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ZIVAC Team

SUPPORT GUIDE

”SCIENTIFIC SELECTION OF THE PERSONNEL”

**Guide developed under the project Erasmus+ Programme
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Selection "**

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Introduction

This manual is thought to be a guide that can help staff who work in personnel selection to identify tools to help them work and give them a holistic image by introducing behavioral analysis into the selection process.

The first chapter is about how certain techniques such as outlining a development plan for an employee, what happens before hiring can contribute to effective communication between the interviewer and the person who wants to engage. It describes socialization at work and how integration of the new employee takes place.

In chapter two, it talks about the scientific part of personnel selection, the importance of tests, some examples of tests, and the characteristics that a test should have.

Chapter Three addresses behavioral analysis and how this technique can complement the methods used in personnel selection. Using behavioral analysis by specialists working in staff selection will help optimize the process and facilitate the right choice for what is required for the available workplace.

CHAPTER 1

Before and after the selection of personnel

1.1. Monitoring personnel selection

Personnel selection can be referred to as a methodical process used to engage people. This term can apply to all aspects of the process (recruitment, selection, employment, etc.), but the most common is the selection of workers. In view of this, the selected candidates are separated from the rejected candidates with the intention of choosing the person who will most likely succeed and will bring the most valuable contributions to the organization.

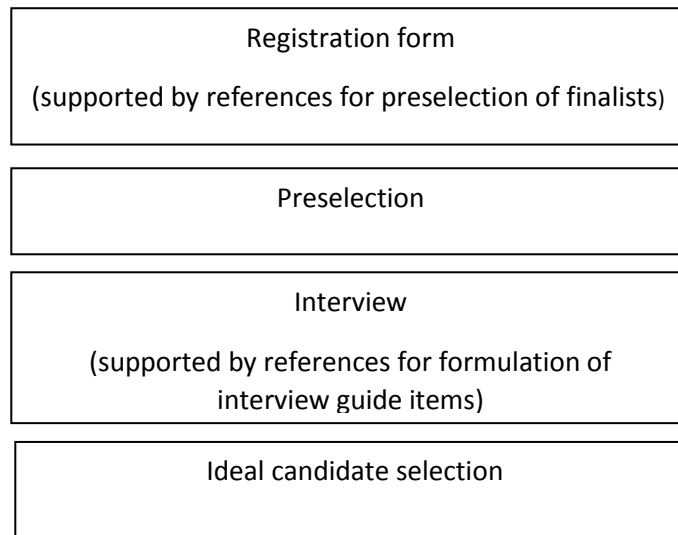
The selection procedure follows the data collection strategy of a person to determine if it can be useful for the availability of the accessible job.

Good selection decisions can provide managers new valuable members that can help increase productivity and even change the working ethos. Inappropriate selection decisions may be costly in terms of the management time required to deal with disciplinary cases, recalculate non-performing persons and recruit substitutes for employees who have been selected and / or who have left the job immediately after they showed up at work.

1.1.1. Traditional selection process

The traditional personnel selection process is a combination of three selection methods: enrollment forms, interviews, and references. The key element of this process is the application form and the interview. References play an important but subsidiary role, which functions either as a source of information and evaluation for short listing and interviewing, or

as a verification of the interview decision. In succession, the process would work the following way.



1.1.2. Selection measures

Human resources managers use a variety of tools / instruments to select candidates that best fit their position. The main purpose of these tests is to predict and quantify job performance and each test has its own strengths and relative limitations to consider. When making a hiring decision, it is essential to keep in mind the person's style, values, motivations and attitudes. Skills and knowledge can be acquired by new employees through training, but personality is an attitude that varies among individuals and changes very hard.

The most frequently used selection methods can be broken down as follows:

a. Interviews

Interviews are considered one of the most common ways people are selected. Ordinary interviews follow a structured framework in which each applicant addresses the same questions and is marked with a standardized rating, called a scale.

b. Personality tests

Another tool used for the selection process is personality testing. Personality tests provide a fairly accurate analysis of a candidate's interpersonal skills and attitudes. These tests can reveal a variety of things about a candidate, such as how well he works with others, self-discipline, attention to detail, organization, flexibility and mood.

c. Select biographical data

Basic information, questionnaires, interviews, and references from past employers to assess the reliability, integrity and personality of an individual. To implement this technique, a validation study should be performed before.

Applicants are given a list of questions on issues such as economic stability, professional ethics, and educational achievements. Applicant scores are determined by weighting each item according to the empirical relationship of the item with the criterion of interest. This technique requires a validation study to obtain empirically derived weights for biographical data.

d. Testing abilities

Psychomotor capacity tests are used to measure motor skills and coordination. These abilities are vital in jobs that require coordination. Unlike psychomotor capacity tests, physical fitness tests measure motor skills such as lifting and running. These skills are important in jobs such as construction, where force is needed.

1.2. Reliability and validity of selection methods

The reliability of a test refers to the extent to which repeatable results are obtained. Recruitment and selection processes are used by a company every time you need to hire someone, and if the results are satisfactory they can be considered reliable. In addition, it is necessary to assess the validity of these measurements in order to determine whether the selection tools can predict the performance of the jobs.

There are three major types of validity: construct, content, and criterion.

Validity of construct (conceptual)

The validity of the construct refers to the extent to which the test accurately assesses the underlying construct of what it claims to evaluate. This can be assessed by examining correlations with other measures that intend to evaluate the same construct. When we ask whether the test has a valid construct, we ask, "Are we testing this thing that we are interested in testing?" An example of a measure of constructive validity is IQ testing. It is intended to measure intelligence, but there is disagreement about measuring intelligence, as they say, or just one type of understanding.

Validity of content

Validity of content refers to the extent to which the construct underlying the concept that it claims to evaluate is being assessed. For example, let's look at an interview for a banker position. This tool would have a low validity of content if it assesses the extent to which the candidate felt comfortable talking to different people, but not if he felt comfortable with math, because the candidate had not been thoroughly assessed in every aspect of the banker job. The measure does not cover all the magnitude of what is required of the job.

Validity of the criterion

The validity of the criterion examines how well the construct correlates with behavior in the real world in several situations and manifestations.

1.3. Personnel selection research

The main elements in the design and validation of personnel selection procedures have been in place for many years. The role of job analysis, contemporary models of work performance and criteria are critically analyzed. After identifying important issues and reviewing the researched work on attracting applicants, including the perceptions of applicants on

staff selection processes, the research on major staff selection methods is examined. Recent work on cognitive skills has confirmed the validity of the criterion, but the negative impact problems remain.

New personality research advances beyond studies designed only to explore the validity of personality criteria. The interview and the results of the research centers' reviews are assessed and are discussed periodically. In both cases, one of the key constructs measured, appears to be, in general, cognitive ability. Values of data validity and processes used to develop biographical data tools are also critically reviewed. The article ends with a critical assessment of the processes of obtaining evidence of validity (mainly from meta-analyzes) and the limitations of the current state of the art. Future prospects are briefly speculatively reviewed.

The traditional model of selection and evaluation practice has not changed for many years. Smith and Robertson (1993) indicated the major sequence of events involved in the design and validation of any staff selection system. The traditional system implies an in-depth detailed analysis of the job. This analysis is then used to indicate the psychological attributes a person needs to have in order to be effective at work. In turn, staff selection methods are designed to enable those responsible for the selection to attract and assess candidates' capabilities on these attributes. A validation process is used to assess the extent to which staff selection methods provide valid predictors of job performance or other variables of criteria, such as absenteeism.

Perhaps the most significant change in research staffing research literature over the last decade has been linked to meta-analytical studies on a wide variety of staff selection methods that have shown that when the visible effects of sampling errors: the lack of reliability of the measurements is eliminated, the "true" validity of the personnel selection methods is much higher than originally thought. Many selection methods have been subjected to a detailed meta-analytical review. One of the best

meta-analysis lists of selection methods is included in Schmidt and Hunter (1998), where he identifies meta-analyzes of 17 selection methods. Figure 1 is based on Schmidt's and Hunter's review and shows the validity, estimated by Meta analyzes, of many selection methods. The numbers on the right are valid when general job performance assessments - usually by superiors - are used as criteria. The two sets of results are very consistent, even if fewer meta-analyzes are available for the training criteria. The use of several criteria had disadvantages: they were often impractical or costly to collect and led to confusion because they produced divergences. In the 1980s, the criteria were organized into three groups: production criteria, personnel data and judgements.



The Schmidt and Hunter tables imply that, in practice, psychologists combined production criteria and judgment criteria (usually supervisory ratings) to produce two categories of factors.

As far as the criteria are concerned, the most significant changes in staff selection research concern the expansion of job performance building so that it includes not only the efficient capacity of the relevant tasks but also the contextual performance or behavior (Borman & Motowidlo, 1997; Coleman & Borman, 1999). The field of selection of staff that has

evolved the least and seems increasingly problematic is the analysis of jobs. The traditional role of job analysis within the staff selection paradigm is to provide data for all subsequent stages of the process. In today's organizational life, jobs are no longer as stable as they were 10 or 15 years ago. At one point, the technology related to work and the length of careers of employees were reasonably well suited. Nowadays, technologies, working practices, even organizational forms appear differently in an individual's life. This means that in many selection situations, the requirement to understand the job is particularly complex and difficult because the jobs in question can be radically different in ways that are very difficult to predict within 5 or 10 years.

In the personnel selection analysis, Hough and Oswald (2000) noted the importance of the changing nature of work and the difficulties it presents for traditional job analysis. These indicate that, by expressing recognition of the increasingly rapid changes taking place in the workplace, many researchers and practitioners are now conducting analyzes focusing on workers' transversal tasks and abilities, rather than traditional analysis of places of work. In particular, they noted the use of O * NET as a database (Petersen, Mumford, Borman, Jeanneret, & Fleishman, 1999), which contains information about worker behavior and attributes, including information about personality variables, cognitive variables behavioral variables. This modern approach to job analysis has many useful attributes, but it clearly can not find a way to predict future job demands with a certain degree of certainty.

1.4. The process of personnel selection

1.4.1. Issues that may arise in personnel selection

This document is not intended to provide a comprehensive review of the literature on staff selection over the past decade. Recent reviews of the

research literature on staff selection provide a detailed description of the state of the art. Hough and Oswald (2000) and Salgado (1999) provided a detailed and comprehensive review of the research literature on staff selection. The review of Hough and Oswald (2000) covers the full range of staff selection from job and workplace analysis to professional, legal and ethical standards. Salgado's report (1999) focuses on staff selection methods.

Both Hough and Oswald (2000) and Salgado (1999) offer convincing evidence of the previous statement that the meta-analysis results have provided strong validation evidence for many staff selection methods. Several methods, including cognitive capacity tests, personality questionnaires, interviews, assessment centers and bio data, have proven to be reasonably valid.

A major area that causes difficulties for both researchers and practitioners concerns the correctness and negative impact of staff selection methods. An adverse impact occurs when members of a subgroup are selected disproportionately more or less frequently than members of another subgroup.



In general terms, cognitive ability creates the most problems when it comes to a negative impact. Even when combined with methods that have a lower negative impact, cognitive ability often creates unfavorable impact problems for selection systems (Bobko, Roth, & Potosky, 1999, Schmitt, Rogers, Chan, Sheppard and Jennings, 1997) . Some staff selection methods that do not have a negative impact, eg. Personality questionnaires (Ones & Visweveran, 1998) are widely used (Shackleton & Newell, 1997). Other methods, such as bio data, which have a minimal negative impact and relatively good values of validity, continue to be used relatively little (Bliesener, 1996; Shackleton & Newell, 1997).

For several years, research literature on staff selection has been dominated by studies that explored the validity of specific staff selection methods. The development of meta-analysis and the subsequent use of the technique to provide a better estimate of the validity of a whole range of methods have provided a significant step forward. Evidence of a wide range of methods is currently reasonable and stable, and a number of topics such as those mentioned above, namely job and workplace analysis, criteria measurement, negative impact and fairness, are becoming increasingly important the most visible in research literature on staff selection. They are also important in the practitioner's field. Other issues that are of increasing importance in the research and practice of staff selection are: selection procedures that take into account the group in which candidates will work (ie selecting team members); selection for multinational organizations, where recruits must work in different cultures; applicants' reactions to staff selection experiences and the validity of the criterion to be achieved by combining different selection methods.

1.4.2. Perspectives of the future

Progress in selection theory and practice over the last 50 years has been enormous. We now know with certainty the accuracy and validity of most of the selection methods. We have a much clearer conceptual

understanding of the correctness and nature of the hiring criteria. The candidates were also consulted, but without a relevant result.

It is also possible that further progress will be made in new areas related to staff selection. Two new areas of particular interest are: the use of physiological measures and the comparative evaluation of selection systems.

1.4.3. Psychological measures

Current research on selection and evaluation seems to have ignored advances in psychology, suggesting that physiological measurements may be useful as evaluation tools. For example, Shafer (1982, 1985) and Shafer & Marcus (1973) investigated several indicators derived from EEG records. An index, the "neural adaptability index," measures the extent to which the magnitude of brain waves decreases when a stimulus is repeated. It has been hypothesized that individuals with peak IQ will become more accustomed to the test items and thus preserve neural resources. It was found that neural adaptability had a connected correlation of 0.82 with the scores of Ivan T. Robertson and Mike Smith from the Weschler Intelligence Scale - a correlation comparable to that found between two established intelligence tests. Similarly, Eysenck and Barrett (1985) investigated the complexity of brain waves generated by a standard stimulus. They obtained a correlation of 0.83 between the complexity of a person's evoked environmental potential and the full-scale scores of the Weschler test.

There are some suggestions that certain aspects of personality, such as emotional stability and extraversion, also have neurophysiological correlations. It is too early to say if these data will have any advantage over the measures commonly used in the selection.

1.4.4. Comparison selection systems

Selection and assessment practitioners often have to differentiate (comparatively) the systems used by management organizations.



Practitioners from other areas, such as production managers, can use a number of methods to compare their own operations with the top-level production operations. A production manager may have its audited external methods and obtain a global score and an indication of those aspects of its selection system that are below best practice standards. In many organizations, the selection function is subject to similar pressures, and it is likely and desirable that audit methods of selection systems be developed in the near future.

1.5. Report Construction (Personal Development Plan)

The Personal Development Plan (PDP) is related to various concepts, such as portfolio, continuous professional or personal development plan, work journal, or personal professional profile. The two frequently used terms are the personal or professional development plan and portfolio valuation. Concerning the latter, different connotations can be discussed. In

many sources in literature, the portfolio (evaluation) refers to a reporting system that is used for organizational accountability and learning (Schmitz & Schillo, 2005). Moreover, a portfolio is described as a register or note that provides evidence of acquiring skills, knowledge, attitudes, understanding and achievements (Brown, 1995; Redman, 1994) or employee competencies (Smith & Tillema, 1998). On the one hand, this demonstrates a "continuous" development or acquisition; is prospective (Brown, 1995, McMullan et al., 2003). On the other hand, a portfolio is retrospective, since reflection occupies a central place in the construction of one (Brown, 1995; Snadden, Thomas, Griffin and Hudson, 1996).

Portfolios were originally used as a showcase by photographers, painters, architects and brokers (Lyons & Evans, 1997; Mathers, Challis, Howe & Field, 1999). Subsequently, they were implemented in secondary schools and higher education to support student learning and to inform certification. Part of the portfolio was dedicated to student professional development, called PDP (eg Driessen, van Tartwijk, van der Vleuten, & Wass, 2007). Gradually, teachers, nurses and family doctors began to use portfolios. Unlike its use in schools, however, improving professional performance, rather than visible educational performance in a portfolio, is not easy. This is also reflected in the discussion on how to use training results, a discussion that has been going on for years. Instead, professional portfolios are used as a tool to present information about the skills the employee has developed and which he intends to develop further, and is therefore labeled as a Personal Development Plan.

PDP can be defined as a tool that:

- Provides an overview of the competences that the employee has developed in the past and the skills that the employee intends to do in the future;
- It is composed of the employee himself (self-direction of the employee), although the PDP format is mostly fixed;

- Used as a basis for structuring conversations with the supervisor or coach, which provides employee feedback and stimulates employee reflection;
- Serves for making different decisions, ranging from planning an individual training program to the decision to grant a person a promotion or not.

1.5.1. Evaluating personal development plans

A PDP is a tool used to collect and document information about the skills the employee has worked on and intends to further develop. In this respect, it can be defined as an evaluation tool. Collecting and documenting information through a PDP can serve to achieve two main goals. Typically, a distinction has been made between the two main purposes: professional development and certification / selection / responsibility (Smith & Tillema, 2001). When a PDP is used to develop, learning has a central role. Instead, when a PDP is used for certification, the presentation is very important (Beck, Livne, & Bear, 2005, Bradshaw & Hawk, 1996, Bunker & Leggett, 2004, Lyons & Evans 1997; Orland-Barak, 2005; & Tillema, 2001). Smith and Tillema (2001) refer to two dimensions. The first content starts from "Certification Purposes (Promotion, Selection)" to "Learning, Development Goals". The second content makes the difference between compiling a PDP on a voluntary and mandatory basis. The authors reported that there was a deeper development when using sustained PDP was voluntary than when it was mandatory (Smith & Tillema, 2001). Instead, other research has shown that staff members did not develop a PDP [didactic] unless they were forced (Bunker & Leggett, 2004). Consistent with the difference between the two main goals, a difference has been made between several types of portfolios. A work portfolio is used for reflection, while a documentary portfolio and an impression portfolio are used for summative evaluation.

The difference between a documentary portfolio and an impression portfolio is that an impression portfolio displays only the best things in

someone's work (Bunker & Leggett, 2004). Another similar difference was made between a product portfolio or presentation portfolio and a process portfolio (Moore & Bond, 2002).

PDPs have become widely used, not only in the fields of medicine and education, but also in business contexts and government offices (Beaussert, Segers, vander Rijt, & Gijssels, 2011). For example, a study in the Netherlands among companies in the Limburg region showed that 89% of companies use PDP (GITP, 2008) in the context of talent management. In the United Kingdom, various authors underline the government's strong recommendation to use PDPs to stimulate the continuing professional development of health services (Evans, Ali, Singleton, Nolan, & Bahrami, 2002; Bullock, Firmstone, Frame and Bedward, 2007). Despite its popularity, empirical evidence on the efficacy of PDPs is mainly limited to educational and health care environments. In addition, there are large variations between different studies in terms of PDP implementation characteristics. There is an important difference with regard to the purpose for which PDP is used. A distinction has been made between two broad sets of goals, learning / development on the one hand and promotion / selection / responsibility on the other (Smith & Tillema, 2001).

Different authors ask whether PDPs can be discussed in development interviews as well as in evaluation interviews conducted by one and the same supervisor (eg, Beck, Livne & Bear, 2005; Wolf & Dietz, 1998). However, related field research provides arguments for examining the purpose for which a PDP is used.

First, when PDPs are used for rewarding purposes (such as promotion or wage growth) instead of development goals, it can be assumed that openness to critical self-reflection is jeopardized. However, critical reflection is the starting point for professional development as it clarifies the strengths and weaknesses of past performance (eg, Riley-Doucet & Wilson, 1997). Employee self-protection and the fear of performing its

performance may lead to the collection of unauthorized evidence and to the construction of invalid PDPs, instead of PDP that reflects open employee learning and development (Smith & Tillema, 1998, 2001).

As Smith and Tillema (2003: p. 626) state: "The relationship between the selection of evidence and the reflection on work remains intrinsically tense."

Second, when the purpose of PDPs is not transparent to the employee, which implies that it is not clear what the PDP decisions are, this could lead to a lack of confidence in supervisor control and, in turn, his lack of confidence in developing and improving performance. The 360 degree feedback research has provided evidence of the key role of trust in the evaluator..

Tool 360-degree feedback "is based on the assumption that an individual's performance information collected from various perspectives and reapplied the same individual will lead to individual development" (Brutus, London & Martineau, 1999, p. 676). However, the 360 degree feedback development effect is only achieved when there is confidence in the evaluator's assessment of the test. This is confirmed by a recent study by Van Gennip, Segers and Tillema (2010) on the effectiveness of 360 degree feedback. The results show that the assessment of the belief in psychological safety predicts significantly the evaluation of the perception of trust in the evaluator and, in turn, his perception of the improvement in performance. Based on this finding, it can be assumed that when the goals of PDP are not clear and could be used both for developmental purposes and for reward purposes, the feelings of psychological safety of the assessment are under pressure.

1.5.5. Learning principles

A PDP fits well with the hypotheses of adult learning theory (Knowles, 1975). Firstly, the valuation tool assumes that an employee is

curious and self-motivated to develop (Joyce, 2005). Therefore, it stimulates the employee to take responsibility for his / her own learning (Lyons & Evans, 1997). In other words, a PDP supports a self-oriented way of learning; employees have to regulate their own learning processes. Teaching learning is "a process in which individuals take the initiative in evaluating learning outcomes, diagnosing learning needs, formulating learning objectives and selecting appropriate learning tasks" (Kicken, Brand-Gruwel, van Merriënboer & Slot, 2008). Secondly, it allows the employee to use his previous experiences as rich learning resources. Based on experience, the employee has already accumulated a lot of knowledge that he often does not know. By reflecting on these experiences, the employee's knowledge can be brought to the surface and developed. Alsop (2002) describes the reflections as "images of our experiences, reviewed for learning" (p.203). Kolb (1984) also stated that learning takes place through "concrete experiences" (eg a job) and reflecting what has been experienced, which can be stimulated during a meeting with the supervisor. Third, PDP allows the employee to develop their ability to learn from life's problems.

The use of a PDP must be accepted. An employee has to be supported in an uncontrolled way, allowing his or her own development and having behavioral learning options (London & Smither, 1999). In turn, it leads to an intrinsically enhanced motivation, because the employee has a sense of self-competence and feels in control of his or her own behavior. The search for feedback and participation in learning activities should be encouraged and rewarded (London, Larsen, & Thisted, 1999; London & Smither, 1999). Support can be provided by a coach, mentor or supervisor. Within organizations, the evaluation process in which a PDP is used is supported to the greatest extent by the supervisor. This is consistent with the research that found that using a candidate's file, training and feedback were the most appreciated when given by a superior (Smith & Tillema, 2003). In addition, it was found that employees are more likely to engage in development

activities such as training when they have supervisors who support their efforts (London et al., 1999).

A manager should be available to have sufficient contact with the employee and to provide feedback (Wasylyshyn, 2003). The lack of interaction with the supervisor is mainly due to time limitations, incompatible work schedules and physical distance (Noe, 1988). In addition, it is noted that when the supervisor provides his employees with a clear objective, a formal framework (including meetings), specific guidelines and standards; the effects of evaluating the personal development plan will be more visible (eg, Guaglianone, 1995; Noe, 1996; Roberts, 2003).

Support can also be given to colleagues. Typically, they have a better view of performance and development of service colleagues than their supervisors (Beck et al., 2005). In addition, employees capitalize on the exchange of ideas, interviewing different views and exchanging feedback with their colleagues (Tigelaar et al., 2006). Ultimately, a supportive environment contributes to the success or failure of using a PDP. The more organizational the environment is, the more employees are directed to receive guidance in their professional development (Johnston & Thomas, 2005; Joo, 2005; London et al., 1999). A supportive environment includes the provision of time and resources. Time is required to compose a PDP and discuss with the supervisor during the evaluation interviews. The resources provided could be printed materials and web links to help build a PDP and provide instruction in the use of the tool (Austin, Marini, & Desroches, 2005, Bradshaw & Hawk, 1996, Daniel & Stallion, 1995).

1.5.3. Teaching your personal development plan

An argument often used to challenge PDP's place in higher education is that personal development is not something that can be learned as a subject. Conventional higher education settings offer many contexts where

generic communication skills, teamwork, problem solving, project management can be practiced and refined and can be structurally built into (or near) the curriculum.

These experiences will develop the skills, trust and important aspects of our holistic concept of personal development.

Unlike self-evaluation that is based on subjectivism, it is necessary to compare the opinions of others about us in a systematic way. Also, developing self-concepts involves almost inevitable feelings. A "life coach" helps an individual to think through personal goals and motivations to plan future actions. The concept of a mentor or "critical friend" has a broad meaning, referring to someone who will help to "debate" an experience, in terms of performance standards, actions taken and their consequences. Personal development planning and employability are also popular tools in the form of standardized tests that together answer questions about past or hypothetical experiences to provide a predictive profile. Self-reporting and self-evaluation are thus balanced from multiple perspectives based on experience from other participants.

This leaves us the key issues of motivation and values. It may be less easy to approach in the conventional educational context. In a highly structured, modularized, credit-based and learning-based system, there may be limited incentives for learners to look for real challenges and move out of their comfort zone to tackle new issues and develop new skills for their own need, especially given the knowledge that they will be evaluated solely on the basis of the declared learning outcomes. The culture of university departments can not provide a fertile basis for value conflicts and the presentation of significant moral and ethical issues for which there is no obvious institutional solution. Therefore, we need to go back to different, more naturalistic contexts and use PDP approaches in environments that offer rich opportunities for what we might call "direct learning in employment." Increasingly, students in higher education have the

opportunity to learn at work: by participating in internship programs. Here, by definition, learning experiences are not carefully selected and evaluated: on the contrary, the learning environment is rich but unstructured, sometimes chaotic. It depends on whether the student observes both the environment and his own reactions, recognizing them as meaningful in a way, analyzing them and comparing them with the ideas and beliefs previously formulated. The quality, depth and rhythm of learning are therefore highly dependent on students' motivation and values, not just their previous skills and knowledge. Supervisors and mentors of the workplace are best placed to make students and students more aware of this and to encourage their curiosity, initiative and tenacity.

It has been demonstrated that evaluation practices have an impact on learning outcomes by influencing employee perceptions (Biggs, 2003), we consider that the questioning of employee perception is the best way to measure the effects of evaluation.

However, for those interested in researching employee behavior regarding PDP use, learning and performance, it is good to consider that a good recommendation comes from supervisors.

In conclusion, the tool itself does not make employees learn and develop; is how the evaluation practice is implemented and used to function, regardless of the instrument used. Research should focus on evaluation practices and support conditions in these practices. Evaluation tools, such as PDPs, should mainly be used as learning and development tools.

1.6. Work Socialization

To reduce the anxiety of the new employee, he should integrate into the organization. The initial integration method for new employees is socialization, guided adaptation to the company's climate, workplace and

workgroup. Socialization nowadays has changed and the benefits are clear. People are more connected than ever, social networking has developed, large companies are using these social processes.



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According to a new survey conducted by the Society for Human Resource Management, 83% of companies report the use of a formal guidance program for new employees. The most commonly used formats are group sessions and individual sessions, while only 11% of companies run the scheduling program using a computer-based format.

Often an orientation program involves communicating factual information about salaries and benefits, reviewing company policies and

rules, and completing documents. It may also include the presentation of a new employee's manual and a quick tour of the office. Although these procedures are important in providing basic organizational information, an effective program should actively involve new employees and encourage them to ask questions. Other people also play a role in the integration process. Managers and colleagues can help integrate new employees into the workplace. In addition, the nature and quality of new employee relationships with their managers have a significant effect on socialization.

When planning the details of a guidance program, within the human resources department you should set the objectives of the program. For example, Corning Inc., a successful company, illustrates that setting and focusing on the objectives in advance can help develop a successful program.

The HR specialist and human resources department has overall responsibility for program planning and monitoring, and must work with the supervisor immediately to avoid duplication or omission of important information. Usually, particular attention is paid to the content of the targeting program. After completing the guidance program, HR representatives may review a checklist with employees to ensure that all items have been covered. Because new employees are not the only people involved in the program, it is essential to get feedback from everyone involved in the process. This can be done through discussions with new employees after their first year of activity or by questioning to all relevant individuals (eg managers, colleagues). Having a formal and systematic tracking process will not only help evaluate the effectiveness of the program but can also identify areas for further improvement.

1.6.1. Sharing knowledge

When a small business sends more communications during the day, it is easy for the reader to overlook a note or important detail. During

socialization, employees often share updates about projects that might be lost. Social activity also gives workers exposure to different perspectives on changes in policies or projects. These exchanges also allow small business owners and leaders to guide and train their employees. Offering clues in a more informal context, such as during a break, can easily get information. Knowledge sharing, such as the company's success and failures, provides insight into others.



1.6.2. Socializing new employees

New employees entering a crowded work environment can feel confusion and intimidation. Integration of the new employee is a proven method that allows him to adapt to the environment, work team and duties. Introducing the company's new employee is how businesses use socialization at work. For example, the manager can lead the introductions by saying: "This is Mircea, our new accountant, he will work with Mihaela." Employees welcome Mircea, encourage him, and point out his tasks.



1.6.3. Encourage teamwork

Workplace socialization benefits teamwork. Allowing these teams to use the "high five" salute, gathering their hands or spending a little time in the group can reinforce team spirit. This type of socialization is contagious. This brief but strong socialization can be positive and powerful.

1.6.4. Creating alliances

Socialization builds new powerful alliances within the company. A strong alliance between a member of the accounting department and a member of the production department could result in a strong team finding a way to reduce production costs. Apply the same socialization principle to both employees, one for customer service and one for production.

1.6.5. Stages of the socialization process

Socialization as a process can be divided into three steps as follows.

a. Stage before arrival

This stage explicitly recognizes that each person arrives with a set of values, attitudes and expectations from the organization, for example in many jobs, especially highly skilled jobs such as manager, the new members will be exposed to a considerable degree of socialization. Socialization before arrival, however, exceeds the specific job. The selection process is used in most companies to inform employees about organizations as a whole. In addition, of course, the interviews in the selection process also act to ensure the inclusion of the "right type" that determines who will fit. Indeed, the ability of individuals to present their profile during the selection process determines their ability to integrate into the organization first. Thus, success depends on the degree to which aspiring members have correctly anticipated the expectations and desires of the organization in charge of the selection.

b. Meeting stage

Upon entering the organization, the new members enter the meeting stage. Here, individuals face a possible dichotomy between their expectations of their place of work, their colleagues, their supervisors, the organization in general. If expectations have been more or less accurate, the meeting only provides a reassertion of previously generated perceptions. However, socialization can not solve all the differences of expectations. Finally, some new members may become totally disillusioned with the realities of work places and resign. Appropriate selection is desirable to significantly reduce this situation.

c. Stage of metamorphosis

Finally, the new member must identify all issues discovered during the meeting step. This can mean passing through change. Therefore, the last step is called the metamorphosis stage. Metamorphosis is complete, as is the socialization process - when new members have adapted to the

organization and their work teams. In this situation, the rules of the organization will be internalized, colleagues and members will understand and accept these norms. New members will feel accepted and appreciated by their peers. They will acquire an understanding of the organizational system and not only of their own tasks, but also of unofficially accepted rules, procedures and practices. Finally, they will know how they will be evaluated. They will know what is expected from them and what a good job is. Consequently, successful metamorphosis should have a positive effect on the productivity of the new employee and his engagement with the organization and should reduce the likelihood that the employee will leave the organization at any time.

1.6.6. A process of alignment

Organizational socialization is a dynamic process of acquiring organizational knowledge and organizational skills; this is a process by which people learn the rules and roles needed to function within a group or organization. In fact, socialization within the organization is a constant learning process, a continuous process in which knowledge is created by transforming experience. It is a process by which an individual acquires the necessary knowledge and skills to assume a role in the organization and takes place through the stages of entry, confrontation and transformation (Van Maanen and Schein, 1979). Successful organizational socialization enables employees to be easier and better integrated into the organization and to adapt in professional and social terms. This success will have a positive effect on occupational motivation, job satisfaction, work efficiency, reducing uncertainty about most business performance, and therefore designing long-term individual commitment to the organization. Successful organizational socialization is primarily reflected in the alignment of personal and organizational interests. This alignment depends primarily on the harmony existing between the individual and his job, that is, the harmony between the individual's knowledge, skills and abilities, on

the one hand, and the requirements of service, as well as the harmony between the individual and his organization.

1.6.7. The negative effects of socialization in the organization

a. Communication for introverted people

Organization of socialization requires new engagements to communicate with the management and new collaborators. Introverted people can not feel comfortable joining the group during this process, because it can be overwhelming. This is problematic because the questions asked can help new employees learn about the company, their work tasks, policies and procedures, and answers to questions can help their colleagues know them personally and professionally. During the socialization process, employees can gain strength to communicate openly. Consequently, employees and leadership can formulate employee opinions before they can demonstrate their knowledge, skills and abilities. Old employees can see new employees as incompetent, unfriendly and less likely to succeed in the company. New employees can be ignored by old and senior employees, which may cause them to receive less important tasks.

If new employees are introverted and inappropriately treated by colleagues and managers, this can have a lasting negative impact on their experiences in the company.

b. Technology

While new introverted employees may feel overwhelmed by the organization's socialization process, there is a way you can help them reduce their anxiety. By integrating technology into the socializing processes of the organization, introverted people can become familiar with the company. Make a self-guided orientation program, which can include web classes, forums, an internal blog, and chat and email communication.

1.6.8. Outcomes and gains from socializing at work

Employees should learn to depend on each other for mutual support. Encourage employees to collaborate and capitalize on individual talents to achieve team goals; and, when necessary, request guidance or support from other members of the team and management. This teaches employees to ask for help, rather than solve a problem on their own. Employees must feel connected to a general purpose or goal of the company. One way to help employees integrate is to set clear company-level goals and give employees an option to work independently or in groups to socialize.

1.6.9. Outcomes and gains from socializing at work

Most current socialization research focuses on organizational assimilation. Quantitative, empirical research methods in a variety of disciplines dominate the literature of organizational socialization and socialization in general. Questionnaires and polls are used to find answers to questions such as: How do five different sources of forward-looking socialization differ? (Levine & Hoffner, 2006). Longitudinal studies are also increasing, as is the case with the recognition that socialization takes place throughout life (Gibson & Papa, 2000). Qualitative methods are also used to understand the organizational socialization process. In-depth interviews (eg, Zorn & Gregory, 2005), focus groups (eg Myers, et al., 2011), interpretive analysis (eg Clair, 1996) and ethnographic methods determine the increase in socialization research. Qualitative studies attempt to unpack responses to such questions as: What communication experiences help to manage uncertainty (Kramer, 2011) and how do newcomers become insiders? (Gaitens, 2000).

Most of the research focuses on the fact that people entering full-time positions in a particular vocation or organization do not have an analysis of wider work experiences before full-time professional or organizational

adherence (Gaitens , 2000, Levine & Hoffner, 2006, Zorn & Gregory, 2005)..

a. The criticisms of organizational socialization research

The dominant approaches to studying organizational socialization have been criticized by a number of researchers. In this section, we underline and explain the primary criticisms of the socialization literature as (a) the presentation of socialization as a linear process, (b) the view of socialization as a single transmission of organizations to individuals, and finally (c) socialization as assimilation in a organization.

- **Socialization as a linear process**

The first critique of organizational socialization research is that the process of organizational socialization is linear (Clair, 1996; Kramer, 2011).

Clair argues on the classification of work, labor, and jobs that are fulfilled before organizational assimilation as anticipatory and suggests that "any work prior to organizational activity is found in nature" (p.251) preparing individuals for a "real" activity. In addition, Clair explains that scenic models imply that "he can not enter into a real job until he has taken part in imaginary services, which devaluates the workings of many people" (p. 265). According to Waldeck and Myers (2008). The approach to socialization development includes a "systematic and linear model for understanding complex personal and relational issues" around organizational assimilation (p. 336).

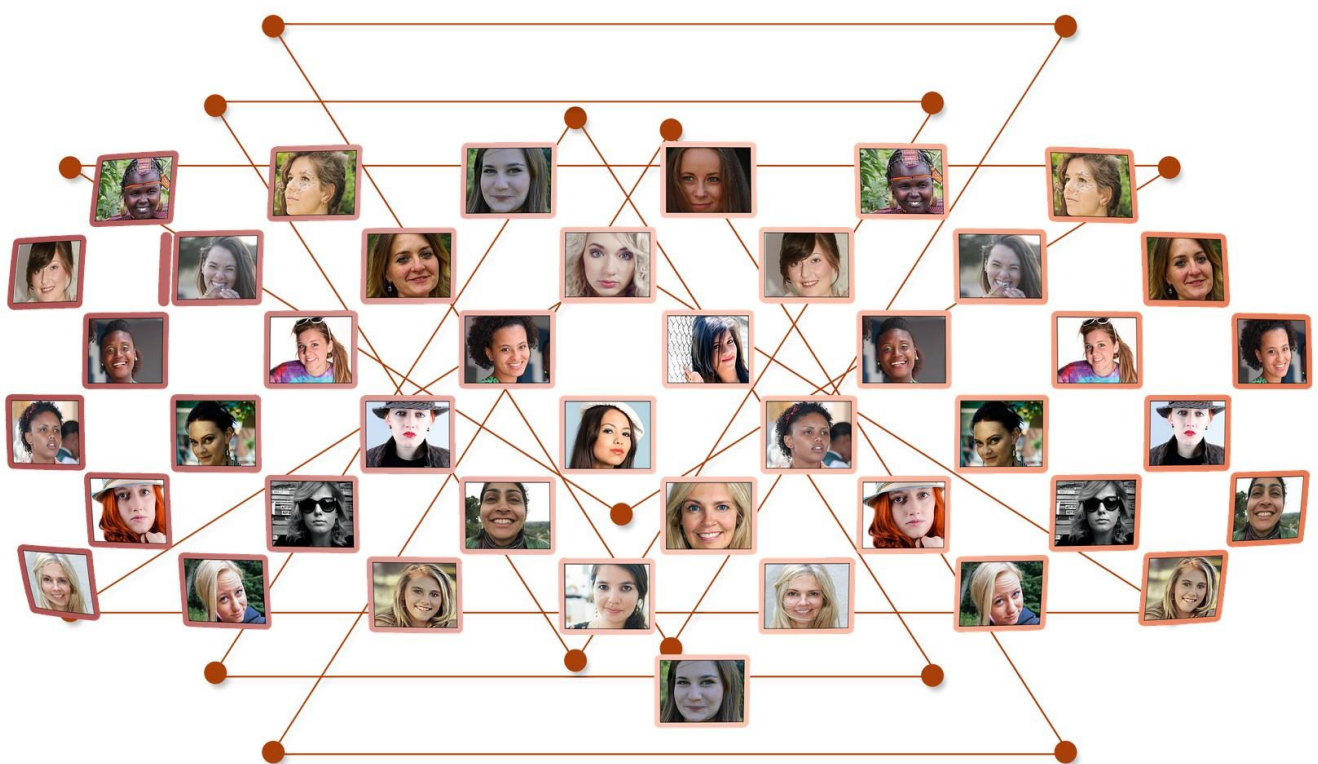
Socialization is seen as having an anticipated (anticipative), a time (encounter), and possibly a final goal to be achieved (metamorphosis), which can be clearly distinguished.

However, linear models limit the ways in which we can conceptualize the socialization process. Individuals are constantly entering and going into different organizations, vocations and / or functions within an organization. Focusing on socialization as a linear process is problematic and does not

recognize that the socialization process takes place throughout the active life.

- **Socialization as a unique transmission of culture**

A second critique of socialization research is that it sees socialization as a unique organizational process through which the culture of an organization is transmitted to individuals (Kramer & Miller, 1999; Smith & Turner, 1995; Turner, 1999).



Organizations are seen as having a set of prescribed rules and values that newcomers sign up for when entering an organization (Jablin, 2001). This idea that newcomers "join" in organizational culture, adapts to it and joins the assumption that individuals have little influence in the socialization process. As individuals are socialized in an organization, they learn the appropriate behaviors and values as prescribed by the organizational discourse (Barge & Schlueter, 2004). When a newcomer

enters an organization, it is assumed that the newcomer becomes socialized or assimilated into the already-prescribed organizational culture. The inclusion of socialization in assimilation emphasizes the organization and its efforts to influence individuals to meet their needs as well as individuals' efforts to change organizations to meet their needs.

In an effort to change this emphasis, Katz and Kahn (1966) introduced the terms of assuming the role to describe the process by which people become functional organizational members. According to Katz and Kahn, role-taking refers to socializing and the role-play refers to individualisation. Individualisation is the process by which new employees attempt to "individualise" their role in an organization (Jablin, 1987, Schein, 1968). Much of the literature treats the study of socialization with little attention to individualization, and instead assumes that the process is one that is linear and unique in nature (Smith & Turner, 1995). The concept of individualisation recognizes that individuals are active members of the socialization process and therefore are not simply indoctrinated in organizational culture as is often involved in socialization research (Katz & Kahn, 1966; Schein, 1968).

- **Socializing as assimilation in an organization**

The third critique of socialization research in organizations is that it puts too much emphasis on assimilation in a certain organizational or vocational context. Bullis (1993) considers this a narrower form of socialization "as a process through which newcomers become organizational members" (p. 10) and suggests that it is productive to conceive it even more widely as "a central process by which the individual and relationships are mediated." Organizational research into socialization often focuses on a narrow perspective of socializing and assimilating newcomers to specific organizations rather than on a broader process of developing the guidelines for work itself (Bullis, 1993, Clair, 1996, Waldeck & Myers, 2008). Much of the current literature focuses specifically on socializing in organizations

and does not have a deeper focus on the role of socialization in more general work (Clair, 1996). Focusing on the context (organization), rather than the socialization process, previous writings provide a means to understand socialization only when integrating new employees into organizations (Waldeck & Myers, 2008).

1.6.10. Conclusion

An important aspect of new income adjustment at different levels is to gain confidence and personal control over the situation. To achieve this, effective employment or orientation programs allow new employees to learn culture and organizational behavior. These programs also help to facilitate the wider socialization process, involving not only newcomers and human resource practitioners, but also support from close supervisors and collaborators, as it has been proven that the social network can provide information help integrate new income into the organization.

CHAPTER 2

Scientific selection of personnel

2.1. Scientific selection of personnel

I will start this manual with an unconventional statement. The scientific selection of staff is not just a matter of validation and statistical indicators. You can do a Scientific Selection of Personnel if you connect to the statistical parameters and variables of your organization's needs for which this procedure was requested.

A psychometric test with all indicators of satisfactory validity and reliability is used in most staff selection processes. But this can lead the expert to make one or more of the following errors:

- The test is valid only by using a sample in a context of non-selection. All subjects are influenced by the context in which the test is performed (Vitale, 2010). For example, better people's performance on intelligence tests occurs if they do so in a selection context. The presence of a desired goal increases motivation and then performance. This means that the environment and the standard deviation in the standardization process are different if we compare a clinical context with a staff selection context. Using the general environment (with no context specification) during a staff selection process can be misleading. The selection framework also affects a second variable called "test anxiety". Anxious people will tend to modify results during a staff selection. Competitive people tend to work better.

- The test is valid in a selection context, but no needs analysis has been made. What are the specific needs of the organization requesting the selection? Which specific key performance indicators want to grow? What is the socialization process that will begin immediately after the selection? Finding that a test is valid does not mean that the test is valid in any context. Unless a proper needs analysis is performed, a thorough assessment, a very precise test application, but without achieving the

company's goals will be done.

- The interview is structured, but the scoring procedure is not. 100% of companies do individual interviews for staff selection. Often interviews are not structured, and even when interviews are structured, the scoring procedure is unclear. Using a structured interview without a goal and without a scoring procedure means having the validity of an unstructured interview. Also, in cases where human, economic and time resources are limited, a clear procedure is being prepared for key questions.

2.1.1. The starting point of the selection procedure

When using the psychometric validation tests, you will discover the results and validity at the end of the process, perhaps a few years later. Moreover, selection does not just mean finding the right person in the right place, but it is also about personal development. At the end of the process, you'll actually find that the written report should be very useful for both the company and the person, even in the case of a test that does not have the desired result for selection. The report given to the firm and person should indicate strengths and weaknesses, but always in a constructive way, indicating:

- a. If the test passed, suggestions for training and mentoring for that person.
- b. If the test has not passed, a suggestion as to how it would do better next time.

The report should be not only a set of features, profile, but also a time to give usable feedback to the person and company. The consultant or employee of the company making a selection of staff must be responsible for how a result is communicated. Communicating the result should always be more than "passed" or "dropped" communication.

Therefore, scientific selection is more than just a set of tests and interviews, it is more than scientific validation and also refers to some

aspects that are often underestimated, namely: Needs analysis, Selection context relevance, Comparison of results from testing to the results of the organization, making a correct report and communicating the results correctly, monitoring the results, implementing after selection of the training, guidance and socialization processes.

The first step is therefore to make a proper analysis of needs.

2.2. Organization needs analysis

For a proper staff assessment, it is first necessary to evaluate the organization. You will not be able to find the right person in the right place if you do not know all the details about that place. And when I refer to the company's knowledge, I refer to collecting as much information as possible about the job to be selected, so that the selection process is more specific. This is extremely important if you are an external consultant for that company, but surely you will not have to underestimate this procedure also if you are an internal employee and you should know the main challenges of this organization.



2.3. Basic set of tools for a correct needs analysis

Needs analysis is a process that involves collecting data about the objective of the selection procedure. If the goal is not clear, some coaching strategies can always be applied to help the contractor define his goal. This will help you gain more credibility as a consultant to make the selection process the best possible. In fact, if you define an inaccurate goal, it will be more difficult for you to demonstrate that you have achieved your goal. In conclusion, needs analysis helps the company define its best goals, but it helps meeting the evaluation and selection goals.

However, not everything depends on the selection process. You can select a very good profile, but be included in a negative context of the organizational climate. You can select a very good profile, but that person can live many events after selection that will influence him and his life changes significantly. You can select a very good profile, but inconsistent with that specific organizational culture. You can select a very good profile, but the socialization process is very weak and this leads to inefficient group dynamics. These aspects - external to the selection process - must be known before selection. It is important to know these things before starting the recruitment process to save time and to have a correct selection. If the needs are properly analyzed, the probability of error is reduced. These issues may increase or decrease the potential outcomes and performance of selected candidates. Sure, you are not supposed to be responsible for socializing, coaching, mentoring, working group dynamics. If the company asks you to make the selection process, you are supposed to do that part in particular. The Rapporteur draws up a list of suggestions for the socialization process.

You can prepare some suggestions for training procedures and guidelines that have a dual role:

- a. If you are an external consultant, you will indirectly say that you will take care of this company. Give more than expected.

- b. Say that the selection is only part of the process that will include a new person inside the company, which means you say something right. By saying that some socialization, mentoring and coaching processes are necessary, you also point out that not everything depends on the selection process, this being just a first step.

2.3.1. The main tools of needs analysis and best practices to make a fair assessment are:

a. The individual interview. This procedure is used in the recruitment of CEOs, managers and supervisors, however the possibility of doing this interview to other employees is not excluded. A semi-structured individual interview is the most used tool for need analysis. This can be an in-depth interview, but I recall that only one point of view is collected.

b. Group interviews. Choosing a group of employees in the target department is a useful strategy to understand the strengths and weaknesses of the department. The strategy is perhaps less confidential compared to the individual interview, but during group interviews you can also notice group dynamics.

c. Analysis of organizational culture. This is defined by Schein (1999) as a set of hypotheses that a person does about the group they are participating in. These hypotheses are grouped into three levels:

- *artifacts* (physical, visible elements);
- *beliefs and values* (strategies, goals, declared philosophies);
- *basic beliefs* (assumed, unconscious beliefs) are usually the most difficult to change.

Usually the unstructured interview with CEO or a department manager is the most used tool. However, it is not the best choice. Often, consultants use this tool for quick application or to avoid too much effort from the CEO or manager, who is the person who decides whether to make the selection or not. In any case, it is important to communicate the importance of a proper needs analysis. The minimum level for a correct needs analysis is a

structured or semi-structured interview. In the case of a structured interview, you decide exactly the wording, the number and the order of questions. In the case of a semi-structured interview, you can also add some adapted questions.

Below are some errors that need to be avoided during the needs analysis procedure and how to turn them into positive and easier to use statements:

a. I want a smart guy. I have heard these words often during the needs analysis. The truth is that in most cases CEOs and managers do not use a psychological language but only a common language. Does this mean exactly the person's description? What exactly is expected from the required selection? The trap is accepting a selection based on an insufficient description of personality and proficiency profile of what is being sought. So what does "smart guy" mean? Who wants a person who is not smart? The best way to find out is to ask questions: More specifically what does "intelligent guy" mean to you? If it seems to you as a too direct question, you can start like this: I would like our description to be very specific, as this will help us define the candidate's profile in the most accurate way. Another question that you can use is: what is the difference between a smart guy and a less intelligent guy? You can reformulate the question as you wish, relying on the blurring of the personality trait used in the interview (eg in your opinion, what are the specific differences between an extraverted person and an introverted person?). You will notice that the definition of people is often different. The key is not to find the best definition, but to understand exactly what kind of person is wanted to be recruited.

b. "I want an athlete". Sometimes during the needs analysis you can discover strange beliefs of the beneficiary. For example, "I want a person who does sports because athletes have a dynamic personality." Scientific research has shown that there is no correlation between hobby and performance. In addition, the hobby section is commonly used in CVs to

create a better impression. So why focus on a variable that has no predictive validity and sometimes declared incorrectly by candidates? Do not be afraid to highlight this aspect of the beneficiary as an external consultant or employee of the Human Resources department. It helps in defining what is possible and what is not possible to do, but it also shows your professionalism.

c. "We make a selection to replace X, find me a person who is different from X". Fortunately, we are all different and if you accept this contract, psychologically it will be a very easy task for you. However, it is not possible to define a serious goal by deciding what you do not want. The risk is finding a different person but not actually being the best option for the job to be occupied.

2.3.2. Suggestions for a proper needs analysis

- a. Make a list with the beneficiary with all the required skills.
- b. Make a list with the recipient with all the personality traits you want.
- c. If possible, order skills and personality traits, from the most important to the least important
- d. If the beneficiary is unclear, ask the following question: "What specific behaviors or personality trait should a person have to be hired?"
- e. If the beneficiary talks about unwanted features / skills, but you can understand that they are related to performance, ask: "Please, can you give me a concrete example where this feature was a problem?" If the person speaks about the desired features / skills and you can not understand the motivation of this statement, ask: "Please, can you give me a concrete example in which this feature was a resource?"
- f. While studying the needs of the beneficiary, you must indirectly observe his / her leadership style. Because you can often see information about it indirectly.
- g. There needs to be a list of key performance indicators for the job and how they are measured. If there is no such list, suggest a way to enter it.

- h. When you receive a list of personality / competency requirements, to fully clarify, ask the following question: "How do you link these features / competencies to the desired performance or expected personality?"
- i. Collect information about that job.
- j. Request information about the previous selection process. Find any traps and bottlenecks that may have created problems in the previous selection process.
- k. If possible, record this audio or video.
- l. Perform your needs analysis in a quiet, non-interrupted environment.
- m. The time of this interview does not exceed one hour (40 minutes is an optimal time interval).
- n. Inform yourself about the perceived personality traits and skills required by candidates? Are these descriptions helpful / informative for selecting people? Sometimes these features are used and declared by the candidate during the interview only in order to appear compatible with the intended position.
- o. Write and present to the beneficiary a summary of the company's needs and job profile.

2.4. Suggestions for Interview Analysis

When holding an interview for job analysis it is very important to talk to a manager. Here is a brief schematic of the important questions that need to be applied when analyzing the position for which the selection is made:

- a. Define the specific tasks that the employee (tasks) must fulfill.
- b. Ask for a description of an ordinary day. Start with the first task you have to accomplish when entering the company.
- c. After the first task , ask what to do next?
- d. If you want to get more details, focus on inputs (phone calls, activities) and behaviors the employee has to display (outputs) to answer entries (take over the call, complete the form, etc.)
- e. Here are some examples of questions:

- What specific tasks are currently being performed for input activities?
- How often are these tasks?
- What specific activities / activities are being carried out?
- Are there time requirements to solve tasks?

f. Also note the non-verbal behavior of the interviewee. Ilarity and irony on some subjects may indicate that there might be a problem there. Laughter is a form of sublimation of aggression. Try to learn about this topic.

2.5. Organizational culture information

If you want to get information on organizational culture and the working climate, you can do it in a number of ways. A first option is to use psychometric tests or questionnaires. However, some authors such as Schein (1999), one of the most important researchers in the field, believe that organizational culture can not be measured directly with individual interviews or tests, but it can be done with group exercises.

Here are some suggestions for collecting information about organizational culture.

a. Kilmann-Saxton is of the opinion that all measures of cultural norms give you an indication of cultural differences: the distance between norms and the perception of employees. The four variables studied are social relations, personal freedom, support burden, innovation task. This is a very good tool for analyzing organizational culture. However, I suggest that you use this tool during a needs analysis with a view to selecting staff, especially when organizational culture is supposed to make some changes. Organizational mergers and intergenerational change are just a few examples of situations. In Romania, as in Italy and Cyprus, many companies are small or medium-sized and rely on family culture. Changing leadership between parents and children is not always easy. In this case, it is very important to study the organizational culture and the gap between norms and actions. Schein also

said that in such companies the organizational culture overlaps with the personality of the founder of the company. So if you make an internal selection for a leadership change in a context that is very important to take cultural aspects into account.

b. Organizational Culture Inventory is a test designed by Cooke and Lafferty (Cooke, Rousseau, 1988; Cooke and Lafferty, 1989; Cooke, Szumal, 1993; Van der Velde, and Class, 1995). This tool is useful in the case of organizational change and measures the ability of employees to understand the organizational culture of the company. It measures the difference between culture and understanding of the culture of employees. The presence of large differences is proof of the need for change.

Measurement of organizational culture can be done in two dimensions:

- Targeting the task vs targeting people
- Orientation towards development vs safety orientation

This measurement allows the classification of organizational culture into one of these three groups: **constructive culture, aggressive-defensive culture, passive-defensive culture.**

2.5.1. The Multidimensional Analysis of Organizational Cultures

The Multidimensional Analysis of Organizational Cultures (MAOC) by Avallone and Farnese (2005) is composed of 25 dimensions grouped by ACP - Promax Factor Analysis in 7 factors.

a. *Integrity, tolerance, collective synergy*: collectivism. individualism; differences vs. egocentrism, cooperation vs. competition, argument vs. argument execution, motivation vs. control, proactive driving vs. reactive leadership, negotiation vs. dominance, tolerance vs. intolerance;

b. *Energy, approval, justice*: approval vs. disapproval, activity vs. passivity, transparency vs. non-transparency, rapidity vs. slowness;

c. *Personal efficiency, power, responsibility*: responsibility vs. responsibility privacy, privacy vs. gossip, orientation to resolve vs.

lamentation;

d. *Innovation and the desire for new knowledge*: high technology innovation vs. low technology innovation, global vs. local, exploration vs. stagnation, risk taking vs. risk mismatch;

e. *Inventiveness, autonomy, commitment*: autonomy vs. membership; decentralization vs. centralization, eustress vs. distress;

f. *Finance and profit*: one size with the same name;

g. *Environmental Respect*: Ecology vs. Environment environmental exploitation.

2.5.2. Schein Method for Organizational Culture

Schein states that some people in a group are unaware of their organizational culture, but that does not mean that it is not accessible. Here Schein's steps (1999):

a. Define the company's problems. All it takes is a room and a blackboard. Start the conversation with the troubleshooting group in your company. How to improve things.

b. Revision of the concept of culture. Once you have the strategic goal, it is important to explain the concept of culture in terms of artifacts, values and beliefs.

c. Identify artifacts - the most visible level of organizational culture in Schein's view. These are observable characteristics, so that all of these aspects listed below are possible artifacts: dress code, language (written or oral), level of formalities in relations with authority, hours of program, meetings, decision making, communication, social events, identity, symbols, rituals, balance between personal and professional life, physical elements of decoration, myths and stories, behavior of organizational members, organizational practices and routines. If you need help in identifying artifacts, it's a good idea to present a list of possible artifacts.

d. Identify organizational values. Start by defining the declared values.

Sometimes these values are stated in the mission statement and vision of the organization.

e. Compare the values and artifacts. The main question should show us how these values connect with the artifacts? Is there a congruence or difference between declared values and artifacts? How can this help us in finding true values and beliefs?

f. Repeat this procedure with other interest groups as well.

g. Identify common beliefs and basic hypothesis. At this stage, try to show them the need to use a culture.

2.5.3. Drafting a needs analysis report

You have come to the point where you put all the information together and draw up the final report that is useful to you for the next step. Define the tools used during the staff selection process. As you read above, there are several ways to create a template document for your needs analysis. Here are some suggestions on how to use these paths to create a custom template.

a. Defining the profile of the desired candidate

- Description of the interview (location, key person (s) - you can use a single document if it is a group interview, multiple documents if you have more than one interview)
- Skills list
- The list of personality traits
- List of hypotheses for the interviewee. Try to use simple language phrases in this section like: "The key person thinks"
- KPI list (key performance indicators)
- Key list of convictions about the connections between profile characteristics and performance
- A list of evidence about these connections
- Analysis of the previous job opportunity notice (if any)

- Define a new ad about job opportunities

b. Tasks and job analysis

- Description of the interview (location, key person (s) - you can use a single document if it is a group interview, multiple documents if you have more than one individual interview).
- List of tasks (with frequency, priority)
- List of entries and exits
- Skills list (you can compare them to those in the manager / CEO conception)
- List of personality traits (you can compare them to those in the manager / CEO conception)

c. Organizational Culture

- The possible results of standardized questionnaires
- Artifacts
- Values
- Hypotheses

Once you have this information, you are ready to move on to the next step, that is, preparing a set of tests. In the next paragraph and in the next chapter we will present a series of tools for staff selection. With an overview of the tools you will be able to select the most suitable for your situation. In this chapter you will find a fundamental part about the scientific selection of staff, concrete ways to select and how to verify the fulfillment of scientific criteria.

2.6. Psychometric tests

When selecting evaluation procedures, it is very important to choose the appropriate tests. As discussed above, it is not just a question of validity, it is very important that the test be for the purpose of selection and

- preferentially - in the context of a selection similar to yours. If the test is not valid in context, my suggestion is to collect information about the selection context.

The first rule is to study the manual of psychometric tests. Sometimes, experts select procedures taking into account only general investigation situations through tests and / or the presence of scientific validation. The most important thing is the analysis of specific indicators. I give you an example. Let's assume you're going to look for a defense test. This does not mean nothing unless we read the specific indicators. We should ask ourselves the following question:

- a. What specific definition of defense mechanisms is included?
- b. What are the specific indicators included in the test?
- c. Which validity and reliability indicators are satisfactory?
- d. How do these indicators relate to the desired results?
- e. What are the specific research showing that indicators are connecting to the desired results?

The first question tells us some real information about the purposes of the test. We can talk about defense mechanisms from multiple perspectives. If we select only a specific definition of defense mechanisms, you have only done some work. In fact, if we extract the test construct from a highly structured book (eg DSM-5, Diagnostic Manual), there is no discussion about the selection indicator. We will select criteria already present and well described. But, if you select other constructs that do not have a specified list of indicators, then other aspects will be considered. Let's say we select a test to measure the defense mechanism after Freud's definition. Freud describes what defense mechanisms are, but different readers can interpret the text differently. For this reason, it is important to answer a second question: what are the specific indicators included in the test? Then you need to check the validity and reliability issues, and then find connections between the test and the desired result. If certain validity and reliability indicators are not satisfactory or can not be measured, it is very

important to look for other external validity indicators. But if there is no other reasonable choice at that time, a bibliographic search should be made to find other evidence of validity. The more evidence you have, the better the scientific selection is. After first collecting information, a useful procedure is to start collecting information about your specific context to start custom validation. Meanwhile, the validity and reliability indicators presented in the manual and the evidence from the research - if any - are sufficient.

How to properly select test batteries or psychometric tests

As mentioned earlier, the manual is the main source for choosing specific tests. And the manual should always be thoroughly studied to select the best test batteries to apply in a specific situation. Below is a list of psychometric tests.

2.7. Personality tests

a. Questionnaires

Big Five Personality Model. This model of personality test assumes that there are five main factors in the human personality: Extraversion, Emotional Stability, Openness, Agility, Conscientiousness.

The NEO-PI3 test (McCrae, Costa ed., In Italy by Fossati, Ciancaleoni, 2014) is one of the most comprehensive tests because it studies six faces for each factor. A summary of the measured variablese:

- Emotional stability: anxiety, anger / hostility, depression, self-awareness, impulsivity, vulnerability.
- Extraversion: Heat, sociability, assertiveness, activity, feeling sensation, positive emotions
- Opening: fantasy, aesthetics, emotions, action, ideas, values
- Agility: Trust, lee, altruism, compliance, modesty, sensitivity
- Conscientiousness: competence, order, sense of duty, commitment, discipline, clear thinking.

The advantages of this test are simple (automated and online) and report reporting. The variant has a double standard: one for a normal context (N = 727) and for a competitive context such as staff selection (N = 460). It consists of 240 items and the normal test time is 40 minutes.

2.8. Intelligence Tests - Fluency Intelligence

Fluent Intelligence vs. crystalline intelligence

One of the most predictive factors in workplace performance is fluid intelligence. Unlike crystalline intelligence (Catell, 1963 quoted in M. Minulescu, Theory-and-practice-in-psychodiagnosis-test-intellect) that depends more on the environment, the level of education, fluid intelligence has a general character, with a high degree of dependence on the genetic factor and intervening in the process of adapting to new situations.

The Fluid Intelligence Test (Romanelli, Saggino, 2014) is a very short test (item = 48). This test is not only used in clinical settings but also in staff selection. The objectives of this test are:

- Fluid intelligence assessment during staff evaluation and selection
- It is important to select profiles on intelligence levels
- Integration session for professional reorientation counseling

It measures four variables:

- Induction: measures the ability to analyze different figures and to understand the common features present in the set of stimuli presented;
- Quantitative reasoning: measures the ability of attention and concentration; it is recommended to apply simple mathematical rules;
- Spatial Relations: Measures the ability to perceive spatial relationships and to deduce the arrangement of objects in space;
- Visualization: measuring the ability to understand the image of the movement of objects in three-dimensional space.

At the end of the test, it is also possible to calculate the overall score

of fluid intelligence.

2.8.1. Screening intelligence test

Sometimes, when selecting staff, especially when you have a large number of candidates, the most important thing is to exclude inappropriate profiles in a short period of time. The IST screening test is excellent for this purpose (Liepmann, Beauducel, Brocke, Nettelstroth, adapted in Italian by Ciancaleoni, Fossati, 2013). It lasts only 26 minutes and has a total of 60 items (20 for each type of verbal item, numeric, abstract). It has two forms that are typically initially administered to reduce falsification or to avoid copying the answers. The advantages of this test are related to the automatic score, its speed and the presence of good standardization in a large sample (N = 1361).

2.9. Measures to measure the Leadership indicator

There is no standard leader for any situation, but the effectiveness of the leader is measured in the specific situation. Leadership indicator test is an online test of 45 minutes. It consists of 16 situational scenarios in which the candidate has to make a decision.

2.10. Test for focussed concentration measurement

The d2-R test (Brickenkamp Schmidt-Atzert, Liepmann, the Italian edition of Ciancaleoni, Fossati, 2013) is a very useful standardized test for measuring concentrated attention. It takes only five minutes, and for this reason it is very easy to include it in a series of tests. All the stimuli are non-verbal, the subject has to identify a certain character in a similar A4 paper. It is a relatively simple task, however, its performance requires the integration of different cognitive processes: recognition of target stimuli and elimination. You may get more specific indicators: attention, processing speed, working style, precision. This test is suggested for the post that requires intense or long periods of concentrated attention (for

example, for accounting positions, traffic controller).

2.11. Tests for motivation. Achievement Motivation Inventory y

This test is designed to measure motivation style and is useful for selecting managers, middle managers and talents. This test was built by Schuler, Thornton, Frintum, Prochaska. It includes 3 general areas and 17 aspects of motivation and also provides an interesting feedback on the subject as to the needs profile. It is useful not only for selection purposes, but also for evaluation and development centers. The measured variables are::

- Trust in itself: confidence in success, dominance, courage, flexibility, independence, preference for difficult tasks
- Self-regulation: internalisation of successes and failures, persistence of objectives, control at the workplace
- Ambition: compensatory effort to avoid failure, competitiveness, willingness to learn, engagement, concentration, established goal, pride for own results, power orientation

It has two administration and scoring systems: paper and automated as well as automated reporting.

2.12. Test to measure negative aspects

Dark scale triad - psychopathy, narcissism, machiavelism

This concept has been described in books on personality, online behavior and cyber security (Parvulescu, Vitale, 2016).

The instrument we are proposing here includes:

- Extraversion
- Emotional stability
- Fluent intelligence
- Machiavellianism

- Narcissism
- Social domination
- Control place
- Working obsession
- Motivation for realization
- Mastering the style
- Coping strategies
- Lie
- Emotional intelligence

2.13. Q-Bo Test.

A proposal for the selection process. After the selection process not only is it important to measure KPI indicators (key performance indicators), but also to welfare indicators. The Q-Bo test (De Carlo, Falco, Capozza, 2008) was built to measure work-related stress in the welfare perspective. In Italy, Law 81/08 requires businesses to measure workplace stress for the health of workers. However, this procedure is very important for inclusion in monitoring activities (also if not prescribed by law), because it is important for the health care of workers and also because it also affects overall performance. The test has a duration of approximately 1 hour and includes 200 Likert Scale items.

2.14. Monitoring scales

An innovative application in the workplace is the one that measures the attachment style in organizational contexts (for example, the application of the tool in organizational settings read Vitale, 2012). Measurement of experiences in close relationships (ECR, Brennan et al., 1998) is done through a test consisting of 36 items aimed at measuring the avoidant and anxious attachment. The original form is used to measure this construct in adults for the couple relationship. It is possible to adapt this tool to organizational settings simply by changing the target item. For example, the

item "I prefer not to show my partner how I feel" will be changed to "I prefer not to show others how I feel." Examples of items measuring anxiety "I'm afraid I'm abandoned," "I'm worried about my relationship with others. "Examples of avoiding attachment style are:" I prefer not to show others how I feel "," I feel comfortable when I do not have a close relationship with others."

The scale proposed by Kruglanski et al. (2000) composed of 12 items. Examples: "nothing is more interesting than seeing my ideas become reality"; "If I believe in a project, nothing can stop its realization." Proactive personality scale (Bateman & Crant, 1993). Examples of elements are "I like to do things rather than be a spectator."

Perceived organizational support. Eisenberger's Scale, Cumming, Armeli & Lynch (1997). Examples of items are: "I can count on helping others in case of need", "my boss is interested in my opinions."

Ethical driving standard (ELS) is a test performed by Brown et al. (2005) based on 10 items. Examples of items are "my boss takes fair and balanced decisions," "my boss hears what employees have to say."

2.15. Validity and fidelity during selection procedures

The validity of a test refers to the extent to which the test measures what it intends to measure and how well it performs (Anastasi 1976) or to "the extent to which the test fulfills its function" (Lindeman, 1978).

Fidelity is the quality of a test to measure correctly and every time the same thing, systematically and repeatedly.

It is important to use validated tools. We have studied the fact that validity and fidelity are multidimensional concepts. Usually, those who build tests have the opportunity and duty to check the level of fidelity and validity. This process often takes between 1 and 3 years, based on the length and complexity of the test. During validity and fidelity checks, the author has the ability to compare the test with other indicators. I said that an important indicator is convergent validity. It is assumed that similar

concepts measured by different instruments should be positively correlated. It's fine, but it's only done during the first validation. Also, divergent validity is important, you should check whether your test correlates negatively with other tests that measure the opposite construction. All these procedures are useful before you start using a test in your company or in the recipient company, the one that requests the services. However, these procedures for validating the test give you an idea of how this specific test works in your company.

It is important to have general data on validity and fidelity. However, it is also right to collect specific data for your organization, organizational culture, organizational climate, specific positions, workgroups, management mode, and task specificity can affect how your company operates. This means that having validated tools is a first fundamental step, but you can achieve the best level of accuracy only if you collect specific data about your company. So let's start from general to specific.

2.16. How to select scientifically: from general to specific

Motivation affects people's behavior. Motivation filters reality and increases the likelihood that specific behaviors will occur and reduce the likelihood of other behaviors. In Personnel Selection Science, we know this. We have also said that the context affects people's behavior. If you present yourself in a formal or informal context, you will do it differently depending on your goals. For this reason, it is very important to get standardized results from the context of staff selection. It is a common experience in the field of psychological testing to discover that a similar person in a different context has different performances.

For example

- Anxious people make more errors in the intelligence test during staff selection
- The gender of the psychologist affects the quality of the responses in the projective tests

- Questions on group management can affect the quality of responses
- The presence of high grade class stimuli can affect the answers due to the different positioning of the candidates
- The specific characteristics of the psychologist who administers the test may affect the quality of the answers
- The physical feature of the test camera may affect the quality of the responses

The truth is that everything (room, objects, communications, duration of the test) should be standardized, but not everything is standardizable.

- You may have a specific physical context without the possibility of change
- You can not standardize any communication between candidates. Some evaluations, in fact, take one day. From one psychological testing session to another, candidates can change and use certain information.

Some simple physical contexts do not exclude the possibility of contact and communication between candidates. This information exchange can also affect the level of anxiety.

Standardization can not cover all aspects. Let's take an example. Let's say you will select sellers. You have a standardized and validated test. You have enough data for the competitive context. However, you may need a more specific procedure. Suppose the test is validated for sellers who will sell the products in a store. This is not equal to the sale of high level consulting or sophisticated technologies. In addition, the test can be validated in a completely different socio-economic context.

The best way to standardize tests is to do this in your company. If you select multiple times, you can collect enough data to have detailed information about your specific context. If you have sellers, for example, these vendors are not general sales agents but have their specificity. Employment opportunities can be very different (temporary jobs in relation to permanent jobs), the socio-economic context in a given region may be

different.

The goal of psychometry is to find common trends in large population groups, but remember that when you receive a selection task, you get it in a special situation with its specificity. And this is useful:

- If you are hired as a company HR, you need to create personalized profiles for a specific organization
- If you are a consultant, it is important to collect specific data not only to provide more specific results but also to increase the level of credibility of your assessments.

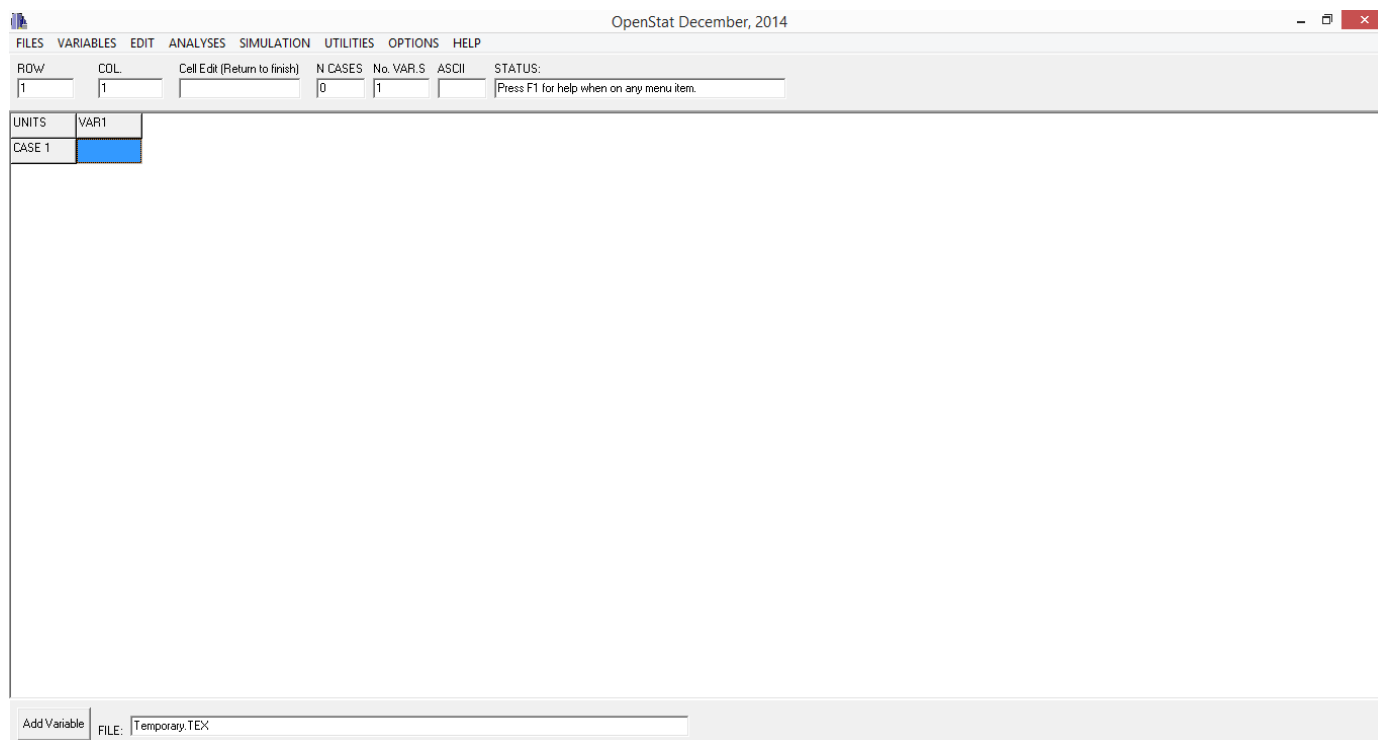
2.17. Technical aspects of a selection of scientific staff. Criteria

The first thing you have to do is select your criteria. One of the most important validities is the validity of the criterion. Its purpose is to link test results to behaviors, performance and other external factors. One of the goals of psychometry is to make accurate predictions of future behaviors. So, given the situation in your company, what are the desirable / unwanted behaviors / outcomes / performances? What is the specific KPI (Key Performance Indicators) that you can consider to build your scientific system? I know you measure the validity of the criterion at the end. Ask this question for the first time using one or more of the methods described in "Needs Analysis" because:

- It is not scientific to select criteria at the end of a study
- Focusing on desirable and unwanted forward behaviors will also help in selecting the most appropriate psychological tests / interviews / group tests.

Then you need to open a statistics program. There are many valid softwares such as "R" or "SPSS" and many others that are very common and easy to use, such as Excel. You probably know Excel, it does not have some important statistical functions used in psychometry. For this reason I will show you a freeware easy to get. OpenStat is a computer program built by

BillMiller and you can find a free download here:
<http://openstat.info/OpenStatMain.htm>



You can download it for free by double-clicking on the line: OpenStatSetup.exe, then find the file on your computer and double-click to start the installation. At the end of the process you can run the program. The first screen you receive is this:

You should first set all the variables. When I say all the variables I mean every score in the scientific design: the elements, the variables, the criterion and any other present number.

Let's start with something easy. You want to validate a situational test for the seller consisting of 10 different scenarios. The candidate has to make a decision in a simulated scenario, so each article is a different scenario, the candidate describes his personal behavior in that situation, and at the end the psychologist makes the score and achieves results.

Each situation is marked from 1 to 5. 1 represents the minimum performance, 5 represents the best performance. There is also an indicator summarizing the test with the sum of the 10 elements. Needs analysis

showed that the most used KPIs in the hypothetical company are Sales per Month (in terms of €), Customer satisfaction, Complaint Rate.

At the end of the staff selection, the test used suggests selecting 10 sellers and after one year you want to check if the test worked correctly. You have collected data about the criteria and you can start making statistics. So you have to define your variables. In this case, you have 14 different variables:

- 10 items
- a variable for the sum of the 10 items
- 3 criteria



The first step is defining the variables. In the main program menu you will find the VARIABLE name, click it and then run the "Define" option. If you do everything right, you should see this screen at the end.

X
Data Dictionary

WARNING! NO BLANKS ALLOWED
Var. Types ▾

No.	Short Name	Long Name	Type	Integers	Decimals	Missing
1	VAR1	Variable1	0	0	0	

Press to create a variable automatically
Delete Row
Cancel
Return

All text cells are editable. The first thing you have to do is click "press to create an automatic variable" 13 times to get the 14 required variables at the end. You must then edit the table, including the name of the variables, the presence of integers and decimals. We will put a full value and 0 decimal, because our range of points is from 1 to 5. Finally, you must enter a missing data code. In fact, this program does not allow empty cells. So if you have missing data, you have to fill the cell with the missing code. Let's assume that in this case our missing data code is 9 because 9 is not our range of points (1 to 5).

X

Data Dictionary

WARNING! NO BLANKS ALLOWED Var. Types ▼

No.	Short Name	Long Name	Type	Integers	Decimals	Missing
1	ITEM1	Item 1	0	1	0	9
2	ITEM2	Item 2	0	1	0	9
3	ITEM3	Item 3	0	1	0	9
4	ITEM4	Item 4	0	1	0	9
5	ITEM5	Item 5	0	1	0	9
6	ITEM6	Item 6	0	1	0	9
7	ITEM7	Item 7	0	1	0	9
8	ITEM8	Item 8	0	1	0	9
9	ITEM9	Item 9	0	1	0	9
10	ITEM10	Item 10	0	1	0	9
11	SELLING	Selling abilities	0	1	0	9
12	Income	Income per month	0	1	0	9
13	Satisfaction	Customer satisfaction	0	1	0	9
14	Compliant	Compliant Rate	0	1	0	9

Press to create a variable automatically
Delete Row
Cancel
Return

Then click "Return" and you will have the table updated

X

OpenStat December, 2014

FILES VARIABLES EDIT ANALYSES SIMULATION UTILITIES OPTIONS HELP
STATUS: Press F1 for help when on any menu item

ROW
COL
Cell Edit (Return to finish)
N CASES
No. VAR.S
ASCII

1
1

0
14

UNITS	ITEM1	ITEM2	ITEM3	ITEM4	ITEM5	ITEM6	ITEM7	ITEM8	ITEM9	ITEM10	SELLING	Income	Satisfaction	Compliant
CASE 1														

Add Variable
FILE: Temporary.TEX

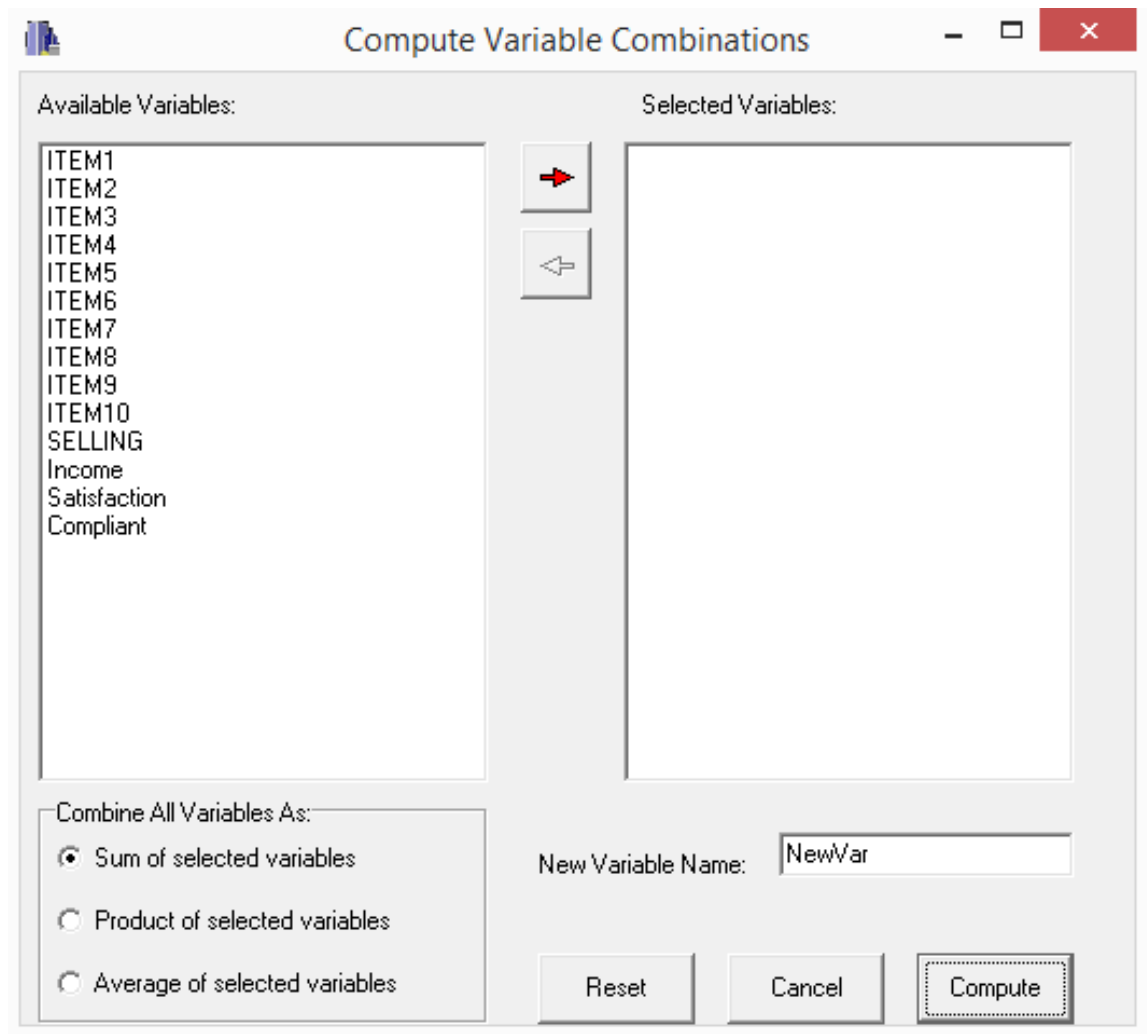
Now each column is a different variable and you need to fill in the cells. Use the Down Arrow button to create new rows. Each row corresponds to a subject. So we hit the "down arrow" button nine times. If you make an error on the number of rows, you can always delete rows from the menu by selecting Edit> Delete a row. Now you should check your sign-up documents. Give a scoring example. If you want, put the same numbers, so you can check if everything is correct (because you will find the same results of this example).

OpenStat December, 2014

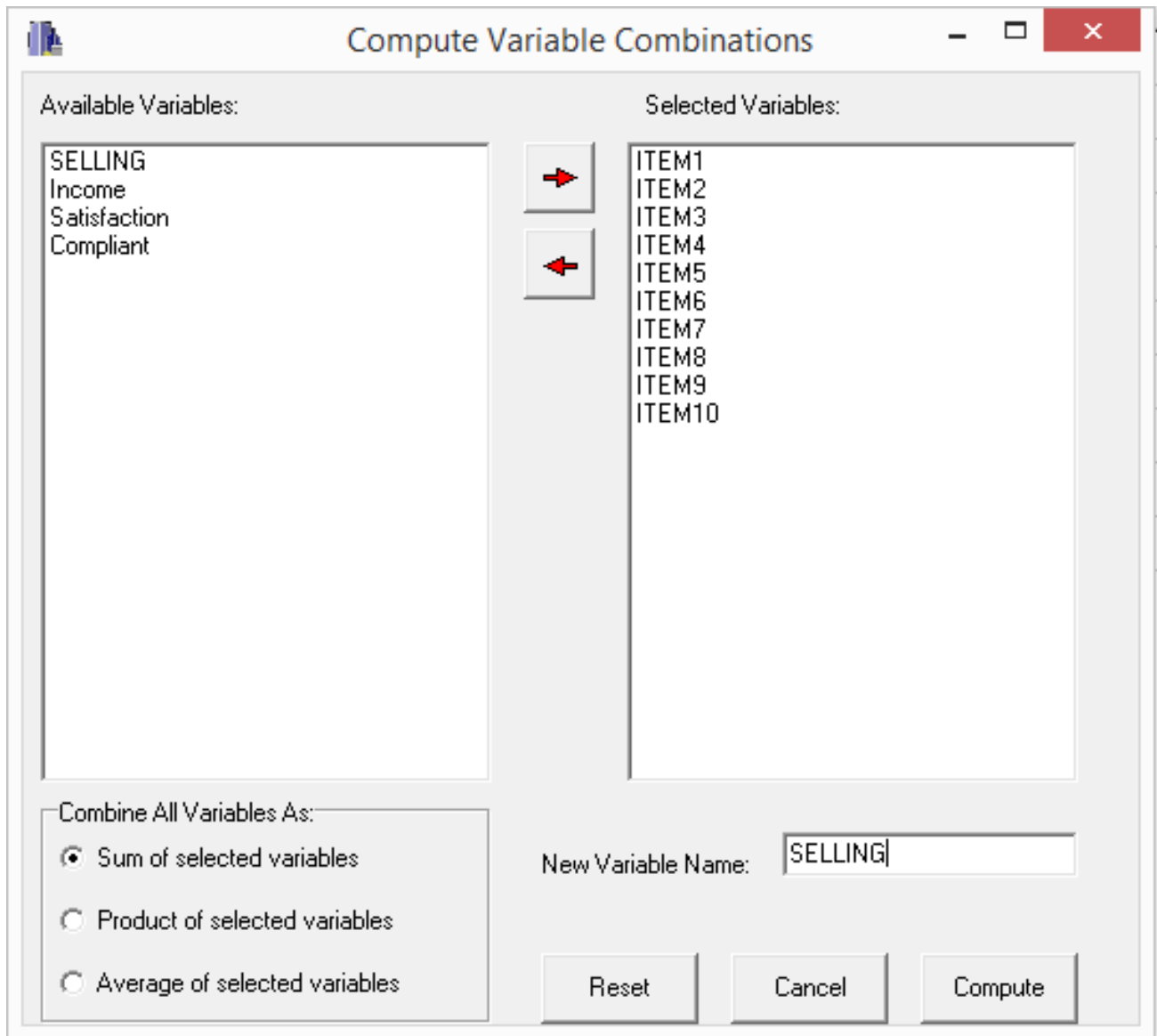
FILES	VARIABLES	EDIT	ANALYSES	SIMULATION	UTILITIES	OPTIONS	HELP
ROW	COL.	Cell Edit (Return to finish)	N CASES	No. VAR.S	ASCII	STATUS:	
10	11		10	14	37	Press F1 for help when on any menu item.	

UNITS	ITEM1	ITEM2	ITEM3	ITEM4	ITEM5	ITEM6	ITEM7	ITEM8	ITEM9	ITEM10	SELLING	Income	Satisfaction	Compliant
CASE 1	4	4	4	5	4	4	5	4	5	5		1000	9	1
2	1	1	1	2	1	2	2	1	1	1		100	3	5
3	3	3	3	2	3	3	2	3	3	3		500	5	3
4	4	4	4	4	3	4	4	4	4	4		800	7	2
5	1	1	1	1	1	1	1	1	1	1		50	2	7
6	5	5	5	5	5	5	5	5	5	4		1220	10	1
7	2	2	2	1	3	2	2	2	2	2		150	4	4
8	3	3	3	1	3	3	3	3	3	3		550	4	4
9	1	1	1	1	1	2	3	1	1	1		175	3	5
10	5	5	5	5	4	5	5	5	5	5		1234	8	2

As you can see the "Sales" column is blank. I left it empty because there is an easy way to calculate that column. I said that the sale is the sum of all the items. So, we use the many clicks on Variables> Combine Variable Values. You should see this screen:



As you can see in this image, you have left all the variables in the study. With the "arrows" button you can move some of them to the right. The program will only work on the variables selected on the right. You can choose which operation to do at the bottom, choose between the amount, the product, and the media. I said that our indicator is a sum, so we have the correct indication for the program. Then we should change the label in the text box with the name "New Variables", we change it with "SELLING". If we did all right, we should see this screen:



Then click "calculate" and get the sum of all items in the "SALES" column, such as the following picture.

UNITS	ITEM1	ITEM2	ITEM3	ITEM4	ITEM5	ITEM6	ITEM7	ITEM8	ITEM9	ITEM10	SELLING	Income	Satisfaction	Compliant
CASE 1	4	4	4	5	4	4	5	4	5	5	44	1000	9	1
CASE 2	1	1	1	2	1	2	2	1	1	1	13	100	3	5
CASE 3	3	3	3	2	3	3	2	3	3	3	28	500	5	3
CASE 4	4	4	4	4	3	4	4	4	4	4	39	800	7	2
CASE 5	1	1	1	1	1	1	1	1	1	1	10	50	2	7
CASE 6	5	5	5	5	5	5	5	5	5	4	49	1220	10	1
CASE 7	2	2	2	1	3	2	2	2	2	2	20	150	4	4
CASE 8	3	3	3	1	3	3	3	3	3	3	28	550	4	4
CASE 9	1	1	1	1	1	2	3	1	1	1	13	175	3	5
CASE 10	5	5	5	5	4	5	5	5	5	5	49	1234	8	2

How can we measure the validity of this tool? Sure, in this case, we have only 10 subjects and it's too hard to get accurate statistical indexes, but this is an exercise and my goal is just to show you how to do this when you get a large sample of data.

First question. I want to check whether fidelity in terms of homogeneity is respected. The best way to do this is Cronbach's Alpha. We saw in the first research manual that we should use Alpha when our element has more than one score (from 1 to 5 in this case) We should use Kuder Richardson when we have dichotomous elements (for example, true or false answers). Let's see how to do that. Click the menu buttons as follows: Analysis> Measure> Analysis and fidelity of the classic element. You should see this screen:

Classical Test Analysis

Items to Select for a scale:

- ITEM1
- ITEM2
- ITEM3
- ITEM4
- ITEM5
- ITEM6
- ITEM7
- ITEM8
- ITEM9
- ITEM10
- SELLING
- Income
- Satisfaction
- Compliant

Items in this Scale:

Include Last Name from:

Include First Name from:

Include ID in Listing from Variable:

Item Scoring Options

- ☒ First Case is the Scoring Key
- ☐ Prompt for Correct Response As:
 - ☐ Number
 - ☐ Letter
 - ☐ Single Word

Reliability Estimate Options

- ☐ Kuder-Richardson Formula 20
- ☐ Kuder-Richardson Formula 21
- ☐ Cronbach Alpha
- ☐ Hoyt's Intraclass
- ☐ Stepwise KR #20

Output Options

- ☐ Item Means
- ☐ Item Variances
- ☐ Item Standard Deviations
- ☐ Item Characteristic Curves
- ☐ Intercorrelations
- ☐ Scored Item Matrix
- ☐ Put Scores in Data Grid
- ☐ Mult. Reg. Pred. of Items
- ☐ Plot Subject Scores
- ☐ Plot Item Means

Cancel Reset Compute Return

Now, the first thing I have to say is you can check the fidelity for a single variable on the operation. In this case it is very easy because we have only one variable in the study. We are studying sales skills and have 10 articles. The theory of fidelity as homogeneity states that if we have a certain number of elements that measure the same characteristic, the element should be intercorrelated. The statistical indicators that measure this are Alpha di Cronbach and Kuder Richardons. To do this, we must select all the elements belonging to a scale and move it with the "right arrow" in the "Items of this scale" box. After that, select "Cronbach's Alpha" in the box to the right and then click on the calculation.

Classical Test Analysis

Items to Select for a scale:

- SELLING
- Income
- Satisfaction
- Compliant

Items in this Scale:

- ITEM1
- ITEM2
- ITEM3
- ITEM4
- ITEM5
- ITEM6
- ITEM7
- ITEM8
- ITEM9
- ITEM10

Include Last Name from:

Include First Name from:

Include ID in Listing from Variable:

Item Scoring Options

- ☒ First Case is the Scoring Key
- ☐ Prompt for Correct Response As:
 - ☐ Number
 - ☐ Letter
 - ☐ Single Word

Reliability Estimate Options

- ☐ Kuder-Richardson Formula 20
- ☐ Kuder-Richardson Formula 21
- ☒ Cronbach Alpha
- ☐ Hoyt's Intraclass
- ☐ Stepwise KR #20

Output Options

- ☐ Item Means
- ☐ Item Variances
- ☐ Item Standard Deviations
- ☐ Item Characteristic Curves
- ☐ Intercorrelations
- ☐ Scored Item Matrix
- ☐ Put Scores in Data Grid
- ☐ Mult. Reg. Pred. of Items
- ☐ Plot Subject Scores
- ☐ Plot Item Means

Cancel Reset Compute Return



If you have done all the procedures correctly, you should get these results:

Classical Test Analysis Results

Alpha Reliability Estimate for scale TOTAL = 0.8103 S.E. of Measurement = 0.977

How do we interpret this screen. I have studied the fact that there is a different point of view on an index of satisfactory fidelity. The strictest point assumes that an $\alpha > .80$ is good (Boncori, 2006), other authors (Nunnally and Bernstein, 1970) assume that an index $> .70$ is ok. As we see in production, Alpha is satisfactory. In fact, they introduce the strategic data to get a good result. Our alpha is .8103, so higher than .80. Given the quality of the data, we had the opportunity to have a better alpha, but we only have 10 subjects, so our statistical power is limited. The second indicator is the standard measurement error. This indicates the confidence interval, the error we expect to measure is 0.977. Remember that it calculates the total error and not a single element. An error of 0.98 on a scale from 1 to 5 is a very high level of error. But we should consider the amount of possible outcomes. So the minimum is 10 - if the subject always

has a score of 1 per item - the maximum is 50 if the subject always has a score of 5 per item. On a scale of 10 to 50, the error of 0.97 is good, it means that if the subject gets a 43, his real score will be between $43 - 0.97$ and $43 + 0.97$.

Now everything is ok from the perspective of homogeneity. However, I want to show you what happens when something is not good and how to resolve. Change the matrix in this way. This will create a problem that we will solve after.

Related

If you like to work with Excel and prefer its typing methods, you can always work in Excel and copy all the data into OpenStat just to have the procedures. When you have a large set of data I suggest you make a double saved file in Excel. Just select all the data. Click Edit> Copy highlighted box or press CTRL + C and then paste to excel. This will help keep your data safer. OpenStat does not have the Undo option. This option immediately resolves a problem when you make an error.

OK, we changed items 6 and 8 to reduce fidelity. See how did I do that? If you compare the result of position 6 or 8 with another item on the same topic, you will find that the number is now very different. While other elements from 1 to 10, except those from 6.7 and 8, have a similar number in the same gross subject / subject. This will produce a lower fidelity. When you modify data on columns of elements, note the amount from the sale of the variable. Very different numbers in the same scale will not correlate with each other.

UNITS	ITEM1	ITEM2	ITEM3	ITEM4	ITEM5	ITEM6	ITEM7	ITEM8	ITEM9	ITEM10	SELLING	Income	Satisfaction
CASE 1	4	4	4	5	4	1	1	1	5	5	34	1000	9
CASE 2	1	1	1	2	1	5	5	5	1	1	23	100	3
CASE 3	3	3	3	2	3	5	5	5	3	3	35	500	5
CASE 4	4	4	4	4	3	1	1	1	4	4	30	800	7
CASE 5	1	1	1	1	1	5	5	5	1	1	22	50	2
CASE 6	5	5	5	5	5	1	1	1	5	4	37	1220	10
CASE 7	2	2	2	1	3	5	5	5	2	2	29	150	4
CASE 8	3	3	3	1	3	1	1	1	3	3	22	550	4
CASE 9	1	1	1	1	1	5	5	5	1	1	22	175	3
CASE 10	5	5	5	4	5	1	1	1	5	5	37	1234	8

We show you a more detailed way to get fidelity data. Click Analysis> Measure> Reliability Hoyt and Cronbach:

Within Subjects ANOVA and Hoyt Reliability

Directions: The repeated measures ANOVA requires you to select two or more variables (grid columns) which represent the repeated observations on the same subject (grid row). Homogeneity of variance and covariance are assumed and may be tested in this procedure. In addition, the ANOVA provides the basis for estimation of reliabilities as developed by Hoyt and referred to in the literature as intraclass reliability. The index labeled the adjusted estimate is equivalent to the Cronbach Alpha reliability estimate. Finally, you may elect to plot the means obtained on the repeated measures.

Options:

- ☐ Plot Means Using 2D Horizontal Bars
- ☐ Plot Means Using 3D Horizontal Bars
- ☐ Plot Means Using 2D Vertical Bars
- ☒ Plot Means Using 3D Vertical Bars
- ☐ Plot Means Using 2D Pie Chart
- ☐ Plot Means Using Exploded Pie Chart
- ☐ Plot Means Using 2D Lines
- ☐ Plot Means Using 3D Lines

Available Variables:

- ITEM1
- ITEM2
- ITEM3
- ITEM4
- ITEM5
- ITEM6
- ITEM7
- ITEM8
- ITEM9
- ITEM10
- SELLING

Selected Variables:

Options:

- ☐ Reliability Estimates
- ☐ Test Assumptions
- ☐ Plot Variable Means
- ☐ Post Hoc Contrasts

Alpha = 0.05

Reset

Cancel

Compute

Return

Move the 10 items to the "Selected Variables" box and click the "Loyalty Estimates" and "Assume Assignment" checkboxes. Set the Alpha value = 1. If you do this correctly, you should get it.

Then click "Compute" and you should get this result at the bottom of the page:

TREATMENT (COLUMN) MEANS AND STANDARD DEVIATIONS		
VARIABLE	MEAN	STD.DEV.
ITEM1	2.900	1.595
ITEM2	2.900	1.595
ITEM3	2.900	1.595
ITEM4	2.600	1.713
ITEM5	2.900	1.524
ITEM6	3.000	2.108
ITEM7	3.000	2.108
ITEM8	3.000	2.108
ITEM9	3.000	1.700
ITEM10	2.900	1.595

RELIABILITY ESTIMATES

TYPE OF ESTIMATE	VALUE
Unadjusted total reliability	0.333
Unadjusted item reliability	0.047
Adjusted total (Cronbach)	0.262
Adjusted item reliability	0.034

As you can see in the last part of the output (Cronbach adjusted), our alpha dropped to .405. This is not satisfactory. So what do we do next? First, let's look at the first output called middle and standard deviation. You know this test measures performance. The higher the average, the higher the performance of the group. This can cause you to make inferences about the element's difficulty. In fact, if the average performance is higher, the element is easier, and if the performance average is lower, the element is more difficult. Items 6 and 8 are not now considered because they have been artificially changed. You can see that item 7 is the easiest item because the person performed better = 3.2 and item 4 is the most difficult. However, you can not see large differences between items, which means there is a homogeneity in the items. The second column is called a standard deviation and indicates how large the differences between subjects are, how many subjects are different from each other. The higher the standard deviation, the greater the differences between the subjects. Without taking into account 6 and 8, item 9 has the highest level of standard deviation. It is important to consider the standard deviation. Let's say, for example, that we measure the quality of a leader in a company. The average in the quality of leadership is 7 on a scale of 10. This is partial information; in fact, if we compare these hypothetical situations, we should interpret completely differently.

Leadership scale that evaluates manager X

	Mean	Standard Deviation
Evaluation of middle	7,14	0,13
Evaluation of other employees	7,14	3,4

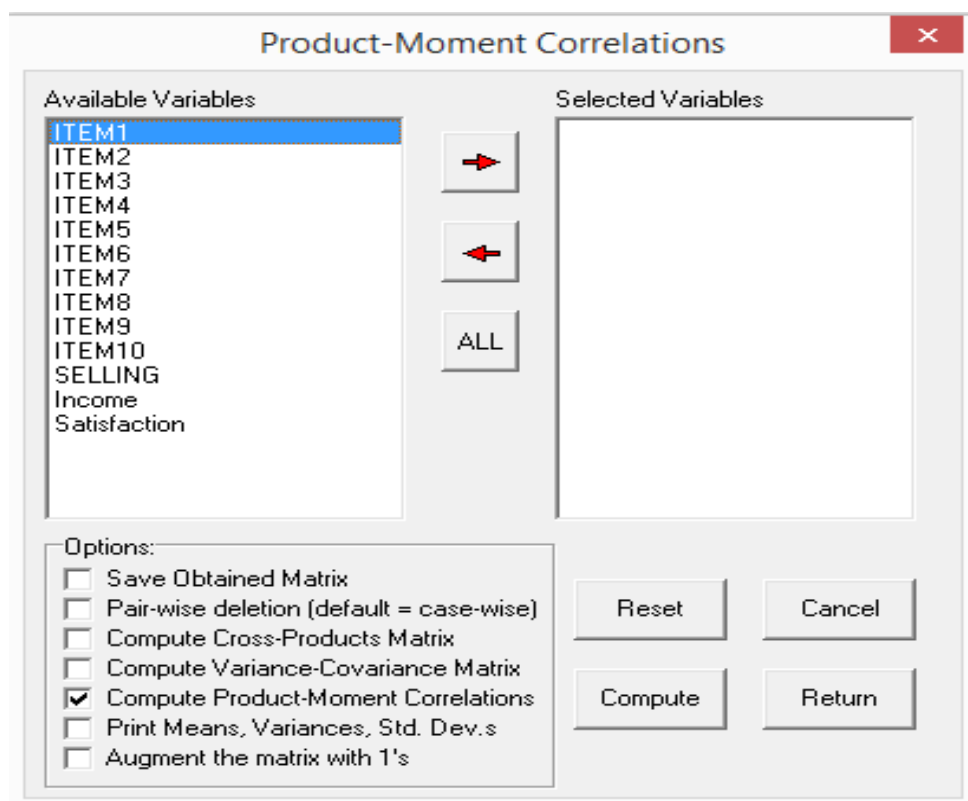
We can see in this example that middle manager and other employees gave a similar assessment of the level of leadership. Both groups rated the

manager with an average qualification level of 7.14, but the standard deviation is different. This means that within the middle manager group there is an agreement between the participants (no big differences in ratings as the standard deviation is low). In the "other employees" group, the perceived quality of management is good (7.14), but there is no agreement among employees, in fact they have a high level of standard deviation. Some employees are very pleased with their leader, but many are not satisfied.

These procedures that analyze each single item are called item analysis. You should analyze the items each time:

- Do you want to get more article data;
- You have a loyalty problem and want to check if there is a general problem or a problem with certain items.

How do we check if an item has a problem? We have now changed artificially. But imagine that you have the ten items in a larger array, with items in one hundred columns. It will be difficult and yet unknowing to detect the data column very different from each other. The best way to study this is to make the correlation matrix. Go to Analyze> Link> Product Batch menu:



Our goal is to study the relationship between the 10 items and their relationship to the "sales variable". So, move the 10 items plus the "sales variable" to the right, that way.

Then click on "compute" and you will get the following array.

CORRELATION MATRIX

Correlations					
ITEM1	ITEM2	ITEM3	ITEM4	ITEM5	ITEM6
1.0000	1.0000	1.0000	0.8378	0.9553	-0.8591
1.0000	1.0000	1.0000	0.8378	0.9553	-0.8591
1.0000	1.0000	1.0000	0.8378	0.9553	-0.8591
0.8378	0.8378	0.8378	1.0000	0.7493	-0.7385
0.9553	0.9553	0.9553	0.7493	1.0000	-0.7609
-0.8591	-0.8591	-0.8591	-0.7385	-0.7609	1.0000
-0.8591	-0.8591	-0.8591	-0.7385	-0.7609	1.0000
-0.8591	-0.8591	-0.8591	-0.7385	-0.7609	1.0000
0.9836	0.9836	0.9836	0.8779	0.9438	-0.8682
0.9563	0.9563	0.9563	0.8378	0.9096	-0.8591
0.8452	0.8452	0.8452	0.7801	0.8733	-0.4749
Correlations					
ITEM7	ITEM8	ITEM9	ITEM10	SELLING	
-0.8591	-0.8591	0.9836	0.9563	0.8452	
-0.8591	-0.8591	0.9836	0.9563	0.8452	
-0.8591	-0.8591	0.9836	0.9563	0.8452	
-0.7385	-0.7385	0.8779	0.8378	0.7801	
-0.7609	-0.7609	0.9438	0.9096	0.8733	
1.0000	1.0000	-0.8682	-0.8591	-0.4749	
1.0000	1.0000	-0.8682	-0.8591	-0.4749	
1.0000	1.0000	-0.8682	-0.8591	-0.4749	
-0.8682	-0.8682	1.0000	0.9836	0.8429	
-0.8591	-0.8591	0.9836	1.0000	0.8127	
-0.4749	-0.4749	0.8429	0.8127	1.0000	

No. of valid cases = 10

I have said that a psychometric scale that meets the homogeneity criteria must have items that correlate each other. The correlation matrix expresses all relations between a certain amount of variables. We include all the themes in the software and also the general variable sales skills. The first thing we have to do is check the correlations between the items. We expect items belonging to the same scale to have positive correlation levels. Let's analyze the first column. Consider each row indicating the correlation between the variable represented in the column (for the first column ITEM1) and the corresponding item. The order of variables is the same in rows and columns. So the first row indicates ITEM1, second ITEM2, third ITEM3, and so on. We note in the first column that ITEM1 correlates perfectly with ITEM1, ITEM2, ITEM3. The correlation between the same variable is mathematically 1. You may notice that - as expected - ITEM1 correlates positively with ITEM 5, 9 and 10. Something unexpected happens

with ITEM 6,7 and 8. In fact, you have negative correlations with ITEM1. If items measure the same concept, obviously they should report positively and not negatively. So items 6, 7 and 8 seem to have a problem. If you look at another column (for example, 2,3,4,5), you can see that the pattern is similar. Instead, you will notice that there are negative correlations with all the other items in ITEM 6, 7 and 8. It is now clear that points 1,2,3,4,5,9 and 10 mutually correlate positively, so we can say they belong to the same staircase, while 6,7 and 8 correlate negatively with the scale and positive with each other. This means that 6, 7, 8 have caused the alpha problem. The data suggests that 6, 7 and 8 measure something different from sales skills. So if our goal is to check the degree of use in this area, we should remove these elements.

Item-total correlation

Another very important indicator is the item-total correlation. Assuming that all selected items are part of a larger and more complete measure, each item has to correlate positively with the final measure. In this case we want to do some visible things and put some data to make a big correlation. However, according to Chiorri (2011), a correlation $> .30$ is ok. If you look at the last column, you can see the correlation between each variable and the total. As you expected, you can see a positive correlation for items 1, 2, 3, 4, 5, 9 and 10. The 6, 7 and 8 negatives refer to the final result. Also, the item-total correlation is an index of item analysis.

If at the end of your procedures you notice that some items have a problem, you can choose to remove them or if you can, you can try to reformulate or understand why the item does not have the desired correlation / consistency. Now, to make the final check, try Alpha di Cronbach except for the 3 items. So repeat the procedure that includes only 1, 2, 3, 4, 5, 9,10. You should get this:

TREATMENT (COLUMN) MEANS AND STANDARD DEVIATIONS		
VARIABLE	MEAN	STD.DEV.
ITEM1	2.900	1.595
ITEM2	2.900	1.595
ITEM3	2.900	1.595
ITEM4	2.600	1.713
ITEM5	3.000	1.563
ITEM9	3.000	1.700
ITEM10	2.900	1.595

RELIABILITY ESTIMATES

TYPE OF ESTIMATE	VALUE
Unadjusted total reliability	0.990
Unadjusted item reliability	0.933
Adjusted total (Cronbach)	0.990
Adjusted item reliability	0.933

As you can read, alpha jumped to .990, we can evaluate it as a very high level.

In this paragraph, I've seen how to measure fidelity as a homogeneity, and also how to fix any problems in calculating fidelity. Now we should look at some interesting details about the validity of the criterion. And this is the main subject of the next chapter.

Validity criterion applied

When you want to provide a result you expect in the future, you should use linear regression, a common method of many specialized manuals. Our predictor is sales ability, the criteria are Monthly Income, Customer Satisfaction and Compliant Rate. The first two variables are positive, and we expect beta positive, third is negative, so we expect a negative beta. In a linear regression model you can enter as many predictors as you want, and just one criterion for each equation. So let's start with the first one. In the first procedure, we want to check whether sales skills can predict a seller's monthly income. Click menu: Analysis> Multiple regression> Multiple progressive multi-directional forwarding and you should view this screen:

Forward Stepwise Multiple Regression ✕

Available Variables:

- ITEM1
- ITEM2
- ITEM3
- ITEM4
- ITEM5
- ITEM6
- ITEM7
- ITEM8
- ITEM9
- ITEM10
- SELLING
- Income
- Satisfaction
- Compliant
- VAR15

Dependent Variable

Independent Variables

Options

- ☐ Get Data from a matrix file. (Dep. var. last one in file.)
- ☐ Save the Correlation Matrix.
- ☐ Place predicted raw, z, residuals, Conf. Intvl's in Grid
- ☐ Show Cross-Products Matrix
- ☐ Show Variance-Covariance Matrix
- ☐ Show Correlation Matrix
- ☐ Show Correlation Matrix Inverse
- ☐ Show Variable Means
- ☐ Show Variances
- ☐ Show Standard Deviations
- ☐ Include BPG Heteroscedasticity Test

Probabilities

Maximum Probability to Enter:

Minimum Probability to Retain:

Reset
Cancel
OK

You should move the predictor (in our case, the sales ability) into the box called independent variables and the criterion (in the first case of income) in the box called dependence and change the values "maximum probability of input" and "minimum probability to keep" "1" as in the following picture:

Forward Stepwise Multiple Regression ✕

Available Variables:

- ITEM1
- ITEM2
- ITEM3
- ITEM4
- ITEM5
- ITEM6
- ITEM7
- ITEM8
- ITEM9
- ITEM10
- Compliant
- VAR15
- Satisfaction

Dependent Variable

Income

Independent Variables

SELLING

Options

- ☐ Get Data from a matrix file. (Dep. var. last one in file.)
- ☐ Save the Correlation Matrix.
- ☐ Place predicted raw, z, residuals, Conf. Intvl's in Grid
- ☐ Show Cross-Products Matrix
- ☐ Show Variance-Covariance Matrix
- ☐ Show Correlation Matrix
- ☐ Show Correlation Matrix Inverse
- ☐ Show Variable Means
- ☐ Show Variances
- ☐ Show Standard Deviations
- ☐ Include BPG Heteroscedasticity Test

Probabilities

Maximum Probability to Enter:

Minimum Probability to Retain:

Reset
Cancel
OK

Then click OK and you will read the following outputs:

Stepwise Multiple Regression by Bill Miller
Stepwise Multiple Regression by Bill Miller

----- STEP 1 -----

SOURCE	DF	SS	MS	F	Prob.>F
Regression	1	1277848.235	1277848.235	15.685	0.004
Residual	8	651748.665	81468.583		
Total	9	1929596.900			

Dependent Variable: Income

R	R2	F	Prob.>F	DF1	DF2
0.814	0.662	15.685	0.004	1	8

Adjusted R Squared = 0.620

Std. Error of Estimate = 285.427

Variable	Beta	B	Std.Error	t	Prob.>t	VIF	TOL
SELLING	0.814	58.539	14.781	3.960	0.004	1.000	1.000

Constant = -1125.578

The first index you need to study is called Adjusted R Squared, in our case it is 0.620. Here you can find a table summarizing the interpretation for the square R indicator:

Interpretation	r	R2	%
Too high	1,0	1,0	100%
	0.9	08	81%
	0.8	0.6	64%
	0.7	0.5	49%
	0.6	0.4	36%
	0.5	0.3	25%
	0.4	0.2	16%
	0.3	0.1	9%
Medium	0.2	0.0	4%
Low/absent	0.1	0.0	1%
	0.0	0.0	0%

According to this table we can state that the adjusted value is R2 and is high, so we have a requirement to continue the analysis. Then we should check the last table for t and p (prob> t). If p is equal to or lower than .05, our test is significant. Our T is 3.690 and the value p is .004, so lower than .05. We can say that the test is significant, so the predictor influences the criterion. If we want to define how and in which direction this effect exists, we need to analyze beta value. In our case, beta is positive and elevated $\beta = .814$. This means that our predictor (test) is very effective in estimating revenue per month. The higher the test result, the higher the probability of having a good income per month. Now you can repeat the procedure for other criteria. In the following pictures you can read the results for other tests.

Stepwise Multiple Regression by Bill Miller
Stepwise Multiple Regression by Bill Miller

----- STEP 1 -----					
SOURCE	DF	SS	MS	F	Prob.>F
Regression	1	52.186	52.186	22.797	0.001
Residual	8	18.314	2.289		
Total	9	70.500			

Dependent Variable: Satisfaction

R	R2	F	Prob.>F	DF1	DF2
0.860	0.740	22.797	0.001	1	8

Adjusted R Squared = 0.708

Std. Error of Estimate = 1.513

Variable	Beta	B	Std.Error	t	Prob.>t	VIF	TOL
SELLING	0.860	0.374	0.078	4.775	0.001	1.000	1.000

Constant = -5.386

As you can also read these results show that sales ability is a good predictor for customer satisfaction, actually $t = 4.775$, $p\text{-value} = .001$. and $\beta = 0.860$.

Stepwise Multiple Regression by Bill Miller
Stepwise Multiple Regression by Bill Miller

```
----- STEP 1 -----
SOURCE      DF      SS      MS      F      Prob.>F
Regression   1     24.921   24.921   21.032    0.002
Residual     8      9.479    1.185
Total        9     34.400
```

Dependent Variable: Compliant

```
      R      R2      F      Prob.>F   DF1   DF2
0.851   0.724   21.032   0.002     1     8
Adjusted R Squared = 0.690
```

Std. Error of Estimate = 1.089

```
Variable      Beta      B      Std.Error t      Prob.>t   VIF      TOL
SELLING      -0.851   -0.259   0.056   -4.586   0.002    1.000    1.000
```

Constant = 10.923

t-test Values for prob. |corr.| > 0 test

```
Variables      Income  Satisfaction  Compliant

Income          0.000      8.873      5.853
Satisfaction     8.873      0.000      9.041
Compliant        5.853      9.041      0.000
```

Probability of greater t

```
Variables      Income  Satisfaction  Compliant

Income          0.000      0.000      0.000
Satisfaction     0.000      0.000      0.000
Compliant        0.000      0.000      0.000
```

CORRELATION MATRIX

```
Correlations
Income      Satisfaction      Compliant
1.0000      0.9528      -0.9004
0.9528      1.0000      -0.9544
-0.9004      -0.9544      1.0000
```

Means

```
Variables      Income  Satisfaction  Compliant
577.900      5.500      3.400
```

UNITS	Dept	SelectionYN	Performance	Anxiety	Error
CASE 1	1	1	4	8	7
CASE 2	1	2	7	5	3
CASE 3	1	1	4	9	6
CASE 4	1	2	8	3	4
CASE 5	1	1	5	6	5
CASE 6	2	2	9	1	5
CASE 7	2	1	2	4	5
CASE 8	2	2	7	2	3
CASE 9	2	1	1	6	6
CASE 10	2	2	8	3	2
11	3	1	5	3	7
12	3	2	8	4	3
13	3	1	3	6	5
14	3	2	8	5	2
15	3	1	2	3	7

One, Two, or Three Way ANOVA

Available Variables:

Dept

SelectionYN

Performance

Anxiety

Error

ITEM6

ITEM7

ITEM8

ITEM9

ITEM10

SELLING

Income

Satisfaction

Compliant

VAR15

Dependent Variable

Factor 1 Variable

Type

☒ Fixed Levels
☐ Random Levels

Factor 2 Variable

Type

☒ Fixed Levels
☐ Random Levels

Factor 3 Variable

Type

☒ Fixed Levels
☐ Random Levels

Alpha Level for Overall Tests:

0.05

Alpha Level for Post-Hoc Comparisons:

0.05

Directions: You may elect to complete a 1, 2, or 3 way Analysis of Variance by selecting a dependent variable then 1 to 3 variables representing factors of your study. Factors may be fixed-levels of treatment or random levels. If you elect post-hoc comparisons, they are made between factor levels for the one factor design only (at this time.) Please note that some comparisons require equal sized samples at various levels.

Comparisons

☐ Scheffe
☐ Tukey HSD (= N's)
☐ Tukey B (= N's)
☐ Tukey-Kramer
☐ Newman-Keuls (= N's)
☐ Bonferroni
☐ Orthogonal Contrasts

Options:

☐ Plot Means Using 2D Horizontal Bars
☐ Plot Means Using 3D Horizontal Bars
☐ Plot Means Using 2D Vertical Bars
☒ Plot Means Using 3D Vertical Bars
☐ Plot Means Using 2D Pie Chart
☐ Plot Means Using Exploded Pie Chart
☐ Plot Means Using 2D Lines
☐ Plot Means Using 3D Lines

Reset

Cancel

Continue

One, Two, or Three Way ANOVA

Available Variables:

- SelectionYN
- Anxiety
- Error
- ITEM6
- ITEM7
- ITEM8
- ITEM9
- ITEM10
- SELLING
- Income
- Satisfaction
- Compliant
- VAR15

Dependent Variable

Performance

Factor 1 Variable

Dept

Factor 2 Variable

Factor 3 Variable

Directions: You may elect to complete a 1, 2, or 3 way Analysis of Variance by selecting a dependent variable then 1 to 3 variables representing factors of your study. Factors may be fixed-levels of treatment or random levels. If you elect post-hoc comparisons, they are made between factor levels for the one factor design only (at this time.) Please note that some comparisons require equal sized samples at various levels.

Type

☒ Fixed Levels

☐ Random Levels

Type

☒ Fixed Levels

☐ Random Levels

Type

☒ Fixed Levels

☐ Random Levels

Alpha Level for Overall Tests: 1

Alpha Level for Post-Hoc Comparisons: 1

Comparisons

☐ Scheffe

☐ Tukey HSD (= N's)

☐ Tukey B (= N's)

☐ Tukey-Kramer

☐ Newman-Keuls (= N's)

☒ Bonferroni

☐ Orthogonal Contrasts

Options:

☐ Plot Means Using 2D Horizontal Bars

☐ Plot Means Using 3D Horizontal Bars

☐ Plot Means Using 2D Vertical Bars

☒ Plot Means Using 3D Vertical Bars

☐ Plot Means Using 2D Pie Chart

☐ Plot Means Using Exploded Pie Chart

☐ Plot Means Using 2D Lines

☐ Plot Means Using 3D Lines

Reset

Cancel

Continue

ONE WAY ANALYSIS OF VARIANCE RESULTS

Dependent variable is: Performance, Independent variable is: Dept

SOURCE	D.F.	SS	MS	F	PROB.>F	OMEGA SQR.
BETWEEN	2	2.71	1.36	0.18	0.83	-0.13
WITHIN	11	81.00	7.36			
TOTAL	13	83.71				

MEANS AND VARIABILITY OF THE DEPENDENT VARIABLE FOR LEVELS OF THE INDEPENDENT VARIABLE

GROUP	MEAN	VARIANCE	STD.DEV.	N
1	5.60	3.30	1.82	5
2	4.50	12.33	3.51	4
3	5.20	7.70	2.77	5
TOTAL	5.14	6.44	2.54	14

TESTS FOR HOMOGENEITY OF VARIANCE

Hartley Fmax test statistic = 3.74 with deg.s free: 3 and 4.

Cochran C statistic = 0.53 with deg.s free: 3 and 4.

Bartlett Chi-square = 1.32 with 2 D.F. Prob. > Chi-Square = 0.516

One, Two, or Three Way ANOVA

Available Variables:

- Dept
- Anxiety
- Error
- ITEM6
- ITEM7
- ITEM8
- ITEM9
- ITEM10
- SELLING
- Income
- Satisfaction
- Compliant
- VAR15

Dependent Variable

Performance

Factor 1 Variable

SelectionYN

Factor 2 Variable

Factor 3 Variable

Directions: You may elect to complete a 1, 2, or 3 way Analysis of Variance by selecting a dependent variable then 1 to 3 variables representing factors of your study. Factors may be fixed-levels of treatment or random levels. If you elect post-hoc comparisons, they are made between factor levels for the one factor design only (at this time.) Please note that some comparisons require equal sized samples at various levels.

Type

☒ Fixed Levels

☐ Random Levels

Type

☒ Fixed Levels

☐ Random Levels

Type

☒ Fixed Levels

☐ Random Levels

Alpha Level for Overall Tests:

Alpha Level for Post-Hoc Comparisons:

Comparisons

☐ Scheffe

☐ Tukey HSD (= N's)

☐ Tukey B (= N's)

☐ Tukey-Kramer

☐ Newman-Keuls (= N's)

☐ Bonferroni

☐ Orthogonal Contrasts

Options:

☐ Plot Means Using 2D Horizontal Bars

☐ Plot Means Using 3D Horizontal Bars

☐ Plot Means Using 2D Vertical Bars

☒ Plot Means Using 3D Vertical Bars

☐ Plot Means Using 2D Pie Chart

☐ Plot Means Using Exploded Pie Chart

☐ Plot Means Using 2D Lines

☐ Plot Means Using 3D Lines

Reset

Cancel

Continue

FISHER'S (PROTECTED) LEAST SIGNIFICANT DIFFERENCE TEST

GROUP	MEAN	GROUP	MEAN	DIFFERENCE	FISHER LSD	SIGNIFICANT?
1	5.600	2	4.500	1.100	0.000	YES
1	5.600	3	5.200	0.400	0.000	YES
2	4.500	3	5.200	0.700	0.000	YES

Bonferroni Test for (Differences Between Means
Overall alpha selected = 1.00

Comparisons made at alpha / no. comparisons = 0.333

Groups	Difference	Statistic	Prob > Value	Significant?
1 - 2	1.100	0.612	0.560	NO
1 - 3	0.400	0.270	0.794	NO
2 - 3	-0.700	0.335	0.747	NO

SOURCE	D.F.	SS	MS	F	PROB.>F	OMEGA SQR.
BETWEEN	1	66.88	66.88	47.68	0.00	0.77
WITHIN	12	16.83	1.40			
TOTAL	13	83.71				

MEANS AND VARIABILITY OF THE DEPENDENT VARIABLE FOR LEVELS OF THE INDEPENDENT VARIABLE

GROUP	MEAN	VARIANCE	STD.DEV.	N
1	3.25	2.21	1.49	8
2	7.67	0.27	0.52	6
TOTAL	5.14	6.44	2.54	14

TESTS FOR HOMOGENEITY OF VARIANCE

Hartley Fmax test statistic = 8.30 with deg.s free: 2 and 7.
Cochran C statistic = 0.89 with deg.s free: 2 and 7.
Bartlett Chi-square = 4.70 with 1 D.F. Prob. > Chi-Square = 0.030

FISHER'S (PROTECTED) LEAST SIGNIFICANT DIFFERENCE TEST

GROUP	MEAN	GROUP	MEAN	DIFFERENCE	FISHER LSD	SIGNIFICANT?
1	3.250	2	7.667	4.417	0.000	YES

CHAPTER 3

Behavior analysis in the personnel selection process

3.1. Behavioral analysis during the selection process

The selection interview is the moment when the company and the candidate meet. During this interaction, the two sides usually have different goals. The company wants to know the potential of the candidate, the candidate wants to know the company's characteristics, the role for which his contribution is expected. The candidate and the company - both - will try to present themselves in the best possible way to ensure a good impression on the other side. The company wants to be attractive and retain the best candidates to ensure good performance, the candidate wants to ensure a satisfactory job in the economic and professional profile. However, as part of this mutual exchange, the first decision is taken by the company. In fact, the company decides whether to include the person in the list of final candidates to make an economic and professional proposal to, only after the candidate opts for this new professional career or will quit.



In this dynamic there are many factors that can influence the selection decision, many of which have no predictive value or are not statistically linked to the quality of the final decision. They are, in other words, factors that will not actually help you choose the candidate properly.

In this dynamic there are many factors that can influence the selection decision, many of which have no predictive value or are not statistically linked to the quality of the final decision. They are, in other words, factors that will not actually help you choose the candidate properly.

As defined in the first chapter of this manual, in some cases the predictive capacity is very clear. Intelligence tests and practical tests, for example, almost always have a high predictive value, being able to distinguish the best candidates from the worst. In other cases, the techniques used certainly have a low predictive value (for example, for graphology).

Different is the case for the interview. The interview is the most widespread instrument, almost all companies make at least one phone interview before hiring a person. But at the same time, it is the most difficult objective assessment. The level of structure of the interview, the number of interviewers, the quality of scoring procedures can make this process very unstable and can therefore compromise its validity.

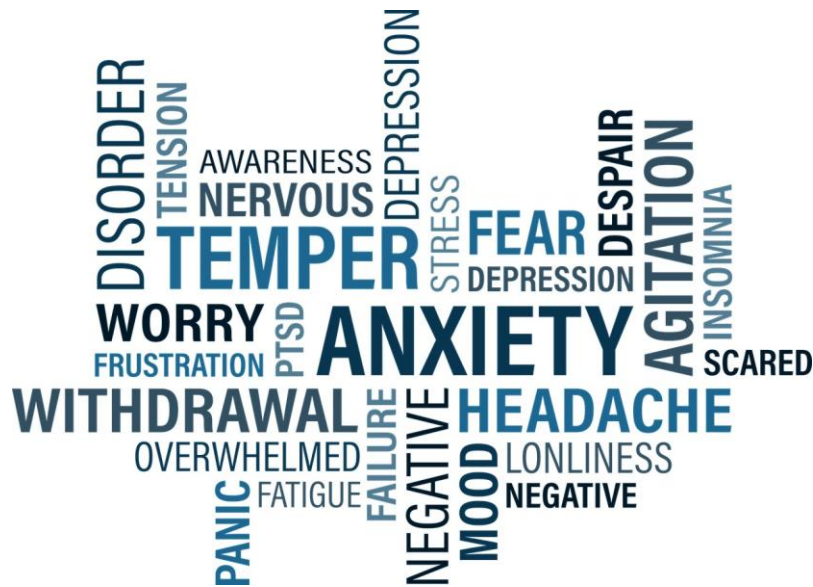
The flexibility of an interview can be a double weapon, on the one hand it can help the interviewer to adapt to the characteristics of the candidate or put him in difficulty, especially with regard to the goal.

In this chapter you will find out why behavioral interviews reduce the probability of error and you will also learn how to run an interview for your specific situation.

3.1.1. Rules for a fair behavioral analysis

Behavioral analysis is what we practice more or less when we interact with a person. Whatever the purpose, regardless of the level of formality and structure of a conversation, we are all interested in understanding the models and personality characteristics of others.

It's part of our story about human evolution. In prehistory, man has always had to understand who he is, to understand his experience and relationship skills. The prehistoric man had to do it immediately, distinguishing an ally from a neutral person or even an enemy. And this was done to ensure its survival as much as possible.



Instinctively, we still choose people in different situations based on the behaviors we see. Therefore, everyone is constantly drawn to the knowledge and methods of recognizing the personality and behavior patterns of others. We all want to know the rules for interpreting behavior, as if there were a kind of dictionary that could translate gestures, behaviors, and language patterns into internal traits.



Interpreting people is certainly a more difficult and less linear task. Before we know how to translate behaviors and how to give them different meanings, it is important to know the observation methodology and fundamental rules of behavioral analysis.

A very careful observation, but without the method, can lead to incorrect assessments. So let's look at the basic rules of observation in behavioral analysis.

3.1.2. Investigator's logic

The attitude of the behaviorist analyst must be to collect as many indicators as possible before transposing them. Each behavior, in fact, has a relative meaning when viewed singularly. If we analyze - as an example - the behavior of closing the arms itself, we can attract little information. This signal, which is usually interpreted as a closing signal, may be due to various factors (eg room temperature, subject's habits, postural factors). If, however, we notice that a particular signal appears along with other closing indices (such as looking down, reducing the number of pronounced words and the level of detail), the information is more valuable and is certainly less likely to lead to the error.

3.1.3. Following the investigator's logic (Vitale, 2015)

- *Accumulate behavioral indices*: at this stage, indicators are collected in the form of behavior. Terms must have a complete behavioral formula, so "if the subject gestures asymmetrically when speaking about the curriculum" is correct because it is an absolutely observable and objective element. Perceptions, on the other hand, can not be considered as behavioral indicators. For example, think about the phrase "I felt distracted when I asked a question about his former boss." Distraction is not something

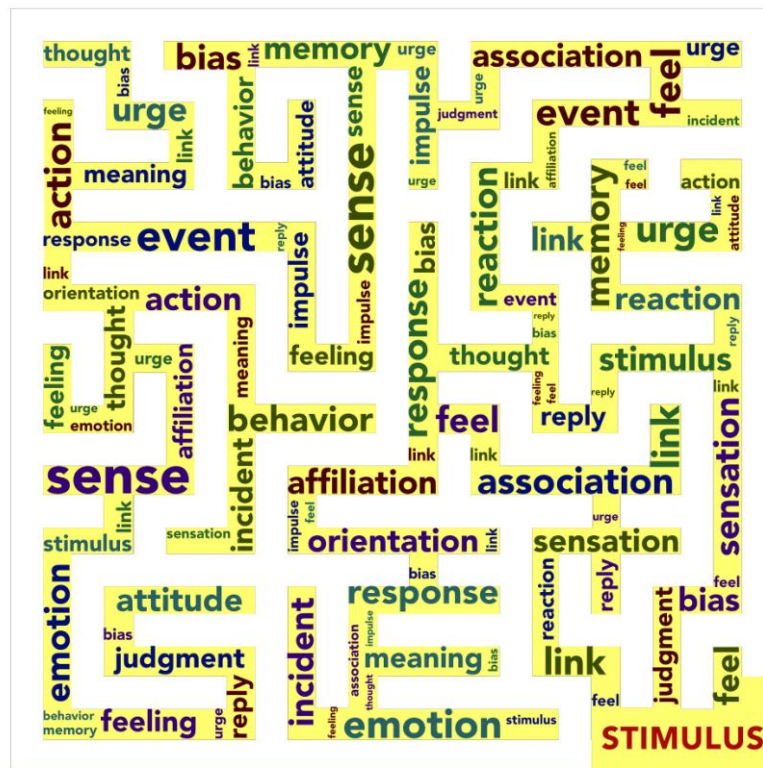
directly observable, but it is something we deduce from observable behaviors.

- *Formulating a hypothesis.* Once you have gathered the behavioral indicators, if you notice that they are going in the same direction, you can formulate a hypothesis. For example, we may notice that the person who is applying, while saying that he is "always in agreement with his supervisor", makes asymmetrical gestures, raises a shoulder and lowers the corners of his mouth, revealing perplexity, we have a whole series of incongruent nonverbal signals with what has been said. Body language, which indicates perplexity, is not consistent with the words spoken. We can therefore believe that there is at least one verbalizing element on which the subject expresses doubts, is not sure or is not attentive.
- *Check hypothesis.* Once the hypothesis has been formulated, it should be verified with a series of concentrated questions. Behavioral analysis often tells us - in an interview - which areas need to be deepened, but often does not tell us exactly where the problem is. If you find non-verbal mismatches when the candidate talks about his previous boss, you do not know the specific problem of the relationship between the candidate and the boss. For this reason, you will have to ask an in-depth, preferably behavioral and situational question that can help you gather new information. Pure Behavioral Analysis helps you understand the shadow areas in someone's verbs, but not the specific problems. For this reason, you will need to learn how to correctly formulate your questions so you can learn more.

3.1.4. Ipoteza trebuie formulată în mod probabilistic și nu sigur.

The behaviors analyzed have a relative, not absolute, value. When you see a certain behavior, the probability that certain interpretations of the meanings will be true will increase. For example, when the subject closes

the arms, the chances are that the level of detail and the number of words pronounced will be reduced. However, we can not speak of a certain estimate.



Each signal may indicate a certain psychological sense more or less certain. In this sense, it is important to analyze the univocity and uncontrollability, the two most important criteria to understand the validity of a nonverbal signal and its predictive value or how much it is able to predict certain behaviors and attitudes in the future.

Unique and uncontrollable signals are the most reliable.

If a signal can be interpreted in several ways, its predictive value is low. Imagine that you need to analyze the "head-off" signal. How important is this signal? Here are some of them:

- Social isolation
- Rationale
- Physical exhaustion

- Jenna
- Sadness
- Disabling
- Other interpretations related to the closing gesture

If we observe a single signal that has so many interpretations, the probability of finding the correct interpretation is low. For this reason, unique signals, unilateral signals, are preferable because they reduce the risk of error. The facial coding system, the most commonly used facial expression analysis system, allows you to associate certain combinations of muscle contractions with individual emotional senses.

3.1.5. Validity and Reliability

The second key indicator for the reliability of a behavioral signal is definitely uncontrollable. Clearly, any signal related to the functioning of the autonomic nervous system (such as skin color or breathing changes) is difficult to control and therefore reflects more of what is happening within a person. The same can be said about facial micro-expressions, neither of us is able to manage facial expressions by controlling them in a major form. Other signals, on the other hand, are relatively easy to control, such as posture, back orientation, legs, and gestures. Although almost all people do not realize conscious control over non-verbal communication (none of us deliberately decides which gestures to use), we all have some control over body language, and this is even more true in situations where we expect to be evaluated (Vitale, 2012).

We can talk about conscious control and unconscious control. Conscious control occurs when a person - in our case, a candidate - deliberately intends to control communication, what is allowed and not allowed to do, what is expected of him. The context creates behavioral filters that increase the likelihood of certain behaviors and reduces others.

In this sense, we can talk about conscious control. The person consciously knows that he is evaluated and, for this reason, adopts behaviors which, in his mental model, can be directed to produce a better first impression.

There is talk about conscious control when a person chooses to act or does not act in order to produce a good impression (the management of voluntary impressions). The candidate can actively look for behaviors that are usually evaluated positively and not negatively. Some candidates search online or from informal sources to find out which behaviors are best suited and often find it advisable:

- a. have an open position;
- b. keep your back straight or gone forward (to communicate the interest);
- c. to opt for formal dresscode;
- d. avoid touching the face;
- e. not to close arms and legs
- f. not gesture too much;
- g. maintain visual contact.

Sometimes, more specific advice is given:

- a. Choose clothing that attracts attention (eg, Red) or relaxes the interviewer (eg, blue);
- b. Hold hands on a radiator to give a warm hand grip;
- c. Stretching to use the posture of the body less tense and relaxed.

This is only effective in appearance and not just because many of these indicators do not have a statistical predictive value in itself. But, above all, because excessive attention to the control of one's own body language significantly increases cognitive load and results in lower quality responses.

In addition, as you can imagine, you analysts do not make a decision based solely on the fact that a person follows the rules of basic communication advice. The analysis must necessarily be deeper.

You can easily avoid controlling the conscious mind of the subject by analyzing the variation. The candidate can set his own behavior to become more credible. For example, you can decide to maintain a vertical position and make gestures lighter than usual.

These elements will be evaluated by the interviewer as a common line of behavior. Initial behavior may actually be the result of a habit. During the interview, starting from the first position, the subject will necessarily change his behavior. No subject is completely immobile. No topic always has the same position, no subject always looks the same. Even if we are in front of someone who sets their own communication, sooner or later something will change. Even though it has decided, for example, to gesture in an open manner, the amplitude and speed of movements vary when conversational topics change. The amplitude and speed of the movements can give us a lot of information. The starting point may reflect the subject's habits (the physical fatigue of that moment). Significant variations, however, may have some meaning.

The fact that a person has volunteered communication is often easy to identify and can be neutralized:

- Observing the baseline of behavior
- Observing movements that seem unnatural
- Observing that gestures and facial expressions seem asymmetric
- Observation that facial expressions are not consistent with speech (for example, before or after the word).

Voluntary communication also increases the cognitive burden and aggravates the performance of the interview considerably. Choosing the

measures to be taken, therefore, has predominant disadvantages for the candidate, especially when faced with an experienced behavioralist analyst.

It is different for those who, after a structured training, are instructed to automatically modulate their own language. Those who learn to be more relaxed and more congruent with themselves will naturally adopt a better nonverbal language. This will not be in contrast to its own way of being, and this will simply lead to a better communication style according to its own way of being. The nonverbal language we adopt influences retroactively, making us more aligned with our way of seeing our world and our values.

Conscious control - especially when it is obvious - is still a way to mislead the evaluator. Excessive use of conscious control strategies could highlight a feature of Machiavellism, a characteristic feature of the Personality Triad. This is a destructive variable that leads to negative effects on the group. These people can sometimes take leadership positions that can lead to long-lasting harm to their organization.

Candidates in the selection do not act only consciously, voluntarily, but often have an unconscious, involuntary control. All people know at a certain level that they will be evaluated and observed. This is stressful for anyone, because there is nothing more intimate than their own identity and the objective of evaluation can lead to an unconscious form of control over the candidate.

Unconscious control can be observed indirectly. There are indeed signs that the person is trying to control himself. Below are some items that show unconscious, involuntary control.

Unconscious control signals are natural and should not be considered as negative signals. There are areas of the brain associated with suppressing an action or verbalization with a positive function. If every one of us would act or verbalize without control, any social relationship could collapse.

Control is what allows us to modulate our actions, emotions and communications.

Control, however, also clearly has a negative side. We do not control only when we adapt our behavior to the context to comply with social norms. We can control when we want to omit meaningful information in front of our interlocutor or when we want to not show our emotions.

This repressed information can also be sensible and helpful to the interviewer. Significant omissions that are not identified by the interviewer may induce a series of mistakes in interpretation.

Correct identification of control signals can be very useful in conversation. We are all, in fact, accustomed to declare some of the information and to negate another.

Here are some of the behavioral indicators of impetus repression.

a. Unconscious control

Appears when we want to say something, do something we repress. There are two possible reasons for controlling behavior, word or emotion:

- Social norms suggest that this is not done, it may not be right to express certain content;
- It may be inappropriate to show content, behavior or emotion.



The first possibility is probably the simplest. If a context is particularly formal or serious, laughter is an unexpected behavior that could reduce the effectiveness of a message or lose credibility, which is why the subject could attempt to control it, the purpose is purely social and not misleading or dissimilar. If a random association between words and other stimuli, for some reason, makes a person laugh, it will tend to repress the laughter.

It is easy to recognize a particularly formal context or, anyway, to recognize what emotions are expected in a certain context based on its level of formality.

b. Control of emotions

Controlling emotions, words and behaviors, in fact, in a certain context, is often a hidden information detector. They can be meaningful and sometimes even relevant to the interview. It is important for the interviewer to recognize these control actions to allow disclosure of relevant information.

For example, a person may omit meaningful information about how to conceptualize group work, about a particular style of leadership, or, for example, about a particular organizational culture. Knowing this information only allows you to better select candidates.

There are some behavioral signs that you can identify to understand who implements unconscious control or the impulse of repression, we sum up them further:

- Lip thinning. In this type of action, the lips are drawn inward, they become less visible. When the red part of the lips is no longer visible, the action is maximum, indicating a pure control;
- Vertical pressing of the lips. This type of control action leads to the upper lip, the lower one, pressing one over the other, this

pressure causes a swelling of the upper and lower lips of the lips. The vertical pressure of the lips is also a signal of anger and unlike the first, therefore, it has a more pronounced feature of frustration or repressed fury. Frustration comes into play when an obstacle appears for the person and his purpose. Frustration, when accrued, causes verbal or physical aggression. Therefore, we can say that the vertical pushing of the lips certainly indicates control, but with a greater degree of frustration;

- Biting your lips. In this case, the lips do not rotate only inside, and the bite appears. In this case, the person exercises greater control. In fact, to repress the words, it will have to make a much stronger action, such as keeping the lips between teeth;
- Biting the lower lip. In this case, apart from control, the component of self-aggression and remorse prevails;
- Closing the fist. Normally, this is considered a sign of aggression. You can also encode it when the intensity is minimal (for example flexing your fingers) at certain stages of the conversation may also indicate the desire to keep negative content.

c. Partial, broken, fragmented gestures

When control behavior is observed, it is very important to distinguish between the type of control (respecting the type of movement) and the object of control. What is it trying to control the person?

Any kind of impulse can be repressed or controlled, a simplification that can be used only in the interview. Control actions sometimes follow a muscle contraction or a word.

- Control due to a smile. Happiness is a positive emotion. Why should a person control such a beautiful emotion? This is because happiness has its obscure part. Happiness is a model of domination,

an advantage. Thus, the person exercises control over happiness to his advantage. This is also possible in deception. Deception is a form of domination, manipulation of the reality of the interlocutor. Those who deceive have no interest in demonstrating that they are in the advantage, as this could be counterproductive. That is why deception is often accompanied by a state of happiness that comes from the satisfaction of being deceived.

- Control due to the expression of sadness. We are all educated to do our best not to experience sadness. Controlling sadness means hiding your own weakness. There is no signal that accompanies a lie, but identifying controlled sadness allows you to understand, in any interview, some of the candidate's weaknesses.
- Control due to an expression of anger or contempt. The person may have aggressive or devaluing verbal content but decides for formal or strategic reasons not to declare it. If you notice this type of behavior, keep in mind that there are actions that might appear as a result of a criticism.
- Control after the person has just said a phrase. The person can make statements and then put into practice control behavior. In this case, the person is likely to have significant information. For this reason, it is considered a nonverbal model of dissimulation. Clearly, it is important to understand if the person is thinking about information about sensitive subjects for the interview or information that is not useful to the context. Many times a person can hide because they think of something that is not relevant to the moment of the interview.
- Control after a pronounced sentence by the interviewer. People are controlling their verbal responses. It happens when I hear something they want to hide or add information. If it is not their turn in conversation, from education, it usually represses verbal

content. For this reason, it is very important to observe whether the subject is being controlled while speaking. If it does, it probably wants to give a reply, it is certainly useful to remember when doing it, and to what topics in the conversation. Perhaps the subject wants to add information about the themes he represses.

3.1.6. Simultaneous behavioral symbols

As we have seen, it is important to evaluate the changes in the candidate's behavior. Its basic behavior may indicate a state it displays at the beginning of the interview or its habits. Any significant variation is a change in the status of the subject.

Any behavioral analysis manual is based on this hypothesis, but not all behavioral variations have a psychological meaning.

Structured interviews have a variable duration and are usually quite long (eg 40 minutes - 1 hour). Some adjustments of the subject in his / her position or back position may have purely physiological reasons (eg, reactivation of movement, postural habits). One way you can determine behavioral variations due to a psychological reason to those due to a physiological reason is timing. Changes in behaviors of psychological significance usually occur when something changes into conversation.

If, for example, a candidate's behavior changes with a change in the topic of the conversation or a question, it is unlikely that this significant variation in behavior occurs at random. It is probably the question or change of the subject that caused this change.

If the behavioral variation occurs at the center of a conversation (without changing the subject) or at another random moment, it becomes difficult to evaluate the reason for changing that argument.

May be for any of these reasons:

- A stimulus word has led to behavioral variations
- A mental association of the subject with the word stimulus has led to a variation in behavior
- Some physiological reasons have caused the change of face or posture

3.1.7. Internal incongruities and ambivalence

A very useful tool for reading a person's behaviors is certainly to verify the level of congruence. Congruence is often defined as the degree of similarity between nonverbal language and words. It is usually assumed that congruous people are trustworthy because they believe in what they say. When someone claims to be happy, it is only credible if the body also conveys happiness. No one can believe in a declaration of happiness if the person who issued it has adopted a non-verbal model of sadness. Incongruity is the degree of difference between what a person says and what he does with body language. To say, for example, that he is a communicative person while the face expresses doubt or perplexity is not congruent, and that can mean dissimulation and significant omission of information.

It is good to always be careful because it is not certain that this is always the case:

- Some candidates can manage non-verbal language
- In some cases, significant omission is revealed by purely verbal indices
- Sometimes omitting a lot of data means simply slaloming the information and finally saying just real things (this does not lead to incongruity)
- Sometimes the behavior of the liars is detected by the absence of the expected behavior, and not by a behavior that reveals the lie.

Also, the level of incongruity is not always a fake detector, although it is highly correlated statistically. E.g:

- A person can express their uncertainty about how they communicate something and not the concept itself;
- The person can implement non-verbal context-related behaviors or external variables, not so much the content of the conversation (for example, the same facial expression of physical pain can certainly be associated with inconsistency in verbal content, but it could also be due to a pain related real physical problem or even the psychosomatic effect of the evaluation. The same signal has several meanings in this case.

There is not always inconsistency between verbal and nonverbal language.

There is also an incongruity in body language. Body language systems (voice, gestures, eyes, posture, facial expressions, etc.) may contradict each other. This state of internal contradiction is also called ambivalence. Ambivalence is not always a symptom of lies. Ambivalence can be defined as the simultaneous presence of two different states in relation to the same subject of the conversation.

Let us take this statement into account:

"My boss was a technically competent person, but he could not manage the group."

or

"My colleagues do not usually act as a team, but in the projects with deadlines, we were the most united group."

They are ambivalent propositions because they reflect two descriptive states on the same social object (person, group, or behavior).

Both states are normal and are often reflected by our way of speaking and using body language.

Usually, when we say or think ambivalent things, body language changes in one or more of the following ways:

A. The asymmetric gesture

Ten years ago, asymmetric behavior was considered a correlation of lies. Today this signal is more closely related to ambivalence.

We will see in which specific cases ambivalence can be related to a false statement:

- Asymmetric facial expressions: Asymmetric facial expressions are ambivalent indicators;
- Inconsistency in verbal language: for example, using a monochrome voice while the rest of the body transmits enthusiasm;
- Incongruity of gestures - the direction of the eye: eg gesturing in the direction opposite to the orientation of the head and / or the body;

Any verbal, paraverbal or non-verbal system may conflict with each other and thus reveal an ambivalence. Ambivalence has nothing to do with the false if the subject says "the two sides of the story." If the words are ambivalent (for example, "I like my job but I want to have a more flexible program") and body language is ambivalent (for example, it uses asymmetric gestures) the subject has words and gestures aligned with one another, it is not a fake detector. But if the subject uses certain words characterized by unidirectional evaluations (for example, "I like the profession") together with ambivalent language, perhaps conceals the second part of the story (for example, "even if it is stressful.")

When you notice ambiguous signs in body language, always check if the candidate also uses ambiguous phrases or sentences with unidirectional

evaluations. If you make unidirectional evaluations, consider the topic of the conversation as a thorough subject.

3.1.8. Person, Behavior, Context: Causes of Nonverbal Behavior

The behavior of a person can be understood by observing the patterns of body language and facial micro-expressions. Many of them have a stable meaning in psychology because they derive from the person's past, have an evolutionary reasoning (for example, a person opens his eyes when he is afraid, because he needs to quickly identify the source of the risk and avoid it). Some of these are influenced by cultural factors (for example, individuals belonging to North European cultures have a greater interpersonal distance than those in Mediterranean cultures). The significance of many behaviors has been studied for decades and has - especially in some cases - scientific and predictive value.

Body language can therefore allow you to understand the hidden meanings of communication, but it is something that can not be directly understood, namely:

- **Causes:** the reason or reasons that trigger a particular type of behavior. This depends on the fact that each person has a personality trait and different emotional regulation systems
- **Objects:** to which non-verbal communication refers. In other words, I can see, for example, a smile I have seen at the interlocutor and I believe credibly it is happiness. But I can not directly understand which are the causes of laughter from the pure expression of the face (a random mental association of subject, context) or from objects (laughs with me, laughs at me, laughs with other people).

There are, however, three main issues that affect the use of non-verbal schemes. In essence, they are the most important content in a person's mind

in determining body language variations. These contents are in short-term memory or working memory. It refers to the part of the memory where we process the information, we compile data. This is why it is also called work memory. Some authors such as Damasio associate the concept of working memory with the state of consciousness. In other words, we are aware of what is in the short term memory.

As for our purposes, ie the analysis of behavioral interaction in the selection process, we can say that the most probable elements present in the short-term memory will be the following:

- the content of the conversation
- the person you are talking to
- the context in which they are communicating

The conversation implies that two people change verbal and nonverbal content. In a staff selection interview, we expect speakers to focus on the content of the conversation. The selection interview has a formal purpose from the two speakers and, therefore, the general focus will be on the content of the speech. We need to consider in this case that the main cause of facial expressions and body language is the content of communication (eg, if the topic of conversation changes and the relationship with colleagues is discussed, this will lead to changes in behavior).

However, it is possible for the interviewee to focus on other important aspects of the interview. In fact, the candidate can make some of his personal mental associations between what he says and other words that are unrelated to the interview and therefore responds at a nonverbal level according to his personal associations

3.2. Analysis of verbal communication

When talking about the conscious control of the interview, people often think only of verbal communication. One of the first questions that

the person who is preparing for the selection thinks is: "What do I have to say?" and not so much: "How do I use body language?".

This simplification sometimes makes us believe that it is easier to lie with words than with body language. This leads to a second worrying simplification, namely, words are controlled at a conscious level, while body language reveals unconscious aspects. This simplification is dangerous because:

- You can control body language on a conscious level (for example, you deliberately decide to keep an open position to become more "communicative")
- It is certainly possible for unconscious factors to determine the language structure

Of course, when you face a complex task, you can pay special attention to the words you say. This is true in any situation where there is a stake. And in the selection interview is the stake. You probably have a concept in mind, but you will not be able to control many of these things like:

- specific use of adjectives
- careful selection of the determining items
- the use of pronouns
- the exact order of words
- Variations of the vocabulary (specific, non-specific, formal, informal etc.)

In other words, a conscious and careful decision can not be taken on each pronounced word. The order of words, variations in vocabulary use and other factors may reveal an unconscious influence of discourse. Here are some variables related to the verbal communication that you can see in

the interview and to which you will need to pay special attention because they can reveal the characteristics of the candidate you are interviewing.

One of the cornerstones of the analysis of the statement is that the person intends to say exactly what he says. That is, before you make assessments or deductions of verbal behavior, just look at the exact words of your interlocutor, literal linguistic analysis is often the first useful step to study its significance.

This is because the lie is demanding and that is why the person usually prefers to omit information. Those who omit the information basically say the truth, but they miss many passages. The mission of a good interviewer is to identify such significant omissions to get a complete picture of the information. Let's look at some of the elements that we need to consider during the interview.

3.2.1. How the person talks about himself. Use of Person I, II, III

During the interview, the person can talk about personal experiences to the first, second or third person. These terms are also referred to as self-referrals. The fact that a person speaks to himself in the first, second or third person can reveal the level of involvement or dissociation of the subject.

The same person can express concepts about himself with conviction or with little conviction. In analyzing the statement, consider using the singular person as an index of persuasion and accountability for certain verbal content. The highest level of conviction happens if there is an explicit use of the word "I". It's a strong sense of conviction. The use of the phrase "I am a person" should be considered less powerful because it does not contain "I".

The use of the pronoun on singular person II or singular person III indicates a greater probability of dissimulation. For example, when a person

is talking about themselves says: "When you know your colleague looks at you, you have to take care of what you are doing," it is an unconscious attempt to transfer the attention to others, and this could have implications , in a context such as that of the staff selection interview, where implicitly and explicitly the objective of the interviewee is to speak about himself in person I.

Another is the use of a third person or impersonal phrases such as: "It's great to share your own professional results with your friends and team." This phrase, without a subject, is characterized by a low level of reference to itself. By default, the subject dissociates from this statement.

3.2.2. Using adjectives

A second way to study a person is certainly to study the adjectives he uses. In this sense, the person can express an assessment of the work he is talking about. There is no separation between social objects (people, things, behaviors) and their evaluation. The person can make assessments of the facts in different ways:

- use of adjective (I think he is a good leader);
- body language (while talking about a colleague you can use facial expressions that emphasize positivity or negativity);
- using complex equivalences (these are expressions that connect two different aspects to express a conviction, for example, engagement creates results. In this case, the word "create" indicates a strong link between two aspects.

During the interview, the person can use different adjectives. These must be points of attention in an interview, because, in fact, the adjectives are directly or indirectly expressing an assessment.

So pay attention:

- the way the person is defined by adjectives or other terms: "I think I am a certain person"
- the way the person defines others: "my boss was unstable." Using adjectives can provide some information about the person we are dealing with, but it is also true that in an evaluation context, we should always ask questions about the affiliation of adjectives.

A good criterion for studying adjectives is to understand whether they are absolute or relative adjectives. Absolute and evaluative adjectives can certainly be fashionable: "good", "bravo" are so general terms that they could actually indicate anything. It also expresses a very positive assessment.

Instead, the adjectives indicating something special are more important. Characteristic adjectives are based on a certain specificity: "Creative", "Precise", "Determined", "Consistent", "Realistic" are positive adjectives (the interviewer will tend to use to define) at least specific. Of course, even more specific "good" and "bravo" adjectives could be used to induce a positive view of the self, but they already have a specificity and thus a greater chance of authenticity.

As you can imagine, the use of extensive terms such as "communicative" (in fact, each of us is communicative and we do not exactly understand what ads mean by using these words) often have no real meaning, because no one in the interview defines themselves as "closed", "static", "inflexible" and "solitary". So, we might ask: what is the purpose of using adjectives in job advertisements? How can the definition of these adjectives help us truly understand the other? If we offer suggestions in the use of adjectives, we only induce some answers and this does not lead to real data useful during the interview.

Therefore, it is very important to see the adjectives the person uses spontaneously during the interview to define themselves.

Many adjectives do not have a real meaning until we ask our interlocutor what he intends to do when he uses this adjective. The respondent may use positive adjectives that are usually used during the conversation, for example, "dynamic", "positive" and "energetic".

Remember, when a person uses a word, it implicitly refers to an entire network of associative concepts that are related to him.

Imagine that among the thousands of adjectives the person could use, he decides to define himself as "coherent" or "correct." Well, what does the person tell us? Clearly, he wants to tell us about coherence and fairness that they are two cornerstones of his way of being. But do not you think that this use of words can indicate even more? Of course, the purpose of an adjective is to remove the subjects in some way. If I talk about someone of implicit "coherence" and "correctness", they do it to distinguish the two concepts. Each adjective evokes its opposite.

In conclusion, people tend to use qualifying adjectives during the selection interview for:

- Profiling in an unspecified way (I'm good at working with the computer);
- To distinguish, in relation to a certain behavioral axis.

However, we have seen that the person can use these adjectives simply for a purpose, that is, to give the best possible impression to the evaluator.

We have two ways to understand if the person believes in what he says:

- Analyze body language when the person asserts certain things about himself to evaluate any inconsistency (for example, "I feel like I am a flexible person" using facial micro-exposures of physical pain, which shows just the opposite, namely, that the person is not actually flexible).

- Make in-depth questions, for example: "What do you mean by specifying [insert adjective]?"; "After you, what distinguishes a person [insert the adjective] from a person [insert opposite adjective]?"

Taking the previous example, we could say, "What do you mean by coherence?"; "What do you think distinguishes a coherent person from an incoherent person?"

The first question explores the personal meanings of the adjective used. The inability to define the same adjective used to define itself is considered negative. If the subject does not know how to define the adjective to be used, the primary hypothesis that follows is that of a subject who uses positive adjectives only to create positive impressions on the interviewer.

The second question evokes a conflict and asks the subject to resolve it. What distinguishes people according to the adjective?

The higher the level of specificity of explaining these questions, the greater the likelihood that the person will believe in what he says. Here are some indicators to consider:

- latency: indicates mental load. It is not necessarily a negative sign, if a person thinks to answer the question does not mean that he is manufacturing something. If creativity is important for that person, it's normal to think of it yourself before assigning this concept to another person. Obviously, the latency between demand and response must be proportional to the quality of the response. Long response times with unspecific responses are inconceivable. A long response time, but with articulated responses, has an obvious advantage.

- the amount of specific examples: the person could spontaneously refer to real events. Examples of real life are very difficult to invent, so when a person uses them, they probably have it. It is very important to pay attention - when analyzing real examples of certain factors of trust in the subject. For example:
 - references to sensory data (visual, auditory, tactile, etc.)
 - interaction between people (A performs an action B replicated to A)
 - playing conversations (Saying something to B to answer)
 - specific details:
 - their own mental states (emotions, thoughts, intentions);
 - mental states of others (emotions, thoughts, intentions);
- The amount of behavioral criteria: how often the person refers to something concrete and observable that can help distinguish a person from an adjective (ie, coherence) from a person who is not coherent;
- Presence of patterns: The person refers to other people who share this feature. If a person uses a positive adjective just to define himself, his or her way of speaking probably tells us that he is an exclusive adjective. The higher the presence of such an adjective in its own description, the greater the likelihood that such an adjective will be used to create a good impression on one's own person. The subject that claims to possess a certain feature should give many personal examples and examples of others to show that he knows this feature in detail.
- Explanation of causes: it is characterized by the use of the word - as -. The use of the word - because - supports the explanation

You could say: "You talked about" fairness, several times during this interview. But, as one can imagine, along with the literal meaning of the

word, each has his own personal vision of the concept of fairness. At this point I ask you, what is the "correctness" in your vision? "

Also, each of these introductions can be associated with the second question, namely, "How do you distinguish a" correct "person from an" incorrect "person after the introduction, the question may be asked, so you should not close the introduction with a question ("What is correctness for you? And how do you distinguish a correct person from an incorrect person?") Putting together these two questions leaves the subject freely the choice of where to start and the opportunity to respond to one of the questions. It is useless to increase the cognitive task with too many questions.

Another useful technique is to analyze the quality of adjectives used, positive (good) and negative (weak) adjectives, positive adjectives (enthusiasm), and negative (terrifying) adjectives. The person's tendency to use adjectives in these registers indicates the overall emotional tendency of the subject. Interpretations are many and must be adapted to the particular situation. However, we can say that:

- The emotional tone of the subject can influence the average use of certain adjectives, ie a positive mental state (in the case of positive adjectives) and negative (in case of negative growth);
- Excessive use of negative terms could indicate mood problems, negative mood, and attention to detail and critical analysis capabilities in problem-solving processes;
- Extreme and exclusive use of explicitly positive adjectives may indicate a state of euphoria and sometimes is related to manic state;
- Exclusive use of positive adjectives to define and negative for others is related to narcissism.

This information should be considered as a statistical correlation title, with certain tangential and non-binding ties in the use of adjectives and personality. Some Linguistic Inquiry Word Count (LIWC) have long

researched these correlations and are tracking through automated tools to recognize the personality of the writer. This tool is usable in organizational contexts to identify the personality of the writer, to identify counterproductive behaviors in the company, false texts, or various harmful intentions (Parvulescu, Vitale, 2016). This also applies in the context of selection, presentation and reference letters.

3.2.3. Deviations and variations on the subject

A linearity index of the subject is certainly characterized by how much the the question and answer is. Each question has certain language formulas that evoke certain answers. Any misconduct or variation of the topic of the subject to the questions may be his attempt to escape the exam's situation. People can certainly change the theme of the conversation and this shows a clear deviation. But sometimes deviations occur at a subtle level.

An example is the time variation: Question: "Tell me a past example in which you have demonstrated great capacity to manage a working group"

Answer: "When I manage my working groups for me, the most important thing is ..."

As you can see that the question is formulated in the past, but the person responds to the present. It is also about employee management, but in fact the shift from past to present indicates a significant omission of past behaviors, which can sometimes hide information.

Another example of deviation is the deviation from the subject.

Let's see this example

Question: "Tell me a concrete situation where you had to deal with a difficult client."

Answer: "We at XY are dealing with difficult customers, so ..."

In this case, we are talking about the difficult management of the clients, but also the subject is deviated from me to us. Of course, this can also indicate a sense of union with the group, but in fact, the question refers to the interviewee's action, and instead, the answer diminishes the subject's contribution to a generic type, making it impossible to guess the subject's reaction, interviewed in a specific situation.

3.3. The individual interview

Gandolfi (in Zucchi, 2004) defines the selection interview as "a moment of meeting between the company and the candidate, where there is a mutual evaluation (on the part of the selector regarding the candidate and the candidate regarding the selector and the company. "The challenge for the candidate to show the best qualities and to see if he is at the right company for him, instead, the company faces a different challenge, namely to understand the potential." The interview should Gandolfi suggest: "In a perspective (not short-term), it is not important to assess what short-term resource will be, but it is essential to take into account the potential of a medium-term perspective and as a result of successive rotations, tutorials, training, coaching / field training and further professional orientation (through the center's valuation).

Selection interviews can be classified according to:

- Structure level of the interview;
- Number of respondents and interviewers;
- Selected conduct mode (friendly, professional, stressful interview).

In a completely structured interview, we have an earlier definition of questions and order of questions. The same questions are put in the same way and with the same exact wording. Structured interviews usually have a sync structure, so that the duration is predetermined or moves within a certain range of minutes. What is most important and really enhances the

quality of the interview is the structuring of scoring criteria. A well-structured interview also has a way to analyze the coded response. It is important that this is predetermined and easy to interpret for each interviewer in order to avoid the creation of systematic imbalances or biased errors.

A second type of interview is called semi-structured. This is certainly the basic structure of the interview, but there is also the possibility of creating additional questions.

The unstructured interview, on the other hand, has no form of organization or planning and has no established objectives from the beginning.

Investigational and validation studies have suggested that the level of structure of the interview goes hand in hand with confidence. It is therefore advisable to adopt structured or semi-structured interviews based on the degree of personalization of the tools. In any case, the scores should be evaluated only by standardized scores and unanimously accepted by several evaluators.

Characteristics	Unstructured	Semi-structured	Structured
Planning	Not	Prepared	Preplanned
Direction	Not	With flexibility	Yes
Communication	Two directions	Finished with purpose	One direction
Flexibility	Yes	Yes	Not
Time	Do not prefix	Partially prefixed	CODE
Standardization	Not	In areas, not in ways	Yes

Table Argentero (2001)

3.3.1. Types of individual interviews. The situational interview

One of the most important methods of structured interviewing is the Situational Interview (Latham, Saari, Pursell and Campion, 1980). A prerequisite of this interview, which seeks to understand the future behavior of the subject, is the need to drive it into the concrete and typical situations of a specific professional activity. The intentions of a person's behavior are closely related to his or her professional future. The method set out by the above mentioned authors is based on:

a. Definition of questions.

At this stage, consultants have to perform a job analysis. In the first chapter of this manual, you have already read an interview model. In particular, it is very useful to refer to all critical incidents, preferably recurrent, situations that may occur at work. You can also chat with experienced people (evaluated as such by supervisors) to get to know the solutions traditionally used by high-performance people. The key question in this regard is: in the face of a specific critical situation, how do people with high performance behave? And how do those with poor performance behave? These data are useful for establishing a behavioral and evaluation scale to be used in the next step. In the case of very large companies, it may be desirable to send a structured questionnaire to all people in order to find a large number of possible behaviors. The main question that should be addressed to the participants, be it an interview or a questionnaire, is "how would you behave in this situation?" The questionnaire can also be used to list all relevant situations so that they have a complete list. If you have too many significant situations to include everyone in the interview, you can always choose to sample those situations by choosing only the most important ones.

b. Determination of the scaling scale.

As I have written, it is very important to first define how the scores are awarded. In this case, you need to summarize your behavioral responses and classify them into several groups (for example, very good answers, appropriate answers and inappropriate answers). Such answers must be anchored at a numerical scale. Usually, these scales go from 1 to 5, where 1 is the inappropriate response, 3 is equal to the appropriate response - and therefore sufficient - and 5 is the appropriate response. An example is a scale anchored to a situational problem by Weekley and Gier, 1987. This question is built on the analysis of the work of a watch dealer.

A customer enters the store to pick up the watch he has repaired. The watch had to be ready a week ago, but the repair shop did not return it yet. The client is very upset. How should you behave in this situation?

1. I tell the client that the watch has not yet been returned from the lab and come back another day.
2. I apologize, tell the customer I will check to see if it is repaired and call him later.
3. I call the lab while the customer waits.

Sample Question from a Situational Interview to Selection of Sellers in Watches (Source: Weekley and Gier, 1987):

- Prepare a pilot study, ie a study that verifies the clarity and adequacy of the structure of questions regarding psychological and psychometric characteristics (sensitivity, validity, reliability).

- Run a panel interview, that is, an interview with several evaluators. This procedure allows assessment of the consistency of the evaluators, the extent to which different evaluators, referring to the same verbal responses of the subjects, assign the same scores. For structured and standardized techniques, the score should in no way depend on the individual preferences and characteristics of the interviewers, but only on the technique. For this reason there should be no difference in rating.
- Repeat the procedure for each candidate. In the case of several evaluators, the final score should be the average score given by each evaluator. In any case, the interview should always be in a comfortable and non-stressful environment.

3.3.2. Description of Behavioral Interview

There is talk of a behavioral interview (BDI, Janz, Hellervik, Gilmore, 1986; Yeung, 2009). The underlying hypothesis of this type of interview is that the best predictor of future behavior is past behavior. An example of this type of interview (Janz et al 1986) is that "in the cashier's job, it may happen that the accounts do not match: in terms of your experience, tell how you behaved when you figured out that the money in the cash register did not match what was expected. "

The behavior-based interview has a high level of validity and reliability. But it has an immediately detectable limit, not all candidates have a past so they can deliver a significant amount of past events closely related to the job they are looking for. This is certainly a very useful tool in cases where experienced staff is needed. It is possible to use the advantages of situational and behavioral techniques with STARS (Yeung, 2008). STARS is the acronym for: Situation, Task Actions, Result, Summarize.

- a. **Situation.** It begins with an open theme, which asks the person to refer to a precise example of his past behavior. It is useful to start

with one of these language formulas "Talk to me about a situation ..."
or "tell me, as an example, a real situation in which you actually have
..."

- b. **Task.** Ask a question about what the candidate mentioned in the reference. In different situations, the context in which this task arises depends on more people, you should try to isolate the specific contribution of that person as much as possible, for example, "what role did you have in this case?", was asked to do in this context?
- c. **Actions.** This is one of the crucial parts. What did the person do? What are the actions and behaviors that can be observed in the context? So, you can ask such questions as "what did you do or did you say in this context?" Or "what were your actions, your strategies to solve this problem?"
- d. **The result.** You can close some of the questions by asking for the results.
- e. **Summary.** Summarize by paraphrasing what the subject said. This is not only useful to confirm that you understood exactly what the subject was saying, but also to better store your answers and possibly use them in the future.

3.3.3. Structured interview

The structured interview is a method designed by Pursell, Campion and Gaylord (1980), which includes the use of four types of questions.

- a. Situational issues
- b. Technical questions
- c. Practical evidence
- d. The requirements of the person carrying out the task

As we will see, the integration of several techniques is certainly a way to increase confidence. Situational issues are similar to those outlined in

the relevant paragraph. Technical questions or workplace knowledge are instead personalized about the role that the resource, in the case of a past test, will need to cover. An example of working knowledge is: "When you get a piece for the car after you fix it, why do you have to clean all the components first?" Or "When do you have to change the filter in the coffee machine?". Other questions, on the other hand, can respond to the work requirements in a particular sector, for example: "Some workers have to operate at big heights and with a precarious security level. Say what the feelings and observations are when you think you have to do these tasks. "

a. Open questions

Each technique has complementary advantages and disadvantages, but with integrated analysis it may be useful to define:

- Structure of the interview;
- Objectives and features to be detected;
- Open questions to enter the theme to detect general issues, to break the ice;
- Situational questions;
- Behavioral questions;
- Scoring models;
- Predictive Performance Indicators;
- Key performance indicators;
- Statistical models for selecting scientific staff.

Here are some key questions that can be used as a model of open questions, namely, introductory questions to open a conversation theme and let the candidate answer freely. These types of questions, although not fully structured, have a general function, namely to study the basic line of the subject's usual behavior, how it is expressed in words and body language. You can also include limited questions about the scoring model, but the

open question is ideal for measuring the baseline, as it gives the subject the freedom and the time to respond and express it in his own way.

During these questions, therefore, the usual information is collected, but also attempting to obtain data about the average behavior of the candidate. Only in this way will you be able to understand the significant variations in behavior. It is good to use only a few questions for each form to be included in the interview. The open questions can lead to very long answers.

- During the interview, we will discuss your CV and we will study together if our organization can give you an adequate insight into your characteristics, so you can know yourself, would you like to summarize the main aspects of your CV?

Note:

- Regular subject behavior (baseline)
- Appearance
- Education, observation of conversation times
- Degree of cooperation (direct answer to questions)
- Average communication speed
- Ability to introduce details, analysis / abstraction ability

School curriculum

Topics:

- Study titles
- Relationship with colleagues and teachers

Examples of questions:

- Do you want to summarize the school curriculum freely?
- What do you prefer and what materials do you prefer?

- What were the difficulties and problems you encountered? How did you solve them?
- Did you run out-of-school activities? How were they integrated into the study?
- What are the causes and consequences of possible times of crisis?
- What was the subject of your graduation thesis?
- What is your opinion about the degree obtained?

Note:

- Adaptability / Flexibility
- Interpersonal relationships
- Intellectual competencies
- Consistency between the exposed CV and the lucrative role

Professional Curriculum

- First job
- Stable jobs
- Occasional jobs

Examples of questions:

- Can you present your work plan?
- What are the most important steps in your career development?
- What were the best results?
- What were the weakest results?
- What were the main issues? How did you solve them?
- Have you supervised other colleagues? What was your experience?
- What were the main issues in the company? What would you do to avoid them?

Note:

- Consistency between the curriculum and the proposed job

- Results
- Adaptability / Flexibility
- Motivation
- Relations with colleagues and supervisors
- Supervision / driving style (if any)

Motivation at work

Topics:

- Ideal work place
- Real work place
- Determining options at work

Examples of questions:

- What caused you to change jobs in the past?
- In general, what do you expect from this job?
- What has brought you the most work satisfaction?
- What are the aspects of the work that you consider less satisfactory?
- How are you concerned about this profession? What are the main benefits?
- If you could choose in full freedom what job would you do?
- If you did not choose this selection, which do you think are your alternatives?
- What are the results of the work you expect to achieve? How long?
- What is important to you today?
- In five years, where do you see? Do what?

Note:

- Verbal / nonverbal congruence
- Consistency between expectations and real role

- Motivation and core values

Personality / Character

Topics:

- Characteristics of the positive personality;
- Characteristics of negative personalities;
- Relationship between personality and lavatory role.

Examples of questions:

- What criticisms are most often addressed to you? What do you think about this song?
- What are your responses and defenses in stressful or frustrating situations?
- How much are you attached to your ideas? How do you defend them?
- What are the main features of your personality?
- Have you been in a conflict situation? How did you do it?

Note:

- Social abilities
- Emotional stability
- Initiative
- Autonomy
- Creativity
- Adaptability / Flexibility

b. Questions you do not ask

This paragraph summarizes the main misconceptions of a selection interview: The main issues of these questions are the disintegration of the

relationship with the candidate and / or the poor quality of the data obtained.

Challenging and stressful questions

Some evaluators use their power position to conduct stressful interviews. As we have seen, this type of interviews ruins any relationship. In addition, the stress in the interview can lead to errors, can produce a certain tension and can damage the quality of the answers. You will never be able to understand if the subject's tension is related to the way the questions or the subject of the conversation are addressed.

Some interviewers use harsh ways to "measure stress" by asking questions like:

- Given your lack of experience, why do you think we should hire you?
- What would you say if I told you you were the worst / weaker candidate I've ever seen in my career?
- How can you deal with stress? How much is 47 multiplied by 13?

If you want to measure your stress abilities, use the behavioral interview or situational questions. For example, you might ask:

- Kindly, can you tell me about a case where you had to decide to give priority to certain activities and not to others in the shortest possible time?
- Talk to me about a case where you have been in a state of uneasiness.
- Tell me about the most rude colleague or client you've had to interact with in the past year.

c. Questions of hypothesis

These are the questions that the candidate often solves, guessing the right answer. It also does not refer to past behavior. Here are some examples:

- How would you feel if you did not reach your sales goals?
- What would you do if two clients requested a meeting at the same time?
- How could you deal with a complex task?

The risk of satisfactory answers is very high. It also moves in the hypothesis field, thus reducing the predictive level of the questions.

d. Pseudo-psychological questions

These are apparently introspective and projective questions that do not have predictive validity on candidate behavior:

- What characters in history would you invite to dinner?
- What do you do when you feel sad?
- What is your favorite day time and why?

As regards not only psychology but also ethics, it is also necessary to evaluate the relevance of these subjects for work. Such questions may be questionable.

e. Worrying questions

These are questions that suggest a certain type of answer or at least contain a response within them. The probability of obtaining satisfactory answers is very high.

- Time management is the most important thing for this job at work.
What are your skills in this regard?
- Do you think teamwork is useful to get good results?

- Does it bother you to work overtime?

It is much better to ask behavioral questions and / or refer to past times:

- Tell me about a case where you had to manage your time.
- When was the last time you had to work longer than you expected?
- Explain to me when you worked in a team, working closely with your collaborators to achieve a goal.

f. Multiple questions

These types of questions are problematic because:

- Increase cognitive load;
- Allow the interviewer to start at one of several points and often focus only on a question;
- Simultaneously measures several factors and makes their analysis more complex;
- Produce very long responses and therefore difficult to follow.

Here are some examples of multiple questions:

- Talk to me once you've exceeded your supervisor's expectations. Tell me what happened, in what contexts and what were your expectations?
- Why did you choose this specialization? How do you think these studies have prepared you for the world of work and what do you think you should learn?

g. Self-evaluation questions

These types of questions have a high risk of producing compliant responses. No candidate is evaluated in a totally negative way, because it is

- in this context - against their own interests. In fact, the claim about strengths and weaknesses has nothing to do with real strengths, it could measure the ability of self-analyzing, which can hardly be compared to actual behavioral data. Here are some examples of self-evaluation questions:

- What are your strengths?
- What are your weaknesses?
- If you were to make a measurement, on a scale of one to ten, how much do you think you are capable of facing a critical situation?

Often, the best answers come from those who deceive their abilities, from those who overestimate themselves. In addition, detailed responses to weaknesses are often retained by participants. Expectations of oneself and real abilities are actually different things.

h. General questions

General questions do not lead the candidate at all and are so extensive that too many variables are produced in the answers. An extreme variability of responses puts into question the structured possibilities of scoring. The open questions defined in the previous paragraph may have the greatest aspiration to detect the subject's usual behavioral line but should not be used to produce scores and assessments. Here are some examples of general questions:

- Speak a little about yourself;
- What are you proud of more than anything else?
- What are the main regrets of your life?
- How do you treat critical customers?
- How do you make decisions?

If we want to address broad themes, it is always better to turn these questions into behavioral ones:

- Tell me about a case where you had to deal with a difficult client;
- Can you describe to me an event in which you had to make a complex decision?
- Tell me about your current post (and use the question just to ask additional questions about the skills of interest);
- What are the projects you are most proud of in the last year (then analyze STARS actions and results)?
- Talk to me about a mistake you made in the professional field and about how you treated it.

3.4. Group interview

Group interviewing is a method used to detect subject interaction in social contexts. It is particularly useful where group work is important and the resources to be included will actually have to work in a team. It is less interesting or usable in cases where the primary job of the person is expected to be characterized by "one-to-one"

Group interviewing is often used as a complement to the individual interview to be able to face the two tools. A candidate may indeed declare that he has a great ability to work in a group but then does not disclose it in the real example of interaction with the group. It is recommended that you do not exercise with teams of over 12 people if there are several candidates, in which case it may be useful to repeat the evaluation on different days. Regardless of group mode and exercise, you must always have a scoring behavioral scheme. It is advisable to use an observer for up to 4 people.

An example of exercise that takes place in a group is self-presentation. In this case, the person is asked to present and include in the presentation the aspects they consider relevant to the peer review, each participant having 10 minutes to organize the presentation and 3 minutes to attend. It is

recommended that you print the exercise and read it for everyone. This is an example of text that you can use:

I introduce myself. At this stage, you will be presenting to the group. You have three minutes during which you can tell, describe, present and characterize elements and experiences that you consider significant about yourself. Before you talk, you have ten minutes to think, to organize a speech that will be supported in the presence of candidates and recruiters. Below is an example of evaluation of the presentation exercise.

Indicators	0	1	2	3
The candidate exposes himself in a clear and direct manner				
The candidate observes the participants as they speak				
The candidate uses the verb crosstalk				
The candidate uses manipulative gestures				
Participants are interested				
The candidate uses illustrative gestures				
The candidate has a verbal behavior and non-verbal behavior				
The candidate talks about irrelevant items				
The candidate speaks too fast				
The candidate speaks too slowly				
The candidate effectively uses humor				
Uses all three minutes without stopping before				

The candidate repeats				
The candidate uses closing positions				

Note:

The adjectives and attributes you use to define yourself:

The adjectives and attributes you use to define others:

Credentials expressed with the X □ Y model

Coding manual for self-presentation

0 - never

1 - little

2 - frequently

3 - complete

- The candidate expresses in a clear and direct manner. The candidate expresses in a clear, grammatically correct manner, without the involvement of discourse, with no unnecessarily complicated or extremely formal terms. The candidate observes the participants as he speaks;
- The candidate observes the participants and pays attention to the different listeners in the classroom without focusing only on a person or, for example, on the evaluators alone;
- The candidate uses "uhm", "ehm" stops too much, "let's say" and all the linguistic forms to fill the conversation spaces without actually expressing useful content for self-presentation;
- The candidate uses manipulative gestures - they are gestures of self-contact (eg playing with a pen cap, touching the face, etc.);
- When participants have an interest - these should be considered as signs of interest: the body orientation of the participants, in the direction of the person presenting, visual contact, body inclination to the front;
- The candidate uses illustrative gestures - the good illustrative gestures should be considered as those that actually indicate the content of the communication (that is why the inconsistent ones are not worth mentioning in the corresponding section);
- The candidate has an inappropriate verbal or non-verbal behavior or manifests emotions that are not congruent with what he / she is expressing, contradicting;

- The candidate goes out of the question - he does not talk about himself or expresses concepts that are completely relevant to selection (for example, he talks about himself only regarding private life without ever referring to what is related to studies or work). The candidate does not express concrete content;
- The candidate speaks too fast - it is a signal of tension, it is hard to follow;
- The candidate speaks too slowly - it is difficult to follow him because of excessive leanness, he feels he does not know what to say;
- The candidate effectively uses humor - smiles, uses jokes, word games, the audience welcomes the humor of the presenter;
- The candidate uses the three minutes - he uses all the time he has at his disposal without repeating or stopping for a long time;
- The candidate repeats - uses the same arguments repeatedly or repeats the same concepts;
- The candidate uses the closing positions - arms or legs crossed, hands in his pocket, body orientation opposite the interlocutors, distances themselves from the interlocutors, leans back.

Measured variables

- The candidate exposes in a clear and direct way. Communication capabilities
- The candidate notices the participants as they speak. Communication capabilities
- The candidate uses manipulative gestures. Stress management
- The candidate shows interest, persuasion
- The candidate uses illustrative gestures. Communication skills
- The candidate has an incongruent non-verbal language
- The candidate leaves the subject. Communication capabilities

- The candidate speaks too fast. Stress management
- The candidate speaks too slowly. Communication skills
- The candidate effectively uses humor. Communicative + persuasion
- The candidate repeats. Communication skills
- The candidate uses the closing position. Communication skills

Weaknesses:

- Communication skills
- Persuasion
- Stress management



3.4.1. Study of Group Interaction

The first exercise can be used to break the ice and provide a basis for information to all participants. It is very important to note how much the participants look at the other members of the group or if they try to avoid their eyes.

It is a good practice to do at least one group exercise. There are many examples of scenario presentation, in all these cases the group needs to finalize with a joint decision. Exercises are not allowed where participants will have to play different roles as this would violate the parity between the participants. By way of example, we present a classical group interaction. This type of exercise has a limited duration, usually leaves 5-10 minutes to read and prepare for the exercise and about 30 minutes of free talks during which observers complete the standard observation grid.

Example - Aselenization

Consider yourself part of a crew of a spacecraft. The initial flight schedule included a meeting between your ship and your mother ship at a preset point of the illuminated surface of the moon. Unfortunately, due to a problem, your ship had to make an emergency landing and you're down 200 km from where the second space ship was. In the maneuver carried out, the ship has suffered irreversible damage, most of the items on board are broken and some crew members are injured.

Then you will find a list of the 15 devices that are still usable and you can choose to use only a few of these items so you can cross the 200 km of the road separating your ship from the mother ship. Set a ranking of the most important devices by writing a number from 1 to 15 depending on their relative importance, indicating 1 most important device and 15 least important device. Consider your knowledge of the moon environment before making any decision.



Object	Importance
Matchbox	
Concentrated food	
Silk for parachute	
Two 45 caliber cannons	
Skimmed milk powder (dehydrated)	
2 cylinders of oxygen	
100 books	
Portable heating	
Nylon cable (50 meters)	
Monthly constellation map	
Ingot and tool to swell	
The magnetic compass	
Water (50 liters)	
Medicines for oral and injectable use	
Walkie talkie powered by sunlight	

Bales's grid according to Interaction Process Analysis (IPA) model

Any behavioral analysis of the group requires a standard analysis grid. One of the most commonly used grids for group analysis is called the Bales Grill.

Name: _____

Category	Frequency	Total
1) Looks friendly, overwhelmed by others, offers help, gratifies		
2) Jokes, laughs, is pleased		
3) Agrees, expresses acceptance, seems consistent		
4) Provides suggestions, directives		
5) Express opinions, assessments, express feelings, wishes, analyzes		
6) Provides information, repeats, clarifies, confirms		
7) Requests information, clarifications, confirmations		
8) Ask for opinions, assessments, analyzes, feelings, desires		
9) Ask for suggestions, directives, ways to act		
10) Disagrees, passively refuses, seems too formal, rejects help		
11) Manages tension, asks for help, tends to escape from the situation		
12) Shows hostility, devaluates others, defends or puts it in the foreground		

The table should be understood as a frequency table, it must be filled in the second column adding an X for the concision whenever the behavior described in the first column appears. Only the end of the exercise we can calculate the number of Xs entered in the table to calculate the final amount to be included in the third column.

- The purpose of this table is only about how content is treated and does not connect itself. For example, we can see a participant who "gives instructions" as described in the category, but we will never write what the specific directives (content) are. These 12 categories are usually grouped in higher order categories as follows:
- *Attempts to respond (Cat.4, 5, 6);*
- *Questions (Cat 7, 8, 9)*
- *Working area (Cat 4, 5, 6, 7, 8, 9)*
- *Positive reactions (Cat 1, 2, 3)*
- *Negative reactions (Cat.10, 11, 12)*
- *Socio-emotional area (Cat 1, 2, 3, 10, 11, 12).*

Category 1 - "Demonstrate friendship"

It includes:

- behaviors such as "greeting", "approaching others for conversation", "physical contact", "extending an invitation", "expressing sympathy / understanding, etc .;
- "protection" behaviors, "positive evaluations of others", "defense of others" manifestations of "protective attitude", "encouragement, praise, approving expression";
- exchanges of ideas and projects;
- thanks, expressing respect, expressing admiration;
- getting out of context;
- behaviors to reduce disagreement between people;

- assertive, friendly, non-task responses.

Category 2 - "dramatizing" / "joke"

The actions included in this category represents a set of dominance and nonconformity behaviors in terms of group values, including deviating behaviors: the theme that shares these actions is the presence of messages with emotional implications. Content can also be very different, with jokes, acts designed to alter mood or even nonverbal behavior.

Category 3 - "in agreement"

This type of behavior refers to a set of friendly and conformist tendencies to what the group claims: it can agree with words or body language. These include signs of interest, attention, exhaustiveness and anticipation of the views of others.

Category 4 - "Give suggestions"

The actions included in this category represent a set of trends of domination and conformism to what the group asserts, which is based on the mission principle. Includes task tracking duties, attention management, task information. It also includes trying to guide or suggest. Pure suggestions should be placed in this category and will refer to tasks without any particular emotional connotation.

Category 5 - "Express opinions"

These are expressions without value, without acceptance or rejection of others. The category contains different subcategories within it, such as obligations (intentions and guiding principles). "I think we should react to this," "I always believed that ..." Introspection, reasoning, calculation, hypothesis and the effect of connection analysis causes, all of which, including any expression of regulatory normative aspirations , the need to attain certain values, any manifestation of serious and reverent attitudes

towards common values and intentions are verbal expressions and assertions that can be traced in the thought processes of tasks.

Then all verbal expressions and indications related to the thought processes related to the task are included in categories such as introspection, reasoning, computation, re-evocations, hypotheses and all sorts of assumptions, understandings and processes that lead them, logical elaborations, classifications, patch-effect analysis, cause-effect. It also includes deductions and actions to understand the motivations and emotions of others.

Category 6 - "Provides information"

This category should include information that is not contagious, be it friendly or critical. Also, it should not contain suggestions and precise instructions on what to do. Examples of phrases in this category are "on seventh day there is a party," "the wall is touched by turning right," "Mario has stomach aches." Does not include emotional-affective elements.

Category 7 - "Request information"

In this category, just as in category 6, only questions that are meant to contain factual, objective, purely descriptive data, without any emotional connotation, should be included in this category. For example, "what time is it?", "Who called?" It also includes indirect questions: "I'm curious to know when we're going to lunch," "I'm not sure of the exact time."

Category 8 - "Ask opinions"

These are calls for opinions, therefore, affirmation of value, without any special force in addressing the positive or negative response. There is no pressure for the subject to agree with a certain vision. Attitude is friendly and not dominant. There is no force in terms of conformism with the group. Here are some examples: "And what do you think about it?", "I wonder what that may determine, in your opinion" and the like.

Category 9 - "Ask suggestions"

In this category, all questions based on the task should be included. They can also be statements of obedience, subordination. Suggestion is required to act in the direction of someone else. For example, "What do we need to do?", "How can I do this?".

Category 10 - "Disagree"

Includes actions with negative effects that are at the beginning of a conversation sequence. They disagree. For example, "no," "disagree," "is unacceptable", it is a reaction to an action of others that the person disagrees with. If the answer is strong and emotional, it is necessary to say how "hostility" is shown.

Category 11 - "Manifests tension"

These are subordinate and non-conforming actions that are not in line with the group's objectives. These are very different actions, indicating agitation (alarm, discomfort, resistance, skin color changes, tremor), but also include statements of verbal and nonverbal anxiety.

Category 12 - "Demonstrate hostility"

There are negative and hostile actions. These include:

- Hostile, dominant, moral actions directed at the control of others;
- Incomplete and controllable actions without moral or anti-competitive attitude;
- Inconvenient and non-compliant actions;
- Hostility exclusively related to the way the tasks are performed;
- Sacrifice and victimization;
- Satisfaction, frustration, lack of attention, boredom.



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