

# JVIS

## *Quick Manual*



SIGMA Assessment Systems, Inc.

The Jackson Vocational Interest Survey (JVIS) was developed to assist high school, college and university students, and adults with educational and career planning. The original development of the JVIS spanned a 10 year period, taking as its starting point the accumulated wisdom of 50 years of experience with vocational interest measurement. Since its publication in the 70's, work has been done continually to keep the JVIS up to date.

The JVIS is one of the most carefully and elaborately constructed psychological instruments ever published. The most modern methods of test and scale construction, and the latest theoretical developments relating to the psychology of work have been incorporated with the aim of providing a comprehensive, accurate, and sex-fair assessment of vocational interests. No psychological test has undergone more thorough methods of scale construction and none has made greater use of multivariate statistical procedures and computer-based optimizing procedures for item selection. Definition of JVIS scales was based on a reconceptualization of occupational preferences in terms of work *roles* and work *styles*. Work *roles* refer to relatively homogeneous sets of activities relevant to occupations. A work role may strongly relate to certain occupations such as scales for Medical Service or Law, or cut across particular occupations and be relevant to a variety of careers, as in the case of Supervision of Human Relations Management. Work *styles* refer to a preference for certain kinds of work environments. For example, computer programmers and physical scientists are often required to work long hours to find solutions to difficult problems. Their scores on the Stamina scale are consistently high.

In summary, the JVIS 34 Basic Interest Scales include work *role* dimensions, relevant to a variety of occupations, and work *style* scales, indicating work environment preferences.

Another feature of the JVIS is that it places equal emphasis upon the measurement of interests of women and men. The Survey was standardized in such a way that an equal number of males and females contributed to the selection of items and scales, and that items were required to show discrimination for each sex separately. The format allows males and females to be measured in terms of a common set of interest dimensions which do not make discriminations on the basis of traditional "male" and "female" occupations. Counselors who wish to give individuals an equal opportunity to consider occupations traditionally associated with only one sex can do so by employing the JVIS.

Perhaps the most unique feature of the JVIS is its method of scale construction. Each scale was designed to measure the interest designated by the scale name and to be relatively unrelated to other scales. To accomplish this result, careful attention was paid to the preparation of a large pool of items reflecting basic work role and work style dimensions. This was followed by administration of these items to large samples of males and females, well over a thousand of each. Final item selection involved a series of multivariate psychometrically-based procedures designed to select items most clearly related to the interests being assessed, to suppress response biases, and to minimize the redundancy between scales.

A notable feature of JVIS scale construction relates to the choice of format for the test booklet. The respondent is asked to indicate a preference between two equally popular interests rather than to reply simply "like" or "dislike." While a "like-dislike" format has the appeal of simplicity, accumulating research has indicated that this type of format is prone to systematic bias. Individuals may show a general disposition to respond "like" or "dislike" rather than express their preference for the activity described. This results in systematic error (accounting for as much as a third of the total variance) and poor discrimination between vocational interest scales. The use of the forced-choice item pairing procedure on the JVIS completely eliminates this source of response bias.

### ***The JVIS Booklet***

The JVIS reusable test booklet contains 289 pairs of statements. Each statement describes a job related activity. Respondents choose which of the pair of job activities they would find more interesting to do. Even though a person may not have knowledge of, or experience with, a particular occupation, preferences among particular concrete activities can usually be identified easily. In administering the JVIS to thousands of individuals there has never been a complaint about the questions being too personal or distressing. The JVIS takes the average college or university student about 45 minutes to complete; high school students may require on the average about an hour. This is a slightly longer time than some other career interest questionnaires require, but the time is well repaid with information which is more valid for discriminating between people entering either different educational programs or occupations. A little extra time is a small price to pay for information affecting such an important decision.

### ***Reading Level and Appropriate Age Level***

Seventh and eighth graders with average or above average reading levels can complete the JVIS under supervision. A systematic effort was made to prepare statements using a clear, simple vocabulary. Even so, there are a few activities and concepts with which some younger students have difficulty, because they describe job activities with which the student may be unfamiliar. With adequate supervision and opportunities to obtain answers to questions these students can normally complete the JVIS.

The JVIS may be given to students at lower grade levels to a) introduce the world of work and b) discuss the nature of career interests, even though interests are too unstable at that age to provide a basis for specific counseling. During the first two years of high school the JVIS may be effectively used as a counseling tool, but again it should be emphasized that interests are continuing to change during development and that decisions about a career are best made somewhat later. Interest scores generally begin stabilizing in the late teens. One can be increasingly confident that a person's interest test scores will remain relatively constant as she or he develops from the late teens to the middle twenties.

### ***Basic Interest Scales***

The 34 Basic Interest scales include scales directly relevant to particular occupations, such as Engineering and Law, as well as new dimensions relevant to broader, more pervasive occupational roles. For example, the Professional Advising scale is relevant to a variety of careers such as medicine, law, architecture or any occupation where an individual uses expert knowledge to advise or counsel others. Additionally, the JVIS includes work style dimensions which relate to the kind of work environment the individual prefers, rather than to the specific job activities. For example, some occupations—like accounting—involve systematic planning for the future. One would expect people in such an occupation or heading in that direction to score high on the Planfulness scale. Other occupations, like free-lance writing, require working effectively without highly structured supervision. Choosing this career would suggest a high score on Independence. These occupational styles reflect preferred work environments rather than personality traits as such. Inclusion of these work style dimensions encourage respondents to examine themselves and their values, and provide the counselor and counselee with information essential to integrate into career planning activities.

### ***Faking and Motivated Distortion***

People usually answer the JVIS honestly. In general, individuals are rarely motivated to distort their results in a career counseling situation. Even in situations such as the intense competition to enter medical school, there is surprisingly little evidence that respondents distort their career interest results in a desirable direction. In a study conducted by the author of the JVIS, the same students gave *less* desirable responses before gaining admission to medical school than six months following admission. Thus, although motivated distortion is possible, the question of whether it occurs in a given situation is an empirical question which needs to be evaluated through examination of results derived from actual situations.

### ***Administration of the JVIS***

The JVIS was designed to be appropriate for individual or group administration. The great majority of people can complete the JVIS with minimum supervision by following the relatively simple instructions on the test booklet and hand scorable answer sheet. Instructions for completing the machine scorable answer sheets are given on the sheets themselves. Instructions for computerized administration are given on the screen before the respondent begins the test.

### ***Hand Scoring the JVIS***

The use of hand scoring inexpensively provides individuals with information regarding fundamental dimensions of career interest. Clerical scoring of tests may be accomplished both efficiently and economically. Alternatively, with proper supervision and checking, respondents may readily be instructed to score their own JVIS. With a minimum of practice, the JVIS may be scored and profiled in less than 10 minutes. With hand scoring, test results may be made available almost immediately.

The profile permits the interpretation of the 34 Basic Interest scales in terms of both combined and separate male and female norms. The profile sheet was recently revised to represent 1999 norms. The reverse side of the profile contains a guide for interpretation of JVIS results including a description and illustrative occupations for each of the Basic Interest scales.

### ***Computer Scoring the JVIS***

While the hand scoring option has the advantage of immediacy, the information received is limited to the 34 Basic Interest dimensions. Comparison of a respondent's

## JVIS Basic Interest Profile

The profile below shows your scores on the 34 JVIS Basic Interest scales. A high score indicates that you show a preference for working in settings involving the activities described by the scale name. A low score indicates that you would prefer not to work in such settings and would probably find such work unsatisfying.

Scale	Raw Score	Percentiles			Combined Percentile Score					High 99
		F	M	Comb.	Low 0	20	Average 40	60	80	
Creative Arts	9	50	58	54						
Performing Arts	12	79	79	79						
Mathematics	11	93	79	86						
Physical Science	10	86	66	76						
Engineering	11	96	69	82						
Life Science	10	76	69	73						
Social Science	8	38	42	42						
Adventure	16	95	86	90						
Nature-Agriculture	4	31	24	27						
Skilled Trades	0	8	5	8						
Personal Service	8	31	54	42						
Family Activity	10	42	62	54						
Medical Service	5	38	31	34						
Dominant Leadership	1	5	2	4						
Job Security	9	58	58	58						
Stamina	12	84	79	82						
Accountability	13	84	84	84						
Teaching	4	3	14	8						
Social Service	5	7	34	18						
Elementary Education	7	16	46	31						
Finance	12	88	76	82						
Business	7	18	24	21						
Office Work	4	12	16	14						
Sales	8	46	46	46						
Supervision	8	38	38	38						
Human Relations Mgt.	10	58	62	58						
Law	8	34	34	34						
Professional Advising	11	73	76	76						
Author-Journalism	11	62	73	66						
Academic Achievement	8	31	38	34						
Technical Writing	4	14	18	16						
Independence	8	24	24	24						
Planfulness	10	62	66	62						
Interpersonal Confidence	15	82	86	84						

Each of the names in the **Scale** column represents an area of interest. The column labeled **Raw Score** lists the number of activities you preferred in each area. The three **Percentile** columns show how your raw scores compare to those of the females, males, as well as the combined females and males, in a large group of students and young adults. Each percentile score is the percentage of people that received a raw score equal to or less than yours. The bars at the right illustrate the scores in the **Combined Percentile** column. Use the longer bars to identify your areas of greatest interest. Short bars show you the areas in which you are not interested. Bars that end in the middle indicate that your interest in that area is about average.

profile with occupational clusters, for example, requires a counselor to compare the respondent's profile with those of each of a large number of occupational groups printed in the JVIS Manual.

There are three ways to score the JVIS on the computer: Mail-in Scoring, Windows Software Scoring, and Internet Scoring (JVIS.com or SigmaTesting.com).

### ***Mail-in Scoring***

Testing Professionals may purchase "reports" from SIGMA Assessment Systems at the address on the back of this booklet. For the cost of a report you are sent a machine readable answer sheet which when completed is returned to SIGMA for a personalized computer report. Reports are processed and sent out the following business day. The personalized computer report is available in a Basic or Extended format. Both forms provide a JVIS profile of the 34 dimensions plotted in percentile scores based on combined norms. Separate male and female percentile norms are reported for the 34 Basic Interest Scales and 10 General Occupational Themes. Similarities to College Students and Similarity to Job Groups based on the Basic Interest profile results are also reported. In addition to this, the Extended Report provides a narrative description of the 10 General Occupational Themes, an additional paragraph of introduction with a listing of possible majors for the three most similar educational classifications, and a similar paragraph and list of possible occupations for the three highest ranked occupational clusters, as well as where one might look for more detailed information about such occupations. This section lists related O\*NET (or NOC) codes, an updated list of books and professional organizations as well as suggested activities for further job exploration. The Extended Report was completely revised in 2000. Revisions included 1999 norms, the addition of a new cluster of computer related occupations and a modern laser printed format.

### ***Software***

An Extended or Basic computerized report for the JVIS may also be obtained by purchasing software. This Windows-based package allows you to administer the JVIS, score it, and print a report in your office. The test respondent may answer directly at the computer so test booklets and answer sheets are not needed. The software insures that each response is entered correctly, and then scores those responses quickly and accurately. Reports can be generated immediately and reviewed with respondents while their

responses are still fresh in their minds. This software is extremely easy to use, although telephone support is available if you encounter difficulties.

### ***JVIS.COM***

JVIS.COM for Counselors allows counselors to purchase prepaid access passwords to distribute to clients at a reduced cost. These passwords allow clients to access JVIS.COM, complete the test and view the instant on-line Extended Report. Counselors can also view their clients' reports online.

JVIS.COM eliminates the hassles of maintaining test booklets and answer sheets as well as reducing the professional time required to administer the test.

### ***SigmaTesting.Com***

SigmaTesting.Com is our online testing platform that offers a spectrum of assessments to be delivered via the web. SigmaTesting.Com provides quality solutions in the aptitude measurement, career planning, leadership development, personality and behavior, and selection testing areas.

This site allows Counselors *full* control of the testing process from adding tests, to sending out instructions through email, to generating the report.

### **a) Occupational Theme Profile**

These 10 General Occupational Themes are similar to those identified by John L. Holland, but expand his proposed six themes to a total of 10. The decision to identify 10 themes was based on separate factor analytic studies of male and female respondents to the JVIS. The 10 identified General Occupational Themes are as follows:

**Expressive**—People scoring high on this theme are likely to be considered artistic by others, regardless of whether or not they are actually presently engaged in any artistic work. They enjoy creative work, which might take a wide variety of forms, including any of the applied or fine arts, drama, music, creative writing, visual art, or in the world of ideas. Such people are also more likely to enjoy the creative work of others. These individuals are likely to consider themselves perceptive, inventive, sensitive, imaginative, and aware of their environments. People in the arts receive high scores on this theme, but many others combine this theme with others in finding expression for their interests.

**Logical**—High scorers enjoy rational, abstract thought that is characterized by testable generalizations, deductive

reasoning, and precision. They enjoy the challenge of difficult intellectual work, particularly in the areas of mathematics and the physical sciences, but also in applications such as in engineering and technology, work with computers, and, indeed, in a variety of other areas where quantitative and exacting work may be required. A preference for working with the physical world or with abstract ideas over working primarily with people frequently characterizes high scorers.

**Inquiring**—High scorers show a great deal of curiosity about their environments, particularly about living things, other people and social institutions. They have a desire to learn about many areas of knowledge, and are described as investigative, intellectually probing, and reflective. Such people sometimes enter one of the social or biological sciences, or, just as often, combine this theme with others in choosing a career.

**Practical**—High scorers enjoy activities requiring physical or mechanical skill, seeking satisfaction from the quality of their work, rather than in exercising influence or power over others. They enjoy outdoor work and are not overly concerned about physical risks. They tend to avoid activities requiring them to be the centre of attention and prefer practical arts to the world of abstract ideas. They enjoy close family ties and are sometimes concerned with arranging for the comfort and well-being of others. Such persons are found in a wide variety of activities—agriculture, skilled trades, service activities, and others.

**Assertive**—High scorers on this theme indicate a preference for working in situations in which one can exercise control and where one's authority is clearly defined. Such people enjoy exercising authority over others, and do so self-confidently, without the need to seek advice or assistance. Sometimes seen as outspoken and direct with others, these people enjoy working with other people, especially in a dominant role. Persons working in environments in which this style of leadership is appropriate frequently receive high scores on this theme.

**Socialized**—People obtaining high scores on this theme are usually regarded as responsible, disciplined, prompt, systematic deliberate, and stable workers, but not usually creative. They would rather be confident about a relatively certain future at a predictable salary, than accept the uncertainty of a more risky but possibly more rewarding prospect. Occupations which offer such stability and reward these traditional virtues are likely to be favored by high scorers.

**Helping**—People scoring high express a genuine concern for other people, particularly those with problems or difficulties or who require assistance, nurturance, or education. High scorers are characterized as benevolent, comforting, sympathetic, supporting, charitable, assisting, cooperative, and as enjoying social interaction and giving advice. Occupations in which they may take a direct role in helping, serving, or teaching others are distinctly preferred.

**Conventional**—High scorers on this theme prefer well-defined work roles within a business or other large organization. They enjoy the day-to-day operations of business, whether involving the detailed operation of a business office, sales, making business decisions, or supervising others in these capacities. They show a preference for working with others in smoothly running organizations, rather than in highly-charged or highly variable environments. They thrive on detail, but prefer not to be required to be highly creative, nor to work at tasks involving physical or mechanical skill, discomfort, or physical risk.

**Enterprising**—Persons receiving high scores enjoy work involving talking with other people, particularly if the purpose of the discussion is to persuade or influence other people. Self-confident, rarely shy about entering difficult situations, dominant, and forceful, these people are usually interested in marketing or management aspects of business, rather than in the details of the day-to-day operation or in particular specialties. They are often motivated by the conventional symbols of social status—money, influence, and prestige—rather than in other forms of recognition. In addition to business, people represented primarily by this theme may be found in the legal profession, administration, public relations, diplomacy, and related areas.

**Communicative**—High scorers are interested in ideas and in particular in communicating these ideas to others in writing. They enjoy any serious expression of ideas, attending lectures, reading, studying, taking notes, visiting a library, or engaging in debate or intellectual discussions. Their enjoyment of writing is more highly focused upon expressing or synthesizing ideas, rather than upon entertaining others, although they might enjoy that as well. Such people tend to be described as intellectual, articulate, well-informed, and as having a broad range of interests. Professional writers, of course, score highly on this theme, but since written expression is important in a wide range of occupations, many others score highly as well.

These themes provide useful information about a counselee's general orientation of life and work. Although scores are based on vocational interest measures, they also indicate something about a person's personality and values, as well as about the sorts of activities and environments he or she finds satisfying.

#### **b) Academic Satisfaction**

The academic satisfaction score reflects the degree of similarity between the respondent's profile and that of an average university student who is engaged in a traditional academic and/or scientific course of study. This score does not predict how well a respondent will do in an academic atmosphere. Instead, it provides an indication of the degree to which a respondent might enjoy scholarly activities such as serious reading, studying, doing assignments, etc.

#### **c) Similarity to College Students**

The analysis of profiles from more than 10,000 university students in over 150 diverse fields, ranging from accounting to zoology, resulted in a cogent organization of these academic majors into 17 broad groups. Each group, then, represents a set of specific educational majors and is based upon interest profiles of both male and female groups. Coefficients of similarity to the 17 groups, which include Environmental Resource Management, Business, and Mathematical Sciences, are reported and the results presented as a graphic profile. Finally, a list of the three most similar groups and a sample of the typical major fields that form these groups are provided.

#### **d) Similarity to Job Groups**

The emphasis in the JVIS is upon groups or families of occupations rather than on highly specific job classifications. There are a number of excellent reasons for this emphasis. The first is that it is considered better counseling practice to more broadly explore alternatives before narrowing the focus to specific occupations. Second, it is impossible to include the many thousands of occupations available in an interpretive report. Third, even if it were possible to include all occupations, this would be very confusing for respondents. Fourth, interest profiles for related occupations are highly similar and the reporting of data on 100 or more occupations involves much needless redundancy. Finally, the use of groups rather than individual occupations allow individuals the choice of exploring occupations in the same cluster at a variety of levels, depending on their abilities and on their values regarding higher education and specialized training. For example, a

person with a profile similar to that of persons in the group labelled Health Service Workers could explore professions in the healing arts, in laboratory technology, or in nursing at a variety of levels. The JVIS extended report lists the respondent's similarities to job groups. These job groups are based on an analysis derived from 278 male and female occupational groups.

Additionally, the extended report includes descriptive paragraphs of the respondent's three highest ranked job groups and information relevant to further exploration of a sample selection of occupations within each of these three groups. Each of the top three job group descriptions is accompanied by current suggested readings and updated contacts for relevant professional organizations including web addresses.

#### **e) Administrative Indices**

The Response Consistency Index compares the respondent's answers on half of the JVIS items to his or her responses on the remaining half. A low score indicates that the respondent did not answer in the same fashion over the course of the JVIS. To facilitate interpretation the Response Consistency Index is graphed as a percentile.

The Infrequency Index measures the respondent's answers to the 45 least popular items on the JVIS. A high score means that the respondent has preferred many of these items. In most cases, a high score only means that the respondent's interests differ from those of most people. However, when combined with a low Response Consistency Index, a high Infrequency Index can be a sign of improper or careless responding. Diagnostic messages will appear when any of the Administrative Indices are out of the normal range.

#### ***Reliability and Validity***

The reliability of the JVIS has been thoroughly investigated. The internal consistency reliability (alpha) from the most recent analyses ranged from .54 to .88 with a median of .72 for the Basic Interest Scales and from .70 to .92 with a median of .88 for the General Occupational Themes. Test-retest reliability coefficients based on an interval of 4 to 6 weeks ranged from .69 to .92 with a median of .82 for the Basic Interest Scales.

The JVIS Manual reports validity data of the following types: differentiation of college and university students; differentiation of occupational groups; experimental studies of counseling judgments and of decision-making regarding vocationally relevant activities; relationships

with a variety of personality and vocational assessment devices; and relationships with measures of scholastic aptitudes and achievement.

An example of validation work is a major study conducted at the Pennsylvania State University. In this study, JVIS profiles predicted choice of academic college with higher accuracy than that reported previously for any combination of interest and aptitude measures.

### ***What the JVIS Does and Does Not Do***

The JVIS is primarily designed for educational and career planning and decision making. On the one hand it organizes interests, values, and other information about a person in such a way as to facilitate planning for the future. It also provides information to counselors and to others who have the responsibility for aiding or assisting individuals or institutions to make decisions.

The most frequent misinterpretation of career test results is that they reflect upon a person's ability. While it is true that in some areas individuals express a greater interest in tasks in which they tend to succeed, there is a very imperfect correlation between abilities and interests.

Interest tests predict probable satisfaction; only rarely do they predict success. The use of career interest scores as selection devices for particular occupations needs to be validated in each case. Students, counselees and others receiving their JVIS results need to be cautioned that the profile is not an index of their abilities, and generally does not reveal "What they are good at" but rather, reflects their expressed preference for activities which bear on a variety of interests.

### ***Applications of the JVIS***

One can identify at least five areas in which the JVIS might be useful. The JVIS may be used: (a) in career development programs; (b) for educational planning; (c) for vocational counseling and career planning; (d) for

industrial selection and placement; and (e) as a means to foster self-knowledge and for redirecting a career in mid-life. A further use, one important in furthering our understanding of career interests and career development, is that of research.

## **The JVIS Occupations Guide**

Douglas N. Jackson, © 1995, 2000, 2005

The newly updated and Internet-friendly *JVIS Occupations Guide 2005* contains a complete description of all 32 JVIS Job Groups including related O\*NET (or NOC) codes and sample job titles. Each job group description is also accompanied by current suggested readings and updated contacts for relevant professional organizations including web addresses. Career exploration activities as well as web-based career research activities are also suggested for each Job Group.

## **JVIS Applications Handbook**

Marc Verhoeve, © 1993, 2000

The JVIS Applications Handbook provides information on practical uses of the JVIS. It is a valuable supplement to the test manual, presenting the role of the JVIS in career counseling, providing comprehensive case studies, suggesting innovative JVIS applications and including a structured in-service package. The JVIS Applications Handbook will be particularly useful to professionals counseling adolescents and adults in the process of formulating career plans. It will also be beneficial to counselors of adult clients in career transitions, such as career change, upper or lateral job movement and preparation for retirement. Marriage and family counselors will be interested in the information pertaining to couples blending career paths and family responsibilities. Another useful application of the Handbook is in corporate settings, particularly with team management training.

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