

Utilizing a Unique Job Analysis Tool to Bridge the Gap between Job Definition & Job Specification

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Introduction

HRVision, a leading supplier of next generation assessment tools, introduces an automatic job-profiling device that encompasses both job analysis and subsequent determination of associated test battery. This uniquely conceptual device, **The SavvyWizard**, allows for automatic in house creation of organization specific job profiles by defining core elements of the job that most keenly affect job performance.

Using a sophisticated online questionnaire, **SavvyWizard** functions as a "computerized consultant / organizational psychologist", that assists the work manager, supervisor or HR personnel in breaking down the specified job into components that are measured and weighted with respect to their importance in the job. Ticking off responses to the **Job Analysis Wizard** results in a highly accurate job profile that mirrors the individual and unique nuances inherent to each job position. This is done by a unique mechanism that translates the job analysis directly into the correlative attributes housed within an ancillary test battery. The resulting profile includes the set of tests most relevant for the job, along with a unique scoring algorithm, which calculates and indicates the suitability of the candidates in the ensuing predictive performance report.

Theoretical Background

Selection is based on the assumption that due to variance in some stable personal attributes and characteristics, individuals vary in how compatible they are to any given job. This compatibility is a product of the degree of fit between the characteristics of the job (e.g., requirements, demands), and the characteristics of the individual (e.g., abilities, traits, motivations).

Past research on the fit between person and environment usually focused on the fit between individuals and occupational environments (P-E fit, for reviews and meta-analyses see Spokane, 1985; Asulin & Meir, 1987; Tranberg, Slane, & Exeberg, 1993), or between individuals and organizations (P-O fit, e.g., see Chatman, 1989, 1991; Edwards, 1991). HRVision theory postulates, however, that selection is not only about congruency with the occupation nor is it only about the congruency with the organization. In fact, organizations select candidates to specific **jobs**. A specific job in an organization is the conjunction of the characteristics of a specific occupation and those of the specific organization.

In order to optimally select individuals to jobs, it is necessary to combine jointly the job analysis and job specification processes. **Job analysis** is the process of collecting information about the characteristics of the job (Harvey & Wilson, 2000) - information regarding what is being done on the job, in terms of activities, tasks, and requirements. The analysis refers to both frequency and importance of the various activities and tasks. The information gathered through job analysis is then being used by experts in the field, to generate **job specification** (i.e., the personal characteristics, in terms of knowledge, abilities, skills, personality traits and motivations) that is required to perform the job, and that will hence make a candidate most suitable for this job.

The process of job analysis is widely used in organizations and is considered crucial for forming the foundation for selection processes, as well as other human resource management tasks, such as performance appraisal, training, or workforce planning (Morgeson & Campion, 1997). To date, there are numerous methods and instruments for collecting job information (Gibson 2001). However, several problems characterize the various instruments available so far, among them conceptual ambiguity (e.g., a mix between

job analysis and specification analysis); a narrow focus on jobs relevant to specific industries only; and unpractical length of questionnaires (often containing around 200 items and more) (for a review see Gibson, 2001).

HRVision Ltd. has developed a conceptually innovative instrument for job analysis that capitalizes on the juxtaposition between the occupational and organizational characteristics, as they are reflected in the job in question. This fully automated tool, **SavvyWizard** represents the Next Generation of job analysis tools that was designed to overcome some of the problems previously encountered using currently existing tools.

Primarily, **distinguishing between the two complementary processes of job analysis and job specification SavvyWizard procedures in the initial stage focuses on job analysis only.** Managers are requested to report on the frequency and importance of various tasks and activities so as to provide the grounds for the specification analysis to follow. At the culmination of the information gathering stage the job analysis responses are automatically analyzed, using a sophisticated and extensive repository of professional expertise. This analysis subsequently discerns and identifies the multifaceted requirements of the job in all its aspects, and assigns the appropriate personality and psychometric tests relating to each of those requirements. As such, the **SavvyWizard** differentiates itself from other systems currently in the market by essence in the extent to which it demarcates between the two intrinsically related processes: job analysis and job specification and ties the testing modules directly to the requirements.

In addition, the wizard is built on a theoretical model of analyzing jobs as they are nested within their inherent environments (i.e., organizations). As such, the information gathered in the job analysis stage takes into account the way in which the role and task in question are formed and shaped within the **specific organization.**

Moreover, relying on a **theory of occupations**, the wizard distinguishes among the various components, or aspects, of the job, and analyses each separately. This results in a richer and more sophisticated body of information regarding the job in question, thus providing better input for the second stage of job specification.

Finally, this new tool is **user-friendly** as it is relatively short and efficient.

In developing the questionnaire, several methodological issues have been considered. To increase reliability, the various questions in the survey were designed to increase standardization by clear phrasing and avoidance of ambiguous expressions. The response scales while descriptive in nature remain as congruent as possible in order to provide, explain and exemplify the possible alternative responses, while minimizing subjective interpretations. To further increase reliability, several managers in each organization were requested to complete the survey, thus enabling the wizard to establish inter-judges reliability.

The SavvyWizard: A New Instrument for Job Analysis

The SavvyWizard is a job analysis questionnaire, reflecting a multi-layered model of job analysis. It is designed to identify the requirements of the job, in terms of workers' inputs – what should be done, how much, how frequent, under which circumstances, and so on. The information gathered by the wizard is then used to analyze the job specifications, and develop a suitable selection system. This selection system is specific to the needs of the job in question, as it is nested within the organization.

Identifying the main components of the job

The basic and most fundamental step in the HRVision job analysis process is the procedure of identifying the main components of the job. While some jobs are simple and homogeneous, the majority of modern jobs are complex and include several components, each entailing different activities and requirements.

To identify the main content aspects of each job, the Wizard draws on Holland's taxonomy of occupational fields (Holland, 1985, 1997, see also Walsh & Holland, 1993). In this taxonomy, the most accepted in vocational research, Holland distinguishes among six types of occupational fields (termed "environments"). Each occupational category is characterized in terms of the activities most and least common in it, and the abilities and skills most and least required.

The six occupational groups are described in Columns 1-4 of Table 1. The wizard presents employers with a list of 17 occupational categories – built on Holland's classification and requests an identification of up to 4 of those categories that reflect the main components of the job. (Column 5 of Table 1 depicts the list of occupational categories included in the wizard).

Table 1: Holland's taxonomy of six occupational fields

| Occupational Field | | Object of Work | Activities | SavvyWizard – Job components |
|---------------------------|----------|---|--|--|
| Realistic | R | Machines, instruments, physical materials | Systematic manipulation of objects, instruments, and machines, to produce or fix a tangible product. | Engineering, technical skills , Transportation, Manual labor, Security |
| Investigative | I | Thoughts, ideas | Systematic, symbolic and creative investigation of physical, biological and cultural phenomena, in order to understand them. | Research and development |
| Artistic | A | Physical, verbal or virtual materials | Free, ambiguous, unstructured activities, manipulating physical or verbal materials to produce artistic products | Artistic design |
| Social | S | People | Working with other people to guide, teach, help, consult and cure them | Teaching and training, Counseling and/or personal treatment, Physical treatment |
| Enterprising | E | People | Working with others to lead, direct and manipulate them to attain organizational or financial goals | Sales, Marketing, Advertising and business development Media, Law and the judiciary, Management |
| Conventional | C | Numbers, forms, administration | Systematic and structured manipulation on numbers, figures and forms to classify, arrange and organize them. | Customer service, Administration, Finance |



After the main components of the job have been identified, managers are asked to make an in-depth analysis of each of the central components of the job in regard to four aspects. Below the four-layered model is described.

A Multi-layer Model of Job Analysis

The in-depth analysis is comprised of four concentric layers emanating from the center as follows: I) evaluating the core characteristics of the job itself (“job complexity”), II) analyzing the autonomy and authority the job provides for the employee (“structure of responsibilities”), III) analyzing the nature of interpersonal interactions, (“interpersonal relationships”) and IV) studying the external environment in which the job is nested (“external environment”).

I. Job complexity

The first (innermost) layer of the in-depth job analysis model focuses on the core characteristics of the job itself. These include an analysis of the tasks and duties required of employees along with the problems and challenges they will have to deal with, and the skills to be obtained

Three aspects of job complexity are assessed in the Wizard:

1. Complexity of Learning: What is the level of learning required for the job?
2. Complexity of Problems: What is the nature of problems employees face in this job?
3. Specific Skills: Jobs (and different components of jobs) vary in the extent to which they require various specific knowledge and skills.

II. Structure of Responsibilities

The second layer analyzed for each of the central components of the job is the structure of responsibilities that characterize the job which encompass:

1. Authority in decision-making: a) Amount of authority an employee has in making decisions relevant to his or her job b) Amount of flexibility on the job
2. Independence in crafting the job: a) Amount of independence individuals have in shaping their jobs -structuring, shaping, and adjusting their jobs.

III. Nature of Interpersonal Relationships

The third layer of job analysis is more extraneous and concerns the nature of relationships employees have with various people in the immediate job environment as well as with people outside of the organization.

The **SavvyWizard** analyzes four aspects of interpersonal relationships: (1) the need to create relationships with others; (2) the need to convince and influence others; (3) the nature of competition the job requires employees to handle; and (4) nature of interdependency in relations with others.

IV. External environment

The outermost layer of analysis regards the external environment in which employees perform their jobs – both in organization as a whole, as well as the external world outside the organization.

1. Environmental Distractions

Work environments vary in the amount of physical distractions they pose for their employees. Physical distractions could include audible, visual, and other types of disturbance that may interfere with performing the job - with jobs differing in both the type and the amount of distractions they encompass.

2. Sources of stress

Stress is another main characteristic of the environment in which people work. Various sources of pressure can characterize a job. These sources of stress could be inherent to the nature of the job, or a result of the way in which the job environment was designed such as: a) overload – either quantitatively or qualitatively or ambiguity, b) uncertainty and lack of clarity with regard to the requirements, responsibilities and obligations of the job and/or c) conflicts of tasks or demands.

3. Changes in the environment

The final aspect analyzed by the **SavvyWizard** regards the external environments in which the organization operates. Specifically, organizations vary in the dynamics of the environment in which they manage their activities – with some organizations working in relatively stable environments encompassing little change, while other organizations operate in a highly dynamic environment, where competition changes rapidly, and the organization must be highly flexible and rapid in reacting to the changing conditions and demands.

Predictive Performance Report

Bearing in mind that any selection process ascribes to a level of prediction, it is assumed that any increase in the level of match between the competencies and the job requirements, will result in a proportional rise in predictive validity. As such, the underlying purpose of the job analysis process (filling out the Wizard questionnaire) is to provide clear and meaningful information regarding the factors necessary for optimal job performance so that they can be linked to the testing phase. By bridging the gap between a proper theoretical job definition (based on specific job requirements) and the associated selected and weighted test modules, the solution is able to offer a unique advantage over existing systems in the creation of a dynamic flow between the two crucial elements of the candidate assessment process – specific job definition and specified test battery.

Generated simultaneously upon the completion of a test session, the Predictive Performance Report provides bottom line information and accompanying commentary on the candidate and his/her overall suitability to the intended job. The report breaks down into optimal score ranges for any capability or attribute (as it is directly derived from specific job requirements) and provides clear, focused information on each of the aforementioned aspects. The beauty and clarity of this report lies in the combination of numerical scoring with verbal descriptions along with various graphic colored bar representations as it relates to the job at hand.

Conclusion

The **SavvyWizard** represents a true breakthrough in the breadth and scope of a job profiling tool by virtue of its ability to break down the inherently complex job analysis process into approachable elements that are analyzed and subsequently reconnected via sophisticated algorithms. The resulting metamorphosis of job requirements into a linked test set enables eliminating to a great degree the commonly found discrepancy between job requirements and associated profile. As such, the solution makes a quantum leap in overcoming the challenges facing even the most seasoned personnel in a) proper definition and measurement of job elements b) composition of test set and c) providing a bottom line clear cut assessment and ranking device that indicates candidate/job suitability.