information; operating a telephone switchboard, taking messages and supplying information; demonstrating and selling products to customers; and providing other services to the public are typical. Both knowledge of the product or techniques of service and the ability to deal with people are essential to successful performance in these positions.

Worker Requirements

An occupationally significant combination of: the ability to become familiar with and carry out established rules and procedures governing the work situation; tact and courtesy in, and an affinity for, dealing with people; some numerical and verbal facility and the perception of clerical detail; a liking for public contact work; and such personal characteristics as a near appearance, honesty, a good memory and the ability to relate to people and adjust to fluctuating circumstances.

Clues for Relating People to Requirements

Expressed preference for public contact work.
Demonstrated ability to follow instructions and guidelines.
Successful completion of business, commercial or clerical courses in high school.
Casual experience of a paid or volunteer nature in public contact work, such as selling tickets, delivering newspapers, clerking, driving, delivery, etc.
Appropriateness and neatness of dress and appearance.

Training and Method of Entry

A high school education with some emphasis on a business or commercial curriculum is usually considered the minimum preparation for entry. Most establishments provide on-the-job training in the specific operations involved in the position. In nearly every case personal characteristics such as speaking ability, tact, courtesy, and personal appearance are considered carefully.

Worker Trait Groups Belonging to Scale

DOT-II pp.

258	Information Gathering, Dispensing, Verifying, and Related Work
265	Facilities, Services, and Movement Allocating and Expediting Work
267	Paying and Receiving
269	Cashiering
291	Switchboard Service
488	(Demonstration and) Sales Work
491	Delivery and Service Work
501	Customer Service Work
519	Transportation Service Work

Qualifications Profile *

	Most Common	Range
G E D:	3,4	2-5
S V P:	3,5,4	2-6
Apt: G	3	2-4
V	3	2-4
N	3,4	2-4
S	4	2-5
P	4,3	2-5
Q	3	2-4
K	3,4	2-4
F	3,4	2-4
M	4,3	2-4
E	5	3-5
C	5,4	2-5
Int:	2,3	
Temp:	5,2	

* See Appendix B of D.O.T., Volume II, for explanation

Worker Trait Groups and Typical Jobs

INFORMATION GATHERING, DISPENSING, VERIFYING, AND RELATED WORK

168.368 Attendance Officer
237.368 Appointment Clerk
237.368 Information Clerk
237.368 Receptionist
240.368 Tracer
242.368 Travel Clerk
243.368 Lost-and-Found Clerk
249.368 Order Clerk
253.368 Guide

FACILITIES, SERVICES, AND MOVEMENT ALLOCATING AND EXPEDITING WORK

242.368 Hotel Clerk
299.368 Customer-Service Spec.
341.368 Recreation Facility Attend.
912.368 Reservation Agent
912.368 Transportation Agent
919.368 Dispatcher, Car Rental
919.368 Ticket Agent

PAYING AND RECEIVING (BANKS AND OTHER ESTABLISHMENTS)

211.368 Cashiering
212.368 Teller
232.368 Post-Office Clerk

CASHIERING (DRUG STORES, THEATERS, RESTAURANTS, AND RELATED ESTABLISHMENTS

211.468 Toll Collector
211.468 Ticket Seller
299.468 Cashier-Checker

SWITCHBOARD SERVICE

235.862 Information Operator
235.862 Telephone-Answering-Service

DEMONSTRATION AND SALES WORK

289.358 Salesman, House-to-House
289.458 Salesperson, General
293.358 Telephone Solicitor
296.358 Personal Shopper

DELIVERY AND SERVICE WORK

292.383 Newsdealer Delivery Man
292.483 Coin-Vending-Machine Collector

CUSTOMER SERVICE WORK

224.478 Retail-Receiving Clerk
290.468 Sales Attendant
290.478 Coupon-Redemption Clerk
292.468 Lunch-Truck Driver
299.468 Will-Call Clerk
299.478 Delivery Boy
919.478 Car-Rental Clerk

TRANSPORTATION SERVICE WORK

913.463 Bus Driver
913.463 Taxi Driver

The OVIS scale descriptions are written in the same format as used in Volume II of the D.O.T. to describe the Worker Trait Groups. This facilitates the study of sub-clusters, since the 114 worker Trait Groups are sub-clusters of the OVIS scales. Also, this approach serves to introduce students to the use of the D.O.T. Perrone (5), in reporting a national study of the use of occupational information by school staff members, recommended that greater attention should be given to making information available by using the job cluster format of the D.O.T. with the basic elements of work, data-people-things, depicted.

Occupational and Industrial Structure (Step 6)

The next step would be to orient students to the Occupational Group Arrangement used by the D.O.T. The first three digits of the D.O.T. occupational code represent the Occupational Group Arrangement (See Figure 10). The occupational group arrangement classifies all occupations into 9 categories, which are

FIGURE 10

OCCUPATIONAL CODE

Occupational Group Arrangement			Data, People, Things Hierarchies		
Category	Division	Group	Data	People	Things
2	0	2 .	3	8	8

divided into 84 divisions, and further broken down into 603 groups. Thus, by using the occupational code, students can develop an understanding of the classification system used by the D.O.T. and the method used to group jobs having the same basic occupational, industrial, or worker characteristics.

Self Understanding (Step 7)

The next step, developing student self-understanding, is not meant to be introduced and covered as one unit, since a variety of activities should be utilized through the K-12 career exploration program for this purpose. However, the measurement of interests, aptitudes, and achievement can be used in conjunction with or after a program of orientation to the world of work. The Ohio Vocational Interest Survey is designed for use in grades 8 through 12, and can be used effectively as either part of, or following this program of orientation. The use of interest measurement as part of an orientation program can be an effective means of motivating students and helping them establish an early relationship between themselves and the world of work. Used in this manner, however, the instrument is not intended as a basis for making vocational choices, but rather as a stimulator of vocational exploration. Following general orientation to the world of work and specific opportunities to participate in exploratory experiences, students can more realistically consider their interests and aptitudes when making exploratory and preparatory course selections, and later, consider them again as part of the background for making decisions concerning educational or training programs in line with their career planning.

Through functional job analysis, the abilities, personal traits, and individual characteristics required of a worker in order to achieve average successful job performance have been identified. Such information is included in the Qualifications Profile which is part of the D.O.T. Worker Trait Group description. The Qualifications Profile can help students understand the worker requirements of jobs belonging to each Worker Trait Group. In addition, interview guides, check lists and other material have been developed and are included in the Counselor's Handbook (8) and the Counselor's Desk Aid (9) published by the U. S. Employment Service. These publications contain materials that can be used to assist students in understanding many of their job related traits.

It is characteristic of youth that they work best when they are pursuing something which concerns them personally. Thus, self-exploration through the use of an interest survey such as OVIS, aptitude tests, and other materials related to worker traits, can serve as a natural motivator to assist youth in vocational exploration, course selection and training.

Exploratory Experiences (Step 8)

In addition to courses, many in-and-out-of-school experiences are available to youth such as clubs, hobbies, interscholastic and intramural athletics, trips to business and industry, and part-time jobs. These can provide not only a means of exploration, but also a means for developing skills and attitudes necessary for later vocational success. Many of these experiences will directly relate to involvement with the basic elements of work -- data, people, and things. Although, the level of involvement may be simple, experience at a lower level can provide a background for learning at higher levels of involvement as well as developing an appreciation and an understanding of the lower level activity.

Exploratory and Preparatory Course Selection (Step 9)

An increasing number of schools are providing exploratory courses and experiences to orient youth to programs of education and training and to the world of work. The experiences and courses should be selected by students with an understanding of how they relate to the world of work and personal development. The following are two examples of how the Ohio Vocational Interest Survey was used in helping students select exploratory experiences and courses. At the end of the 1967-68 school year, OVIS was given to a group of approximately 200 disadvantaged high school youth and the results were used by the students and employers in selecting summer job experiences. At the present time it is being used with another group of pre-vocational students taking a cluster course prior to selecting a vocational program.

Course selection can be made on the basis of understanding interests and abilities, and having a tentative vocational direction. Exploratory and preparatory

course selection can be a means of implementing one's vocational planning.

Training Programs

As students are selecting training programs, either at the high school or post-high school level, understanding of one's interests and aptitudes, along with an understanding of the world of work is essential. Many states now have vocational education programs at the high school level. Prior to student selection of a high school program (generally at the end of the 10th grade or earlier), the Ohio Vocational Interest Survey can be used to assist in program selection.

Placement

Placement in its broadest definition is to provide assistance to students in taking the next step, either after graduating or dropping out of school. Again, information about students' interests in and abilities to function with levels of data, people, and things can assist in job, or educational and training program placement. Students should have an understanding of entry level jobs and how on-the-job training and experience can provide for advancement. They also need to know that they often can enter employment at higher levels by taking appropriate education or training programs. Selection of an entry job or training program based upon available opportunities, interests, abilities, and a vocational direction assists in advancement to a vocational goal.

III. SUMMARY

A unique value of OVIS and the system of orientation to the world of work described in this presentation, lies in its compatability with such major occupational information and guidance tools as the D.O.T., the Occupational Outlook Handbook and related releases, national and state labor market and occupational information publications, and the General Aptitude Test Battery. Since both the OVIS and GATB are tied to the clasification structure of the D.O.T., their value as companion instruments which relate the personal assessment of interest and aptitude to the world of

work sets them apart as key tools for vocational guidance. Any personal traits or occupational or labor market information which can be related to the D.O.T. can also be related to OVIS due to the tie with the Worker Trait Groups and the related data-people-things concept. OVIS scales also provide a natural framework for an occupational information filing system, with each scale serving as a broad category and the Worker Trait Groups belonging to the scale as sub-categories.

School programs must be based upon sound vocational development theory and built around a conceptual framework appropriate for student understanding and involvement. There is a definite need to establish a system which will tie occupational information and job opportunities to student interests, aptitudes, educational course selection and curricular program planning. (11)

Carl McDaniels, in writing an article entitled "Youth: Too Young to Choose?", answered "No! Youth are not too young to choose, only too poorly prepared to make choices." (4) The use of the Ohio Vocational Interest Survey and system described in this presentation is an example of one program which is aimed at assisting youth in understanding themselves in relation to the world of work, thus providing background for making choices.

Note: Additional information about the Ohio Vocational Interest Survey may be obtained by contacting the publisher:

Test Department
Harcourt, Brace & World, Inc.
757 Third Avenue
New York, New York 10017

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