



Report Interpretation

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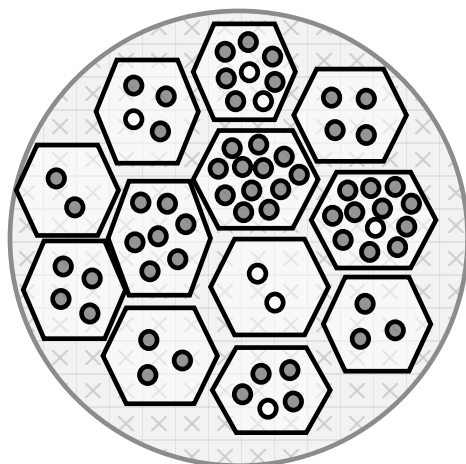
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A COUNSELOR’S GUIDE TO SCORE & REPORT INTERPRETATION

Occupational and career information is gathered and analyzed in different ways by various agencies and departments within the federal government. Educational institutions, vocational rehabilitation service providers, workforce agencies and community based organizations in turn serve diverse populations while addressing a broad range of service delivery objectives. *CareerScope* accommodates this exceptionally broad user community by offering crosswalks between system generated assessment results and (1) the Guide for Occupational Exploration and the Dictionary of Occupational Titles, (2) the occupational units of the O*NET career information database and (3) career clusters and pathways of the U.S. Department of Education’s career planning system. The following overview explains how *CareerScope* assessment results crosswalk into these career information taxonomies and how *CareerScope* results should be interpreted and used during career and employment planning.

The Guide for Occupational Exploration (GOE)

The GOE divides the world of work into twelve broad ***interest areas***. All occupations nested with a particular interest area demand similar interest preferences. The twelve broad interest areas are further subdivided into smaller and more homogeneous clusters, called ***work groups***. All occupations within a given work group demand the same constellation of critical aptitudes at score levels established by the U.S. Department of Labor. The figure below graphically illustrates this occupational taxonomy:



The large circle, encompassing the hexagons, represents the entire employment universe. The hexagons within the universe constitute the twelve interest areas. The respective interest areas then subsume smaller circles that represent work groups. There are, in total, 66 such work groups. The 59 darkened work group circles represent the occupational families that share critical aptitude score requirements.

The *CareerScope* assessment and reporting system is grounded in the preceding “occupational taxonomy” and yields interest and aptitude assessment results that can be cross-walked to the respective work group requirements. *The twelve scales of the CareerScope Interest Inventory are designed to identify interest areas that are most attractive to the evaluatee. The aptitude assessment, on the other hand, establishes the evaluatee’s potential for successful training or employment in 59 Work Groups. When results from both batteries are considered simultaneously, CareerScope identifies viable work groups on the basis of the evaluatee’s career interest preferences and learning capacities.* The table below (entitled “**WORK GROUP REQUIREMENTS**”) identifies the interest and aptitude requirements for 59 work groups. The elements of this table can be easily related to the graphic display on the preceding page.

Work Group Requirements

Interest Area/Scale	Work Group	Critical Aptitude Cut Scores
<i>01 - Artistic</i>	01.01 - Literary Arts	G100, V100, Q100
	01.02 - Visual Arts	G100, S100, P85
	01.03 - Performing Arts: Drama	G100, V100
	01.04 - Performing Arts: Music	G110, V100, Q100
	01.05 - Performing Arts: Dance	G100, S95
	01.06 - Craft Arts	S90, P85, M85
<i>02 – Scientific</i>	02.01 - Physical Sciences	G115, V105, N110, S110
	02.02 - Life Sciences	G115, V105, N110, S110
	02.03 - Medical Sciences	G115, V105, N110, S110
	02.04 - Laboratory Technology	G105, N100
<i>03 – Plants & Animals</i>	03.01 - Mgr Work: Plants/Animals	G100, N90
	03.03 - Animal Training & Service	G95, K85, M85
	03.04 - Elem. Work: Plants/Animals	K85, M80
<i>04 - Protective</i>	04.01 - Safety & Law Enforcement	G100, Q95
	04.02 - Security Services	G95
<i>05 - Mechanical</i>	05.01 - Engineering	G115, N105, S110
	05.02 – Mgr. Work: Mechanical	G105, V100, N100, S95
	05.03 - Engineering Technology	G105, N100, S100
	05.04 - Air/Water Vehicle Operation	G105, N100, S100
	05.05 - Craft Technology	S90, P85, M85
	05.07 - Quality Control	N90, S90, P85
	05.08 - Land/Motor Vehicle Operation	S85, P80, M85
	05.09 - Materials Control	G95, N85, Q90, K85
	05.10 - Crafts	S85, P80, K85, M85
	05.11 - Equipment Operation	S85, P80, M85
	05.12 - Elemental Work: Mechanical	K85, M80
	<i>06 - Industrial</i>	06.01 - Production Technology
06.02 - Production Work		P80, K85, M85
06.03 - Quality Control		P80, K85, M85
06.04 - Elemental Work: Industrial		K85, F80, M80
<i>07 - Business Detail</i>	07.01 - Administrative Detail	G100, N95, Q100
	07.02 - Mathematical Detail	G95, N90, Q100
	07.03 - Financial Detail	G95, N90, Q100
	07.04 - Oral Communications	G95, Q95
	07.05 - Records Processing	G95, Q95
	07.06 - Clerical Machine Operation	G95, Q100, K95
	07.07 - Clerical Handling	Q90, K85
<i>08 - Selling</i>	08.01 - Sales Technology	G100, V100, N95, Q100
	08.02 - General Sales	G95, N90, Q90
	08.03 - Vending	K85, M80
<i>09 - Accommodating</i>	09.01 - Hospitality Services	G95
	09.02 - Barber & Beauty Services	S85, P85, K90, M85
	09.03 - Passenger Services	S85, M85
	09.05 - Attendant Services	K85, M80
	<i>10 - Humanitarian</i>	10.01 - Social Services
10.02 - Nursing, Therapy & Spec. Svc.		G105, V100
10.03 - Child & Adult Care		G95

11 – <i>Lead/Influence</i>	11.01 - Mathematics & Statistics	G115, V100, N110, S100
	11.02 - Educational & Library Svc.	G100, V100, N95, Q100
	11.03 - Social Research	G110, V100, N105, Q100
	11.04 - Law	G110, V100, N105, Q100
	11.05 - Business Administration	G105, V95, N100, Q100
	11.06 - Finance	G110, V95, N105, Q100
	11.07 - Services Administration	G105, V95, N100, Q100
	11.08 - Communications	G100, V100, N95, Q100
	11.09 - Promotion	G105, V95, N100, Q100
	11.10 - Regulations Enforcement	G105, N95, Q95
	11.11 - Business Management	G100, V95, N95, Q100
	11.12 - Contracts & Claims	G100, V95, N95, Q100

Beneath the heading of the middle column (**Work Group**) are code numbers and names corresponding to the 59 darkened circles. The four-digit work group number **01.01** corresponds to the work group that is called “Literary Arts”. The first two digits tell us that this work group belongs to Interest Area **01** (which happens to be the ARTISTIC interest area). Notice, in turn, that the next five work group numbers listed beneath 01.01 also start with 01. This tells us the first six work groups (01.01 through 01.06) all belong to the same Interest Area and require similar interest preferences. (See Interest Area Definitions in Supplementary References for Report Interpretation for these GOE Interest Area numbers, names and definitions.)

Now move your line of sight all the way across the form, to the column entitled “**Critical Aptitude Cut Scores**”. Beneath the column heading one finds the aptitude codes and corresponding critical aptitude score qualifications that are required for each of the work groups listed on the left. This column identifies the essential aptitudes and minimum score requirements that have been established by the Department of Labor in research relating aptitudes scores with job training and performance. (See Aptitude Areas and Related Tasks in Supplementary References for Report Interpretation for Department of Labor aptitude codes and corresponding aptitude construct definitions.)

As you examine the critical aptitude scores required for each of the 59 work groups, keep in mind that the evaluatee must meet or exceed each listed aptitude cut-score in order to qualify for the particular job family. For some work groups, only one aptitude may be considered critical in predicting learning and job performance. In other instances, however, the evaluatee must meet or exceed as many as four cut-scores because the occupational duties implicate multiple critical capacities. Notice, in particular, that 42 of 59 Work Groups implicate General Learning Ability as a critical aptitude.

Let’s take a moment to briefly summarize the preceding information as well as highlight several resulting conclusions:

- (1) **Department of Labor research has established the aptitude score requirements for 59 GOE Work Groups** and *CareerScope* aptitude scores can be related to these requirements.
- (2) **Each of the 59 GOE Work Groups belongs to one of twelve Interest Areas** and the twelve *CareerScope* Interest Inventory scales are based upon GOE interest area definitions.

THEREFORE:

- An evaluatee can qualify for a particular GOE Work Group on the basis of his or her aptitude profile, or
- An evaluatee can qualify for a particular GOE Work Group on the basis of his or her aptitude profile as well as interest profile.

These points are illustrated in the GOE Summary Report output below:

RECOMMENDATIONS

The world of work has been divided into Interest Areas. These areas are further divided into Work Groups based upon aptitude requirements. 59 Work Groups are listed in the table below. When a number appears in the “I” column, it means the Work Group falls within one of your significant **interest** areas (1 = most preferred). When a symbol appears in the “A” column, it means that your **aptitude** scores qualify you for that Work Group. (You can be even more confident that you qualify for a Work Group when it is marked with a • symbol.)

Work Group		I	A	Work Group		I	A	Work Group		I	A
01.01	Literary Arts		○	05.07	Quality Control		●	09.01	Hospitality Services		●
01.02	Visual Arts		●	05.08	Land/Motor Vehicle Operation		●	09.02	Barber & Beauty Services		●
01.03	Performing Arts: Drama		○	05.09	Materials Control		●	09.03	Passenger Services		●
01.04	Performing Arts: Music			05.10	Crafts		●	09.05	Attendant Services		●
01.05	Performing Arts: Dance		●	05.11	Equipment Operation		●	10.01	Social Services		
01.06	Craft Arts		●	05.12	Elemental Work: Mechanical		●	10.02	Nursing, Therapy & Specialized		○
02.01	Physical Sciences	1		06.01	Production Technology		●	10.03	Child & Adult Care		●
02.02	Life Sciences	1		06.02	Production Work		●	11.01	Mathematics & Statistics	2	
02.03	Medical Sciences	1		06.03	Quality Control		●	11.02	Educational & Library Svcs	2	○
02.04	Laboratory Technology	1		06.04	Elemental Work: Industrial		●	11.03	Social Research	2	
03.01	Mgr Work: Plants/Animals		●	07.01	Administrative Detail	3	○	11.04	Law	2	
03.03	Animal Training & Service		●	07.02	Mathematical Detail	3	●	11.05	Business Administration	2	
03.04	Elem Work: Plants/Animals		●	07.03	Financial Detail	3	●	11.06	Finance	2	
04.01	Safety & Law Enforcement		●	07.04	Oral Communications	3	●	11.07	Services Administration	2	
04.02	Security Services		●	07.05	Records Processing	3	●	11.08	Communications	2	○
05.01	Engineering			07.06	Clerical Machine Operation	3	●	11.09	Promotion	2	
05.02	Mgr Work: Mechanical			07.07	Clerical Handling	3	●	11.10	Regulations Enforcement	2	○
05.03	Engineering Technology			08.01	Sales Technology		○	11.11	Business Management	2	○
05.04	Air/Water Vehicle Operation			08.02	General Sales		●	11.12	Contracts & Claims	2	○
05.05	Craft Technology		●	08.03	Vending		●				

When the evaluatee’s interest score results reveal that a particular Interest Area is significantly more attractive than others, a rank will be assigned in the “I” column alongside each GOE Work Group that is a member of that particular Interest Area. For instance, if the evaluatee scores highest in Interest Area 02, a rank of “1” will appear in the “I” column for all work groups associated with the Scientific interest area. Likewise, a rank of “2” will be assigned to all work groups within the second most significant Interest Area. Each of the evaluatee’s significant interest areas will be similarly ranked. A notation will appear in the “Aptitude” column whenever the evaluatee’s aptitude results qualify him for the work group listed on the left of the table. *In many instances, an evaluatee’s assessment results will simultaneously yield notations under “I” and “Aptitudes”.* Such results indicate an “overlap”, or intersection, of the evaluatee’s interests and capabilities. Conversely, there will be instances in which there is “no overlap” between the evaluatee’s interest and aptitude results.

Having established the logic underlying generation of *CareerScope* Work Group recommendations, let’s examine how *CareerScope* calculates aptitude and interest scores as well as how they can be related to the GOE career information taxonomy and career standards.

CareerScope Score Report Use and Interpretation

Let’s systematically review the successive report sections of the *CareerScope* Assessment Profile to develop a thorough understanding of how scores and recommendations are generated and how results should be evaluated and interpreted.

Interest Inventory Results

The *CareerScope* Interest Inventory *Form E* (141 English items) and *Form S* (162 Spanish items) include work activity statements to which the evaluatee responds with one of three choices: “LIKE”, “?”, or “DISLIKE”. Each item is associated with one of the twelve GOE Interest Areas. The *CareerScope* Interest Inventory report then establishes the individual’s interest preferences by analyzing the frequency of “LIKE” responses within each of the twelve Interest Area scales. The first section of the evaluatee’s interest inventory report features relationships between the evaluatee’s twelve *distinct scale scores* (number of LIKE responses) and the twelve corresponding scale score distributions within comparative norm reference groups. The second section of the *CareerScope* interest report examines the evaluatee’s entire twelve scale score profile as a personally distinctive configuration and identifies the most viable Interest Areas to be considered in career exploration and planning activities. In both sections of the Interest Inventory report, however, interest area preferences are established by performing statistical transformations of the independently tabulated sums of “LIKE” responses within the twelve interest area scales. (The English and Spanish Interest Inventory items can be found in the Supplementary References for Report Interpretation.)

In most cases, an exclusive focus upon the evaluatee’s attraction to particular types of work activities will yield a pattern of findings and career recommendations that are straightforward and easily interpreted. In some instances, however, scoring may identify ambiguous preferences or even outcomes that run contrary to expectation. In such situations, guidance personnel may wish to pursue a more thorough and systematic examination of the evaluatee’s number of “?” responses within and across the respective Interest Area scales. The frequent use of the “?” alternative could reflect reading difficulties, problems of item interpretation or even a significant level of general indecision that should be examined in greater detail during the counseling and guidance process.

The *CareerScope* Interest Inventory report provides three sets of percentile results in report Section I – Interest Area Scores (see below). The column of numbers beneath the word “**TOTAL**” reports the percentage of people (males and females collapsed into one total group) whose frequency of “LIKE” responses was less than or equal to the evaluatee’s. *CareerScope* Online offers two sets of age-based norm reference groups. “YOUTH” norms for the 141 item English version are based upon a national sample with an average age of 16.6 years and a mean of 10.4 years of education. The average age and educational level within the Spanish “YOUTH” norm group is 16.1 years and 9.3 years respectively. “ADULT” norms for the 141 item English language version are based upon a national sample with an average age of 28.5 years and a mean of 11.9 years of education. The corresponding statistics for the 162-item Spanish language version are 30.7 years and 10.7 years respectively. *CareerScope* automatically applies the language-group appropriate “YOUTH” norms when an evaluatee reports that s/he is currently seventeen years of age or younger. When an evaluatee reports that s/he is currently 18 years of age or older *CareerScope* utilizes the language-group appropriate “ADULT” norms. The final sentence of explanatory narrative preceding the Assessment Profile score display (see below) defines the age-appropriate norm group that serves as the point of comparative reference.

I. Interest Area Scores

Your total number of “LIKE,” “?” and “DISLIKE” responses for each Interest Area are reported below. Percentile scores show the percentage of other people who gave fewer “LIKE” responses than you did in each Interest Area. A percentile score of 50 shows average interest; 70 or higher shows above average interest as compared to other people. Percentile scores are listed below for males and females as well as for the total group. Your percentile scores are based upon a comparison between your results and the results of people who are 18 years of age or older.

Interest Area	Like	?	Dislike	Percentiles			Percent Like	IPA
				Total	M	F		
01 Artistic	3	2	9	43	43	43	21	
02 Scientific	10	1	2	85	86	85	77	1
03 Plants/Animals	4	3	4	65	62	68	36	
04 Protective	2	0	10	41	31	51	17	
05 Mechanical	2	3	7	42	21	63	17	
06 Industrial	1	0	11	47	43	50	8	
07 Business Detail	8	3	1	74	87	61	67	3
08 Selling	4	1	5	68	72	65	40	
09 Accommodating	3	0	7	56	58	55	30	
10 Humanitarian	3	3	5	48	56	39	27	
11 Leading/Influencing	10	2	2	82	83	81	71	2
12 Physical Performing	2	0	8	55	36	75	20	

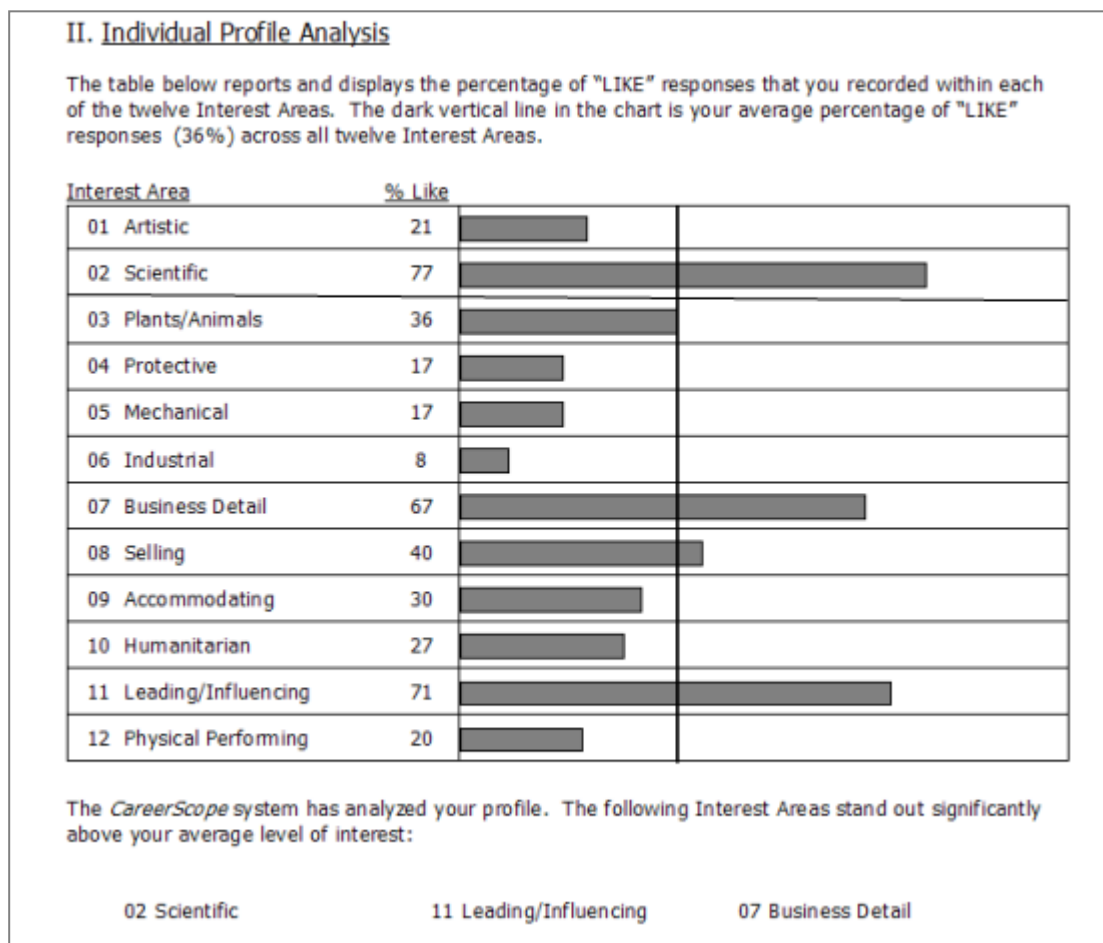
For illustrative purposes, find the row for Interest Area 07 (Business Detail) in the evaluatee’s **Interest Area Scores** table. Now find the column labeled “LIKE”. Notice that the evaluatee recorded 8 “LIKE” responses. When we look further to the right, under **TOTAL**, we find that the evaluatee has demonstrated a degree of interest that meets or exceeds the interest expressed by 74% of the individuals in the adult norm group. Now, keeping in mind that the hypothetical evaluatee is a male (John Sample), look further to the right and notice that 8 “LIKE” responses meets or exceeds the interest expressed by 87% of adult males and 61% of adult females. The resulting disparity between male and female percentile scores reveals that men, as a group, are less likely to be attracted to the *CareerScope* Business Detail inventory items than females.

Several points about the *CareerScope* Interest Inventory responses of males and females are in order. When differential responding is defined as a consistent disparity of ten or more percentile points as one compares equivalent

raw scores as a function of gender, we find that males and females differ most on four scales. Interest areas 05 (Mechanical) and 12 (Physical Performing) were preferred by males. Interest areas 07 (Business Detail) and 10 (Humanitarian) were preferred by females. This means that a female must obtain a higher raw score in the two female-preferred areas to obtain the same percentile score as a male, and vice versa.

The preceding sex-differences establish the rationale for the reporting of separate percentile scores for each sex in addition to the composite group percentile scores. The theoretical assumption underlying this separation is that learned cultural sex-role stereotypes tend to suppress expression of interest in occupational areas and activities that are generally associated with the opposite sex. This theory suggests that “interest strength” may be ascertained best by using the same-sex comparison group as a way of controlling for or “separating out” this sex-role-based self-suppression.

While the first portion of the *CareerScope* Interest Inventory report emphasizes twelve *separate sets of normative scale score comparisons*, Section II of the interest report (Individual Profile Analysis) offers an idiographic approach that examines *variability within the individual’s 12-scale profile to determine areas that are significantly above the examinee’s own average level of interest across the scales*. Notice, in particular, that the IPA table reports the percentage of “LIKE” responses recorded by the evaluatee within each of the twelve Interest Area scales. These numbers represent *the proportion of scale items* that were attractive to the evaluatee and they are computed by simply dividing the evaluatee’s number of LIKE responses within a scale by the total number of items within the interest scale.



The histogram to the right of the twelve respective *% Like* scores visually displays the peaks and valleys (variability) within the evaluatee’s personal interest profile. The dark vertical line that runs through the histogram represents the arithmetic mean of the twelve respective percentages. This graphic representation of “average frequency of LIKE response across all interest areas” offers an intuitive and personalized point of reference to aid in the interpretation of the score profile. In turn, the composite visual profile illustrates why particular Interest Areas are then identified as being “significantly above” the evaluatee’s “average level of interest”. But how, exactly, does *CareerScope* establish that an Interest Area is a notably strong or high interest area? What criterion is used to determine that an interest area

“stands out significantly” above the individual’s average level of interest? And, why is it important to look at *CareerScope* interest results in an idiographic fashion?

The IPA analysis routine was developed to solve several problems of interpretation that are not adequately addressed by a strictly normative approach. One of these problems develops from the fact that some people are very free with “LIKE” responses, while some tend to be more reserved in their style of responding. A person of the first type could have as many as twelve Interest Area scores that fall into the normatively “above average” range. A person of the second type could have no scale scores in the “above average” range though there could be interest scales that attract a distinctively different rate of affirmative response. An exclusive emphasis upon normatively defined “high interest” would advise “liberal responders” to pursue areas that would not truly be “high” in the person’s own frame of reference. Conversely, the “conservative” responder would be told that s/he has no “high interests” despite a differential pattern of response within his or her own unique profile.

CareerScope’s method for establishing an individual’s relatively high interest areas is founded upon the statistical concept of a standard deviation. Just as a mean and a standard deviation may be computed for a distribution of scores *across a group of individuals*, these same statistics can be computed for a group of *scores obtained by one individual across several measures*. In the case of the *CareerScope* interest inventory, attention is focused upon score variability within the evaluatee’s twelve-scale interest profile. To develop an intuitive understanding of the IPA approach, let’s examine John Sample’s IPA results.

Notice that the table and graph in the IPA report section II emphasize John’s “percentage of LIKE responses” and, therefore, “proportional attraction”. Unlike the first section of the Interest Report, in which John’s frequencies of “LIKE” responses within each interest scale were compared to the frequencies of other people, we are now emphasizing the proportion of scale items that were attractive to John. Next, notice that in displaying John’s “average percentage of LIKE responses across all twelve Interest Areas” we begin to establish a personal point of reference for defining variability within John’s own profile.

There are three graph bars that seem to be noticeably “beyond” John’s mean and three or four other bars that are considerably “beneath” his mean. We are able to detect, or “eyeball”, *deviations* from his mean (or, variability around the mean). When a profile displays sufficient peaks and valleys (as in John’s profile), *CareerScope*’s IPA statistical routine is able to identify Interest Areas that “stand out” as particularly attractive to the evaluatee. Conversely, when *CareerScope* analyzes a relatively “undifferentiated profile”, like the one below (to the right of John’s), high interest areas will be difficult to identify. Though both profiles reveal greatest attraction to areas 02, 07 and 11, the profile at the right reflects “attraction to numerous interest areas” and, thus, a high mean % LIKE across the twelve interest areas.

Intra-Individual Score Profiles

- 01 Artistic
- 02 Scientific
- 03 Plants / Animals
- 04 Protective
- 05 Mechanical
- 06 Industrial
- 07 Business Detail
- 08 Selling
- 09 Accommodating
- 10 Humanitarian
- 11 Leading / Influencing
- 12 Physical Performing



John’s Profile

High Flat Profile

The preceding discussion sheds light upon general profile characteristics that impact IPA analysis. We must now clarify how the *CareerScope* program actually computes the IPA analysis. The table below illustrates the successive scoring procedures that underlie John Sample's IPA results.

The two left-most columns of the table replicate the information and Interest Area percentage scores that are displayed in John Sample's score reports. The percentage scores are easily computed by dividing each Interest Area LIKE frequency by the total number of inventory items in the corresponding Interest Area scale. When one adds these twelve resulting percentage scores and then divides by 12 the resulting mean, or average, is 35.9% (reported and displayed as 36% in John's assessment profile IPA findings).

The column entitled "Deviation" reports the difference between each respective Interest Area percentage score and John's "average percentage LIKE" (35.9%) across the twelve scales. A negative number indicates that the particular scale percentage is below John's mean or average. Such a negative outcome is labeled "Below Mean" in the column entitled CSDI (*CareerScope* Deviation Index) and further computations are suspended since a lower than average response rate reflects relative disinterest. Deviations that are greater than zero are subsequently divided by the coefficient 23.0 to yield the CSDI. The quantitative value 23.0 represents the average intra-individual score profile variability within the national adult standardization research sample.

IPA Calculations

Interest Area	Percentage (%)	Deviation	CSDI	Outcome (≥ .5?)
01	21	-14.9	Below Mean	NO
02	77	41.1	1.79	YES
03	36	0.1	.004	NO
04	17	-18.9	Below Mean	NO
05	17	-18.9	Below Mean	NO
06	8	-27.9	Below Mean	NO
07	67	31.1	1.35	YES
08	40	4.1	.18	NO
09	30	-5.9	Below Mean	NO
10	27	-8.9	Below Mean	NO
11	71	35.1	1.53	YES
12	20	-15.9	Below Mean	NO

Let's explore the concept of *average intra-individual score profile variability* by re-examining John's "intra-individual score profile graph" and the corresponding "high flat intra-individual score profile graph" that is alongside. Notice how "variable" John's score profile is. Some scores are dramatically higher and others are dramatically lower than his profile average of 35.9%. The standard deviation of John's twelve percentage scores is 23.3. This number can be roughly understood as representing the average distance of a scale percentage score from John's mean of 35.9%. If we were to compute the standard deviation of the percentage scores within the high flat profile, however, a much smaller number would result. You can literally see that there is much less variability within the "high flat profile" because each of the twelve respective bars is of the same general magnitude as the profile mean. So, what's the point?

Research conducted by VRI has produced average intra-individual score profile variability coefficients for two different developmental English-speaking populations. (Had John Sample been a participant in the national norming project, VRI statisticians would have included his score of 23.3). The resulting average "variability coefficient" is 23.0 within the Adult norm group administered the 141 item English language version and is 21.6 within the corresponding "Youth" group. The corresponding ADULT and YOUTH coefficients for the 162-item Spanish language version are 22.03 and 19.13 respectively. These coefficients serve as indices or "benchmarks" for defining "average intra-profile variability" within the respective Adult and Youth language-speaking populations. These "benchmarks," in turn, are then used to define and identify significantly above average "peaks" (scale percentage scores) within an evaluatee's twelve-scale profile. When an evaluatee's CSDI score is equal to or greater than .5 (is at least ½ of a standard deviation greater than

the average degree of variability within the total population) *CareerScope* designates that Interest Area as a “high IPA area.”

Notice that the John Sample report rank orders his high IPA areas based upon the magnitude of the respective CSDI scores. The Scientific area is listed first, since it yielded the highest CSDI score (1.79). Leading/Influencing is listed second and Business Detail is listed third. Had John’s profile yielded a total of six IPA areas, his fourth, fifth and sixth highest areas would have been listed, left to right, on the line beneath his three highest interest areas. In turn, if several interest scales shared a significant CSDI, they would all then share the same IPA rank.

Aptitude Results

As noted in this chapter’s overview of the GOE career exploration system, extensive national research conducted by the U.S. Department of Labor has established the critical aptitude score criteria for 59 of the 66 Work Groups that are nested within the twelve Interest Areas. These score criteria were established by administering a battery of standardized cognitive, perceptual and motor performance tasks to thousands of employed workers throughout the U.S. economy.

The resulting “critical cut score” constellations define the critical aptitude levels demonstrated by individuals employed within the respective Work Groups. A critical cut-score of 100 indicates that successful performance typically requires a score at or above the 50th percentile (the average score within the general population). A critical cut-score of 80 indicates that a potential trainee would achieve a score at or above the 16th percentile. A cut-score of 115 indicates a level of aptitude that is achieved by the top 23 percent of the general population.

The assessment tasks that comprise the *CareerScope* aptitude assessment were specifically designed to emulate the assessment instruments that were originally used during DOL research on critical occupational aptitude standards. Further, VRI validity research on relationships between corresponding assessment tasks within the *CareerScope* English-language test battery and the DOL English-language battery provides the scientific foundation for converting standardized *CareerScope* task scores into their DOL equipercentile equivalents. The resulting “standard score-equivalents” are then weighted and combined to yield the composite aptitude profile displayed in Section II. This aptitude profile is then compared to the critical aptitude cut-scores associated with the 59 GOE Work Groups. The table on the next page lists the *CareerScope* assessment tasks that are used to derive composite aptitude scores.

CareerScope Tasks Used to Measure Aptitudes

<i>Code</i>	<i>Aptitude Construct</i>	<i>Task(s)</i>	<i># of items</i>
G	General Learning	Pattern Visualization	30
		Numerical Reasoning	23
		Word Meanings	30
V	Verbal	Word Meanings	30
N	Numerical	Computation	30
		Numerical Reasoning	23
S	Spatial	Pattern Visualization	30
P	Form Perception	Object Identification	30
		Abstract Shape Matching	30
Q	Clerical Perception	Clerical Matching	30

The first section of the *CareerScope* Aptitude report (Performance on Tasks) presents the number of correct answers and the total number of items attempted within each task in order to provide information about the evaluatee's response patterns.

I. Performance on Tasks

The table below reports the number of correct answers and the number of questions you attempted in each assessment task.

Task	Correct	Attempts
Object Identification	16	23
Abstract Shape Matching	16	30
Clerical Matching	12	18
Pattern Visualization	15	25
Computation	11	13
Numerical Reasoning	16	23
Word Meanings	17	30










Notice, for instance, that John Sample attempted all items (30 attempts) within Abstract Shape Matching, Numerical Reasoning and Word Meanings. Conversely, he attempted lower proportions of items on the most highly speeded tasks (Object Identification, Clerical Matching and Computation). Notice, however, that John did not attempt five of the thirty Pattern Visualization items despite the fact that this task is not highly speeded. Although it is impossible to establish definitive conclusions regarding factors that influence such results, one might wish to explore such findings with the evaluatee in order to generate tentative insights about the evaluatee's "test-taking strategies". Just as "liberal" and "conservative" response styles can significantly impact the outcomes of an interest assessment they can also exert a profound effect upon aptitude scores. Some assessment results may display great disparities between task raw scores and corresponding frequencies of attempted items. Other reports may reveal patterns in which the number of correct responses is roughly equivalent to the number of attempted items. Recognition of such performance patterns can guide subsequent interpretation of aptitude scores and can also influence one's interpretation and use of the *CareerScope* Recommendation report.

The seven task raw scores (# correct) are then converted and weighted to yield the six cognitive and perceptual aptitude scores that are displayed in the second report section (see Section II – Aptitude Profile, below).

II. Aptitude Profile

The table below reports and graphically displays your aptitudes as standard scores and as percentile scores. Both types of scores involve the comparison of your performance against the performance of other adults.

An aptitude score of 100 is exactly average. Scores between 80 and 120 can be thought of as "in the average range." Percentile (%tile) scores report the percentage of people who score below you. The graph displays your relative strengths. Different combinations of aptitudes (listed on the left) are important in different Work Groups.

Aptitude	Score	%tile	Average Range
General Learning Ability	104	58	
Verbal Aptitude	96	42	
Numerical Aptitude	93	36	
Spatial Aptitude	107	64	
Form Perception	109	67	
Clerical Perception	109	67	
•Motor Coordination	100	50	
•Finger Dexterity	100	50	
•Manual Dexterity	100	50	

The comparative reference group is defined in the first paragraph of section II within the **Assessment Profile**. When an evaluatee is enrolled at or beyond the 11th grade, *CareerScope* automatically applies adult scoring standards. Ninth grade score and tenth grade scoring procedures are respectively applied for those currently enrolled in the ninth or

tenth grade. *CareerScope* applies “eighth grade” scoring procedures when the evaluatee reports school enrollment at or below the eighth-grade level.

When an evaluatee reports that s/he is not enrolled in secondary education, *CareerScope* calculates the evaluatee’s age (based upon the reported date of birth) and then uses the evaluatee’s age as a surrogate for “grade level”. Eighth grade scoring procedures are applied when the evaluatee is currently 14 years of age or younger. Ninth grade scoring is applied when the evaluatee reports that s/he is 15 years of age. Tenth grade scoring is applied when the evaluatee reports that s/he is 16 years of age. Adult standards are applied when the evaluatee reports that s/he is currently 17 years of age or older.

The *CareerScope* “grade level/developmental scoring” process is founded upon DOL and VRI research on differences in the aptitude scores of adolescents and adults. When an evaluatee’s educational level falls below 11th grade (or the evaluatee’s age falls below 17 years of age), *CareerScope* adjusts the test-taker’s scores in order to project adult performance. These adjusted scores are then compared against critical aptitude score standards in order to establish viable Work Group recommendations.

The *CareerScope* aptitude profile presents results as standard scores and as percentile scores. A percentile score of 50, or standard score of 100, indicates that 50 percent (or half) of the comparison group achieved a lower score. And the “average score range” extends from a low of 80 (1 standard deviation below the mean) to a high of 120 (1 standard deviation above the mean).

GOE Work Group Career Recommendations

The GOE Recommendations table below (from the *CareerScope* GOE Summary Report) illustrates the full range of possible outcomes that can emerge from a *CareerScope* assessment.

RECOMMENDATIONS		
The world of work has been divided into Interest Areas. These areas are further divided into Work Groups based upon aptitude requirements. 59 Work Groups are listed in the table below. When a number appears in the “I” column, it means the Work Group falls within one of your significant interest areas (1 = most preferred). When a symbol appears in the “A” column, it means that your aptitude scores qualify you for that Work Group. (You can be even more confident that you qualify for a Work Group when it is marked with a • symbol.)		
Work Group	I	A
01.01 Literary Arts		○
01.02 Visual Arts		●
01.03 Performing Arts: Drama		○
01.04 Performing Arts: Music		
01.05 Performing Arts: Dance		●
01.06 Craft Arts		●
02.01 Physical Sciences	1	
02.02 Life Sciences	1	
02.03 Medical Sciences	1	
02.04 Laboratory Technology	1	
03.01 Mgr Work: Plants/Animals		●
03.03 Animal Training & Service		●
03.04 Elem Work: Plants/Animals		●
04.01 Safety & Law Enforcement		●
04.02 Security Services		●
05.01 Engineering		
05.02 Mgr Work: Mechanical		
05.03 Engineering Technology		
05.04 Air/Water Vehicle Operation		
05.05 Craft Technology		●
05.07 Quality Control		●
05.08 Land/Motor Vehicle Operation		●
05.09 Materials Control		●
05.10 Crafts		●
05.11 Equipment Operation		●
05.12 Elemental Work: Mechanical		●
06.01 Production Technology		●
06.02 Production Work		●
06.03 Quality Control		●
06.04 Elemental Work: Industrial		●
07.01 Administrative Detail	3	○
07.02 Mathematical Detail	3	●
07.03 Financial Detail	3	●
07.04 Oral Communications	3	●
07.05 Records Processing	3	●
07.06 Clerical Machine Operation	3	●
07.07 Clerical Handling	3	●
08.01 Sales Technology		○
08.02 General Sales		●
08.03 Vending		●
09.01 Hospitality Services		●
09.02 Barber & Beauty Services		●
09.03 Passenger Services		●
09.05 Attendant Services		●
10.01 Social Services		
10.02 Nursing, Therapy & Specialized		○
10.03 Child & Adult Care		●
11.01 Mathematics & Statistics	2	
11.02 Educational & Library Svcs	2	○
11.03 Social Research	2	
11.04 Law	2	
11.05 Business Administration	2	
11.06 Finance	2	
11.07 Services Administration	2	
11.08 Communications	2	○
11.09 Promotion	2	
11.10 Regulations Enforcement	2	○
11.11 Business Management	2	○
11.12 Contracts & Claims	2	○

John’s interests and aptitudes are simultaneously “misaligned” with the requirements of six Work Groups: **01.04**, **05.01**, **05.02**, **05.03**, **05.04**, and **10.01** (where he demonstrates neither interest nor aptitude). There are eleven work groups that align with John’s expressed interests (02.01, 02.02, 02.03, 02.04, 11.01, 11.03, 11.04, 11.05, 11.06, 11.07 and 11.09) but where his aptitudes do not meet established score standards. Conversely, John’s aptitude profile meets or exceeds score standards within 30 Work Groups but there is no evidence that his interests align with requirements. Finally, John’s interests and aptitudes are simultaneously aligned with the requirements of twelve work groups: 07.01, 07.02, 07.03, 07.04, 07.05, 07.06, 07.07, 11.02, 11.08, 11.10, 11.11, and 11.12.

Notice that there are two possible symbols that can be displayed in the “A” column; a solid bullet (●) and a hollow bullet (○). The former informs us that the test-taker’s aptitude profile meets or exceeds the work group’s critical cut-scores with a higher level of confidence. The hollow bullet, on the other hand, suggests a lower level of confidence that the individual’s profile meets work group score standards. Why does *CareerScope* distinguish between “higher” and “lower” levels of probable success and how should you interpret such outcomes?

A test, by definition, involves presentation of a relatively small sample of test items on a particular day and at a particular time and place. If many parallel test versions were presented, test-taker performance would fluctuate due to test item differences as well as due to test-taker mood, test-taker hunger, test-taker alertness, test environment noise and temperature, and a host of other motivational factors. The repeated administrations would yield a distribution of scores. Half of the time, test-taker performance would be below the test-taker’s distribution mean. The other half of the time, performance would be above the mean. While the goal of assessment (behavior sampling) is to capture “typical” or “average” performance, there is always the possibility that we are underestimating or overestimating an individual’s “true”, or typical, score on the day of testing.

When a solid bullet appears alongside a Work Group recommendation, we are noting that the test-taker’s observed aptitude profile meets or exceeds established score standards on the day of testing. When a hollow bullet appears alongside a Work Group we are recommending the job family with a lower level of confidence and we are proposing that the test-taker’s observed performance may be underestimating “typical” performance.

While solid and hollow bullets in the “A” column distinguish between “higher and lower confidence” Work Group recommendations in the Summary Report, this differentiation is established in the *CareerScope Assessment Profile* by including/excluding a solid bullet alongside respective Work Group recommendations. In the illustrative example below, Work Group 07.01 is presented without a bullet but Work Group 07.02 is preceded by a solid bullet. In turn, the second introductory paragraph preceding the listed recommendations states “When you see a ● symbol next to a GOE Work Group number and name it means you can be more confident that your aptitude scores qualify you for that Work Group.” By implication, a Work Group listing that excludes the bullet is worthy of consideration (but is offered with a lower level of confidence).

RECOMMENDATIONS

Occupations have been divided into twelve Interest Areas as described in the Guide for Occupational Exploration (GOE) and elsewhere. The Guide for Occupational Exploration further subdivides the Interest Areas into Work Groups, based upon aptitude score requirements. Occupations that belong to the same Work Group require similar interests and similar aptitudes.

Reported below are career directions that match your aptitudes as well as your strongest interest areas. When you see a ● symbol next to a GOE Work Group number and name it means you can be more confident that your aptitude scores qualify you for that Work Group. Review your *CareerScope* recommendations and score results with a career guidance and counseling professional to learn more about the Work Groups that best match your assessment results.

INTEREST AREA 07 - Business Detail

An interest in organized, clearly defined activities requiring accuracy and attention to details, primarily in an office setting.

GOE 07.01 Administrative Detail

Workers in this group perform clerical work which requires special skills and knowledge. They perform management activities according to established regulations and procedures.

JOB TITLE	DOT #	GED M	GED L	SVP REQ
Credit Counselor	160.207-010	5	5	7
Retirement Officer	166.267-030	5	4	7
Administrative Secretary	169.167-014	4	5	8
Securities Clerk	219.362-054	4	3	5
	119.267-010			

● GOE 07.02 Mathematical Detail

Workers in this group use clerical and math skills to gather, organize, compute and record, with or without machines, the numerical information used in business or in financial transactions.

JOB TITLE	DOT #	GED M	GED L	SVP REQ
Electr. Funds Trans.Coord.	216.362-038	4	4	7
Audit Clerk	210.382-010	4	3	7
General-Ledger Bookkeeper	210.382-046	4	3	5
Tax Preparer	219.362-070	4	3	4
Claim Examiner	168.267-014	3	4	7
Insurance Clerk	214.362-022	3	4	5
Account-Information Clerk	210.367-010	3	3	6

In many instances, you will choose to include illustrative job titles in the evaluatee's **Assessment Profile** recommendation report. These are occupations that are either quite numerous in the economy or are undergoing significant growth. Each listed occupation will be followed by several informative data elements. The nine-digit number to the right of the occupational title is the occupational code number that is associated with that title. If you have access to the [Dictionary of Occupational Titles](#) or a computerized occupational information system, this **DOT #** will allow you to access detailed information about typical occupational duties. In turn, the report includes math and language education development ratings (beneath the **GED Req** headings for **M** and **L**) that define the requirements for successful job training and performance. (The *CareerScope* report legend provide information on the meaning of each rating.) At the extreme right of an occupational listing, you will also find a rating beneath the **SVP** column heading. "SVP" stands for "specific vocational preparation" and refers to the duration of job specific training that is typically required (the *CareerScope* report legend defines all possible SVP ratings).

Information on math and language demands and SVP requirements are extremely useful as the career planner examines potential occupational paths during the guidance and counseling process. When the career planner's interest and aptitude profiles as well as math and language education development levels match the demands of a given occupation, there is compelling evidence that occupational skills and knowledge could be mastered. Conversely, when the evaluatee's math and language development levels are lower or higher than the listed occupational demands, caution should be exercised. Occupations that require math and/or language levels that exceed an individual's current skill levels represent potential "fits" only if essential foundation skills are mastered. When an evaluatee's math and/or language development levels exceed an occupation's demands, on the other hand, the position could prove "unrewarding" or "unchallenging".

O*NET Career Recommendations

The default O*NET recommendation report suggests potential occupational units (OUs) based upon simultaneous consideration of the evaluatee's interest and aptitude results. The introductory "boilerplate" report text that precedes the list of OUs establishes this underlying foundation. These are high growth/high replacement rate occupational units (drawn from the O*NET 14.0 database) that are associated with the DOT occupations in the *CareerScope* GOE/DOT database. An occupational unit is a cluster of related positions/occupations that share similar educational and skill training requirements.

The reported OUs are nested beneath their corresponding Standard Occupational Classification (SOC) major group number, name and description. Major Group definitions precede the more specific OU recommendations to provide the evaluatee with a preliminary understanding of the type of work activities implicated in the list of OUs below. The SOC coding system now serves as the officially mandated occupational taxonomy across all federal agencies and Departments.

When the evaluatee's aptitude score profile meets or exceeds the Work Group cut-scores associated with a reported OU, a bullet symbol will appear to the left of the occupational unit title. When this symbol does not appear, adjusted aptitude scores have met or exceeded the associated Work Group cut-scores. Each listed occupational unit number

and title is followed by its corresponding educational zone rating. The rating (defined at the beginning of the report) defines the typical level of education and job training that is required.

When the consumer is seeking detailed information on the nature of the OU and its worker characteristic requirements, the O*NET 14.0 database can be accessed via the internet at <http://online.onetcenter.org>. The six-digit OU number (xx.yyyy) can be used to search for comprehensive information about the designated occupation, including detailed information about job duties, worker trait requirements as well as the relationship between the occupation and the emerging green sector of the U.S. economy. (A list of the “Green” Occupational Units within the CareerScope O*NET database has been included in the [Supplementary References for Report Interpretation](#).)

DOE Career Cluster-Pathway Recommendations

The U.S. Department of Education (USDOE) career cluster-pathway paradigm promotes a new approach to the design and delivery of educational programs and career counseling. If properly implemented, the paradigm should simultaneously result in more meaningful educational experiences for students as it fosters achievement of critical national human resource development objectives.

The pathway paradigm divides career preparation opportunities into sixteen broad clusters that are closely aligned with industries. The respective clusters are populated by varying numbers of pathways, which in turn are populated by varying numbers of career specialties. The underlying educational model emphasizes cluster oriented experiences, career guidance activities and knowledge/skill development objectives during early adolescence. In turn, as the student moves through high school and then transitions to post-secondary study, progressively greater attention is focused upon pathway and career specialty knowledge, skill development and career planning activities. *CareerScope’s* cluster-pathway report facilitates age-appropriate counseling, guidance and educational planning across an exceptionally broad developmental span.

The following topics are addressed in the pages that follow: (a) relationships between the USDOE career education taxonomy and *CareerScope* assessment constructs, (b) the underlying calculations that determine an individual’s reported recommendations and (c) the structure and logic of the *CareerScope* Cluster-Pathway report.

Career Clusters & Pathways and CareerScope Assessment Constructs

The USDOE cluster-pathway educational paradigm is exceptionally compelling because effective implementation should promote the development of transferable knowledge and skills that are applicable across all pathways within a cluster and/or across all career training programs within a specific pathway. Let’s examine the Health Sciences cluster, as an illustrative example, and the subordinate pathways within it.

The Health Science cluster generally addresses the development and provision of medical diagnoses, treatments and related ancillary services. The cluster subsumes five pathways: *Therapeutic Services*, *Diagnostic Services*, *Health Informatics*, *Support Services* and *Biotechnology R&D*. Each pathway or sector within the cluster focuses upon a unique aspect of the broader industry. Diagnostic Services, for instance, focuses upon “assessment”, Therapeutic Services focus upon “remediation”, Health Informatics addresses “data” and so on. It is immediately apparent that all work roles across these five pathways implicate a common set of foundation skills and knowledge concerning industry-wide objectives and general work performance standards.

Now let’s focus upon a specific pathway within the cluster to better understand the “common thread” that unites disparate career specialties or work roles. Consider the Health Informatics pathway as an illustrative example. Some of the career specialties within this pathway are *Epidemiologist*, *Admitting Clerk*, *Health Information Coder* and *Data Analyst*. The *epidemiologist* plans, directs and conducts research concerning the incidence of diseases and conditions. The *admitting clerk* records and enters patient admissions information. The health information coder converts information about the patient, his condition and services delivered into a form that can be used for insurance purposes. Finally, data analysts examine patient medical information or service delivery costs to identify strategies for improving service effectiveness or cost efficiency. As the pathway title implies, *all of these specialties address the collection, maintenance, organization and/or study of patient and medical information*. The “common thread” (patient and medical information) running through these specialties and the inter-relationships of these diverse work roles represents the focal point for pathway oriented educational programming and guidance activities.

Given the preceding explanation, the following fundamental questions arise: *How do U.S. Department of Labor interest and aptitude constructs relate to pathways and clusters? And, how can a student's interest and aptitude profiles assist us in pathway and cluster oriented career counseling and educational planning?*

As we examine the interest and aptitude requirements that are associated with the illustrative career specialties within the Health Informatics pathway, we discover significant variability in occupational demands. An epidemiologist, for instance, is a scientist (interest scale 02) and the critical aptitudes that are associated with this occupation are General Intelligence, Verbal Aptitude, Numerical Aptitude and Spatial Aptitude. Admitting Clerk job activities, on the other hand, are associated with interest scale 07 (Business Detail) and General Intelligence and Clerical Perception. Unlike the Work Groups of the Guide for Occupational Exploration, which explicitly organize occupations based upon uniform interest and aptitude demands, pathways and clusters include diverse job roles that require different learning abilities and different interest preferences.

The diversity of interest preferences and aptitude demands within pathways and clusters, while not surprising, poses an intriguing technical challenge. If pathways and clusters do not require uniform interest and aptitude profiles, how then does *CareerScope* pinpoint noteworthy pathways and clusters that align with the evaluatee's assessment results? As will be established in detail below, this enigma is resolved by locating pathways (and clusters) with a higher incidence of specialties that align with a test-taker's assessment results.

How CareerScope Identifies Noteworthy Pathways

The USDOE pathway paradigm includes over 1800 career specialties that are distributed across 77 pathways. *CareerScope*'s scoring and reporting database defines the interest and aptitude demands for all career specialties that have corresponding SOC codes.

The following calculations are performed whenever a USDOE pathway report is generated:

- (1) The evaluatee's interest profile (**including all significant IPA areas**) is compared against the interest criteria for all specialties with corresponding SOC codes.
- (2) The evaluatee's aptitude profile (**with standard error of measure adjustments**) is compared against the aptitude criteria for all specialties with corresponding SOC codes.

These comparisons make it possible to generate the following baseline statistics (depending on the configuration selected):

- (A) The percentage of specialties within each of the 77 pathways that align with the test-taker's significant IPA interest areas and the average "career specialty - interest alignment percentage" across all 77 pathways.
- (B) The percentage of specialties within each of the 77 pathways that demand aptitude scores at or below the test-taker's adjusted aptitude score profile and the average "career specialty - aptitude alignment percentage" across all 77 pathways.
- (C) The percentage of specialties within each of the 77 pathways that are simultaneously aligned with the test-taker's interest and aptitude profiles and the average "career specialty - aptitude x interest alignment percentage" across all 77 pathways.

The inclusion or exclusion of a pathway in an Assessment Profile report is the outcome of a statistical analysis that is built upon the respective pathway percentage results, the mean percentage across all pathways and the dispersion (standard deviation) of pathway percentage results around this mean. Whenever a pathway percentage is at least $\frac{1}{2}$ a standard deviation above the mean percentage across all pathways, *CareerScope* will include the pathway in the recommendations report.

Due to this statistical methodology, it is possible to have a report that includes no recommendations. This may occur if pathway percentage scores are "uniform" (high or low) with low dispersion and statistical analyses do not yield scores that exceed the .5 standard deviation benchmark. In these situations, the focal point of counseling activities must

either shift to assessment outcomes that might differentiate between the pathways and clusters (i.e., altering the report configuration to “Interest Only” or “Aptitude only”) or attention must be focused upon the actual pathway percentage results that are displayed in the DOE Summary report.

CareerScope USDOE Assessment Profile Recommendations

Where noteworthy relationships between assessment results and identified pathways are found, you will find a detailed treatment of pathway results in the evaluatee’s Assessment Profile recommendations report. **The report, by default, focuses upon career specialties, pathways and clusters that reflect the convergence of the evaluatee’s high interest areas and aptitude results.** (If desired, the report can be reconfigured to reflect primary consideration of the evaluatee’s high interests or aptitude results.) The display below illustrates the structure and content of pathway and career specialty output for the segment of John Sample’s report pertaining to pathway 6.40 (Insurance Services).

<u>Specialty</u>	<u>Interest Area & Rank</u>	<u>Aptitude</u>
6.4001 Claims Agents, Examiners, and Investigators	Leading/Influencing (2)	○
6.4002 Claims Clerks	Business Detail (3)	●
6.4005 Actuaries	Leading/Influencing (2)	
6.4006 Sales Agents		○
6.4007 Customer Service Agents	Business Detail (3)	●
6.4008 Processing Clerks	Business Detail (3)	●
6.4009 Direct Marketing	Leading/Influencing (2)	

For each of the illustrative high-growth and high-skill career specialties that are reported within the pathway, we find information regarding alignment with the evaluatee’s assessment results. John’s second strongest area of interest [Leading/Influencing (2)] aligns with career specialties 6.4001, 6.4005 and 6.4009. John’s third highest area of interest [Business Detail (3)] aligns with career specialties 6.4002, 6.4007 and 6.4008. The absence of any information to the right of 6.4006 (Sales Agent) indicates that this specialty did not align with any of John’s significant career interests.

As we visually scan to the right, to the solid vs. hollow bullets in the Aptitude column, we encounter information about the alignment of John’s aptitude scores and aptitude demands that are associated with the seven illustrative specialties. There are no bullets displayed for specialty 6.4005 (Actuaries) and specialty 6.4009 (Direct Marketing), indicating that John’s aptitude profile did not meet one or more aptitude demands associated with these specialties. The hollow bullets alongside specialty 6.4001 (Claims Agent) and 6.4006 (Sales Agents) indicate that one or more standard error aptitude score adjustments were required to achieve aptitude score demands associated with these careers. The three solid bullets alongside “Claim Clerks”, “Customer Service Agents” and “Processing Clerks” signify the alignment of John’s unadjusted aptitude scores with the respective profiles associated with these specialties.

We close with the following observations, cautions and recommendations:

- The specialties listed on the Assessment Profile recommendations include a representative sample of high-growth and high-demand specialties. It is possible that an evaluatee’s report will indicate a pathway as significant, but have no interest or aptitude alignment displayed. This simply indicates that the evaluatee’s profile aligned with specialties that are not included in the sample list. You can refer to the **Summary Report** to find the percentage of specialties with which the evaluatee’s profile aligned.
- There can be occasions when a weaker (lower aptitude profile) yields more plentiful outcomes as compared to results founded upon an exceptionally strong/high aptitude profile. While the superior character of the stronger profile will be manifest in the percentage results (in the **Summary Report**), the idiographic methodology that identifies “significant pathways” may very well uncover greater variance (and more notable) pathway results for the weaker profile. A higher aptitude profile can yield a flat pathway profile with fewer distinctive peaks and valleys. Always remember that an evaluatee’s pathway results must be interpreted in this broader context.

- As you become familiar with the structure and character of pathway report outcomes, we recommend that you (a) consider all pathway outcomes generated by *CareerScope* and (b) that you try out the different report configuration options available within the Management System. In particular, we encourage you to systematically explore the impact of the trait selection rules (interest only, aptitude only, and interest & aptitude) upon report output. These modifiable configuration rules may prove especially helpful whenever unanticipated or potentially misleading pathway outcomes are encountered in an Assessment Profile recommendation report.

What To Do When a Report Doesn't Include Recommendations?

When you first login to your *CareerScope* Management System, take some time to review the default report configuration settings that determine how an evaluatee's recommendations will be established. You will discover that your default system settings (a) emphasize simultaneous consideration of the evaluatee's aptitude scores and high interest areas and (b) will be grounded in the Guide for Occupational Exploration and Dictionary of Occupational Titles. If you believe that O*NET or Career Pathway recommendations would be more appropriate for your target population, adjust your default settings accordingly.

In most instances, the default *CareerScope* scoring and reporting algorithms based upon simultaneous consideration of aptitude and interest scores will successfully establish recommendations for most of your career planners. There will, however, be occasions when (a) an evaluatee's interests and abilities fail to converge and there can be no resulting "overlap" recommendations or (b) when an evaluatee's aptitude profile consistently falls below all established occupational criteria.

When these situations arise, the brief boilerplate text that appears at the top of the Recommendations section (see below) will direct the evaluatee to confer with a guidance professional. The brevity of the boilerplate, the absence of specific career recommendations and the mention of professional intervention is the "tip off" that there is a situation that requires your management.

RECOMMENDATIONS

Occupations have been divided into twelve Interest Areas as described in the Guide for Occupational Exploration (GOE) and elsewhere. The Guide for Occupational Exploration further subdivides the Interest Areas into Work Groups, based upon aptitude score requirements. Review your CareerScope results with a career guidance and counseling professional and learn about the Work Groups that best match your assessment results.

RECOMMENDATIONS

The U.S. Department of Labor is developing a new electronic occupational information database called O*NET. O*NET includes descriptions of occupational units and also reports worker characteristics that are related to successful employment and job satisfaction. O*NET can be found on the worldwide web at <http://online.onetcenter.org>.

Review your CareerScope score results with your counselor to learn more about the careers that best match your assessment results.



O*NET™ 14.0 is a trademark of the U.S. Department of Labor, Employment and Training Administration.

RECOMMENDATIONS

The U.S. Department of Education has organized career preparation programs into sixteen large Clusters. The Clusters are then divided into Career Pathways. All occupational specialty programs within a specific Career Pathway require a common set of basic skills (i.e., reading, writing, mathematics, computer skills, etc.) as well as a common set of technical skills and knowledge.

Please meet with your counselor to review your results and to discuss your career awareness and exploration activities.

When you encounter such situations, immediately review the evaluatee's GOE Summary Report Recommendations. If the evaluatee's aptitude profile has qualified the career planner for one or more Work Groups, consider generating a new set of Assessment Profile recommendations based exclusively upon the test-taker's aptitude results (using either GOE/DOT, O*NET or Career Pathway reporting options). If the evaluatee's aptitude results do not meet any work group criteria, review the evaluatee's interest results to determine if there are one or more significant IPA areas in the interest profile. If this review reveals one or more significant areas of interest, consider generating DOE career cluster/pathway recommendations based exclusively upon the career planner's high interests.