

Performance Management in Sheltered Work Centres for Disabled

Lourdes Canós-Darós¹, Cristóbal Miralles¹, Juan A. Marin-Garcia¹, Julio J. Garcia-Sabater¹

¹ Grupo ROGLE. Departamento de Organización de Empresas. Universidad Politécnica de Valencia. Camino de Vera s/n 46022. Valencia. {loucada, cmiralles, jamarin, jugarsa}@omp.upv.es

Keywords: Disabled Employees, Performance Management, Sheltered Work Centres.

1. Introduction: Sheltered Work Centres for Disabled

Current practices for the treatment of the handicapped prescribe meaningful job activity as a means towards both a more fulfilling life and societal integration (ADEPSI, 1997). In many countries, these practices have facilitated the development of Sheltered Work Centres for Disabled (SWD) that are contributing to decrease their high unemployment rates. Just as in any other firm, these centres must be efficient, since they compete in real markets, but at the same time they have to promote their workers always taking into account and respecting their limitations.

According to laws, a handicapped is a person whose possibilities of educational, laboral or social integration are diminished as a consequence of a possibly permanent, innate or not, deficiency in his or her physical, psychical or sensory abilities.

The SWD are semi-protected companies that have almost all handicapped employees in the staff. The structure of an SWD is based on the development of a productive activity, the usual participation in market operations and the offer of rewarded jobs to disabled people. The assignment of jobs also provides an attendance by fitting personal and social aspects together with the job.

In ordinary firms it is not easy to measure and control human resources practices, processes, costs and benefits and to represent personnel variables in an indicator. But in this special environment, with so heterogeneous workers, this is even more complex and further human resources issues that need to be taken into account are reported; also evaluating the most adequate indicators to measure the disabled workers performance (Soler et al., 1998). These indicators were the basis for the Performance Management system that is also described, and that was designed, validated and successfully applied in nine sheltered work centres for psychical handicapped, and that contributed to minimize the serious motivation problems that workers of these centres used to suffer (Canós and Miralles, 2007).

Appropriate job placement of handicapped persons gives these individuals a feeling of independence, usefulness, responsibility, and mobility. However, persons with disabilities face substantially greater unemployment rates and significantly lower wages than persons without disabilities. The World Health Organization estimates that 10% of the population, around 610 million people worldwide, are disabled. Of these, 386 million people are at the active labour age and experience very high unemployment rates (fluctuating from the 13% in the UK to the 80% in many emerging countries). In this sense in the US, as noted in the Americans with Disabilities Act (ACT) "historically, society has tended to isolate and

segregate individuals with disabilities, and, despite some improvements, such forms of discrimination against individuals with disabilities continue to be a serious and pervasive social problem”.

Unemployment of disabled people is higher than general unemployment. The real problem is the low level of activities done by handicapped and one of the main reasons is the lack of labor opportunities. Disability is usually identified with difficulties of adaptation to work, training costs and professional education, low performance, bad qualification and, at last, there is not an interest to contract handicapped people. From the 80's, some laws and norms have been developed to protect the employment and rights of disabled people in order to contribute to the non discrimination and the equality to get or to maintain a job.

There are certain circumstances which distinguish persons of disabilities successfully integrated into the work force from those who become unable to work because of their impairments. In this sense, an effort must be made by managers to make the integration of disabled persons easier (see Figure 1). This can be achieved by assigning tasks to workers with consideration to their capabilities and respecting the constraints of each individual.

From our experience, the principal obstacles experienced by the disabled when looking for employment are:

- Accessibility issues in the physical environment.
- Labor market policies.
- Attitudes and prejudices of non-disabled people, especially job providers.
- Labor structure and work organization.

Although much progress has been made regarding the first two issues, this progress is not always translated into better employment rates essentially due to the lack of improvement in the other two points: the employers' prejudices and the rigid workplace organisation.

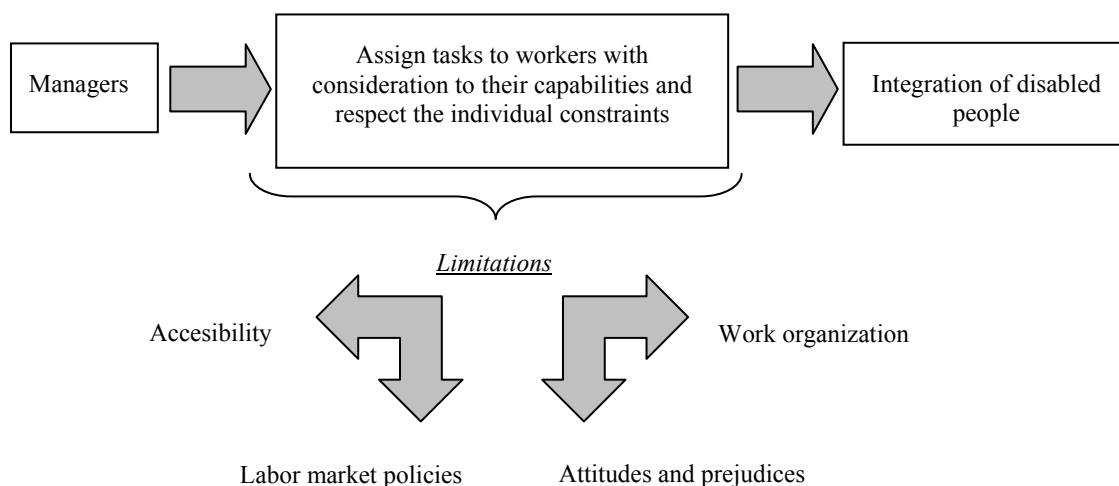


Figure 1. Process of integration of disabled people

This model tries to move away from the traditional stereotype that considers disabled people as unable to develop continuous professional work. Just as in any other firm, a SWD competes in real markets and must be flexible and efficient enough to adapt to market variations, but at the same time must respect the workers limitations and must help to improve

their skills so that they can be integrated in ordinary companies. Only being efficient SWD can grow and give jobs to more disabled; gradually integrating people with higher levels of disability and also promoting as many as possible in ordinary firms, which is in fact its primary aim (Miralles et al., 2007).

In the last years many SWD have been created, which has significantly contributed to achieve these objectives. But this explosion has been so fast that the scientific community and the public administration have not been able to provide tools to SWD to facilitate and support this process. In this sense, among many other desirable issues, it is necessary to generate Management approaches that consider the complexity of these centres in this double role of competitive agent in real markets and integrative social actor. In this sense, the classical Management Science approaches too often consider human resources as standard from many points of view; evidencing the need of both a review of these approaches, and the design of new more open proposals.

These proposals should be generated thinking not only in workers in SWD's but also in ordinary firms, so that the real socio-labour integration of disabled individuals in companies is also facilitated.

In this paper we deal with the evaluation and definition of useful performance indicators applicable when we face heterogeneous workers with different capabilities, abilities and limitations. With this aim, some important characteristics of the human resources management in SWD are analyzed, evaluating the most adequate indicators to measure the workers performance.

2. Performance indicators for disabled

According to a classical definition, the measure is the assignment of numbers to objects or events (in the sense of consequences or results) following some rules. This implies the use of indicators to measure the results (Courret and Igalens, 1988). The results are the consequences of derived problems from the employment of workers in the company. These observable results are criteria to judge a situation. All the indicators provide results, but we have to distinguish between the ones which are consequences and the ones that are an explanation of intermediated situations.

Every measure element involves some problems that have to be clarified. Identifying a problem can provide quantitative and qualitative consequences. For instance, rotation can be a source of losses by identifying the monetary-evaluated cost (replacement cost) and non monetary cost (for example, dissatisfaction). An indicator as number of days or absence hours can be used to evaluate the level of consequences of the phenomenon, but it says nothing about causes. To diagnosis them, it is necessary to refer to another kind of theoretical model to verify the presence of explaining factors, for instance, the physical inability to do a job, the culture of the company about absence, work conditions, etc.

There are many indicators to be used in the company's analysis. The responsible has to know their nature and conditions to provide an accurate interpretation.

An indicator is a measure tool that characterizes a phenomenon. It can be applied to evaluated results in terms of quantity, costs, behaviors, attitudes or opinion. Indicators respect certain conditions of use, understanding and costs, bringing reliability and validity to the process. They can adopt the form of raw data as a quantity (number of labor accidents, training costs, etc.) or they can be a quotient (Candau, 1985). This one is the most used form.

A unique indicator does not exist to show the social situation of a company in a concrete moment. Moreover, the responsible face to different indicators from different matters.

Because there are a lot of consequences from a phenomenon, it is necessary the use of numerous indicators in order to get a measure. For instance, dissatisfaction can be linked with absenteeism, delays, sabotage, mistakes, negligences, etc.

We can get a set of indicators to reflect social life in the company in a given moment. Nowadays, it is a problem to present a collection of indicators accepted by all the stakeholders, because they have different goals and interests. Every group of stakeholders will have its own values and beliefs and they will try to choose the best indicators according to their ideas. To accurately show social life in the company, it is necessary to combine indicators. So, they become a more real source of information.

A criteria to classify indicators is the nature of the collected information:

- Indicators to measure facts (hard). They measure observed phenomena, for instance: absenteeism, rotation, accidents, delays, etc.
- Indicators that reflect opinions (soft). They show judgements to be measured by using samples to allow the quantification of results.

An indicator does not mean anything by itself. Its value must be compared with a norm or standard to identify differences and to evaluate its importance to make conclusions about a problem.

A reliable and valid indicator has to be compared with standards to detect significant differences about an emerging problem. Standards are points of reference of a result. Standards are targets. For example, collective agreements, laws, procedures and techniques, objectives and goals, theoretical models about human resources management or the culture of the company. We can find standards in or outside the company, as sectorial, regional or national means.

We can use different internal and external approaches to determine standards. The use of external standards from other companies is not possible if the indicator is different for the companies or if companies are not comparable. For this purpose, the same group of experts have to value the involved companies. For instance, the comparison between absenteeism rate does not have a meaning unless the results consider the units (hours a day) calculated by using the same procedures, the same staff structure (age, experience, etc.) and comparable technology. Internal approach refers to standards from the company.

Table 1. Indicators from external and internal point of view.

External approach	Internal approach
<ul style="list-style-type: none"> • The current value of the indicator in a company with a similar technological size. • The value of the industrial average or the value of the product's market. • The value of the observed indicator in the leader company of the sector. 	<ul style="list-style-type: none"> • Previous values of an indicator, taking into account accidental happenings. • The differences between the results in the opinion tests. • Forecasted behaviours. • Defined and formalized procedures. • Statistical definition of a deviation.

We must consider standards are contingent to the company situation and to the life-cycle of the product. Criteria used to judge the return are not the same depending if the product is in the introduction step, in maturity or at the end of the cycle. So, in the development phase it is more important the acquisition of personnel while in maturity the stability is higher. Also, in the last phase, more people leave the company. In the same way, diversification policy will

determine criteria. Diversified companies look for objective measures (productivity, profits, production, etc.) while single business companies use intermediate indicators and subjective evaluations to measure the performance (planning, control, etc.). On the other hand the management philosophy determines the criteria of efficiency. In some companies, a high rotation rate is desirable, while in other companies stability in employment is essential.

We can not talk about an homogeneous group of disabled people since they have different limitations, interests and needs. So, different levels of disability are related with different gradations of labor competencies. It also depends on if the disability has its origin in genetics or it is cause of an accident or disease. In this context, the situations of handicapped to get and to maintain a job are different. In laws, it is not always clear the different levels of disability or handicap we can observe, but this is an important information to contract workers and to adjust the job to their competencies.

In any company, what can not be measured, can not be controlled and therefore, it can not be the origin of any decision. It is difficult to measure, control and understand the human resources practices, organizative processes, costs and benefits. If also the managers do not ask for this analysis because it is not positive for the company and they have not been trained in this line, it is explained why the human resources department has not showed its added value in a formal way (Hammer, 2007).

Three ergonomic work-place design approaches have been suggested for a disabled person (Webman et al., 1992): (1) selection of a suitable workplace, (2) work instruction and training, (3) work place design. The handicapped worker should be restrained only when neither improving individual abilities by work instruction and training nor revising workplace design is feasible.

In this sense it is also interesting the study (Chi, 1999) where, from a sample of 1285 jobs, job titles which can be adequately performed by various types of disabled are analyzed including: visually impaired, wheelchair dependent, learning disabled, mental retarded, hearing impaired and individuals with emotional disturbance. It is showed how, despite the level of education and professional skills, severely impaired individuals are at a great disadvantage for highly professional jobs, and without job aids, very few jobs can be adequately performed by them, especially when talking about sensorial disabilities. Fortunately, technologies are producing new patterns of work organization including that of taking information work to people as contrasted to transporting persons to their work. This suggests considerable potential for persons who find personal travel difficulties. Also, aids have now been developed and supplied to control systems by voice or to shift from visual to auditory or tactile information perception.

Despite these progresses the disabled workers often develop tasks that do not provide a big satisfaction according to Maslow hierarchy. Nowadays, for disabled individuals these activities can be very interesting and useful to develop their social aspects. Notice that handicapped have to fight with daily barriers and especially those with psychical disabilities, who also suffer family super-protection, educational and training deficits or consequences of these disadvantages in personality.

Integration and evaluation are two policies very important in the human resources management for disabled people. Labour integration is the end of a process that allows disabled people to have maximum autonomy and independence. This is good for the self maintenance from a personal and social point of view. A complete integration is possible through the employment.

To get the integration of handicapped, we have to achieve some goals (Soler et al., 1998):

- Improve competencies and resources from disabled people.
- Guarantee professional training according to the needs of handicapped and the labour market.
- Facilitate employment contracts for disabled people.

To achieve these goals, some actions have to be implemented:

- Develop social abilities for searching a job by applying updated personalized guides about the more probably growing sectors in a region.
- Inform the disabled people about training, employment and ways to entry in the labor market.
- Spread information everywhere by using new technologies of communication.
- Create data bases containing, for instance, information about labor market, projects, institutions, employment, training, subventions, laws, etc.
- Know potential employment fields.
- Know the most sensitive sectors to contract disabled people.
- Develop different strategies in order to facilitate hiring of disabled people.

Traditionally, evaluation procedures were focused on people. The idea was that the analysis of personal characteristics as abilities or behaviors, compared with the required profile for a job, could help to the decision making (Truch, 2001). For this purpose, some tools have been used, for instance, attitudes analysis, valuation of job samples, analysis of tasks, behaviors, abilities, competencies, etc. (Lantegui Batuak Fundación, 1999).

It is important for the evaluation of disabled people to consider the following parameters:

1. Work place analysis, taking into account physical dimensions and the whole system.
2. Study of people's characteristics. It consists in the valuation of abilities and the establishment of a diagnosis evaluation that allows to know the current performance of a disabled.
3. Comparison between abilities required for a job (including their dimensions) and abilities to be developed or the ones we can observe in the employee.
4. Make decisions to integrate employees in the company and facilitate the understanding of processes.

We can list three parameters to better study a specific job for handicapped:

- Management capacity or autonomy for a job.
- Number of tasks involved in the developing of activities required for the job.
- Specialization level required to develop some tasks in a new job and the relation between them and their complexity.

Other important indicators are the work level in developing activities corresponding to a job; success level in the achieving of tasks, in terms of quality and quantity; relationship with colleagues in the company; responsibility level assumed for the decision making about tasks and corporative culture.

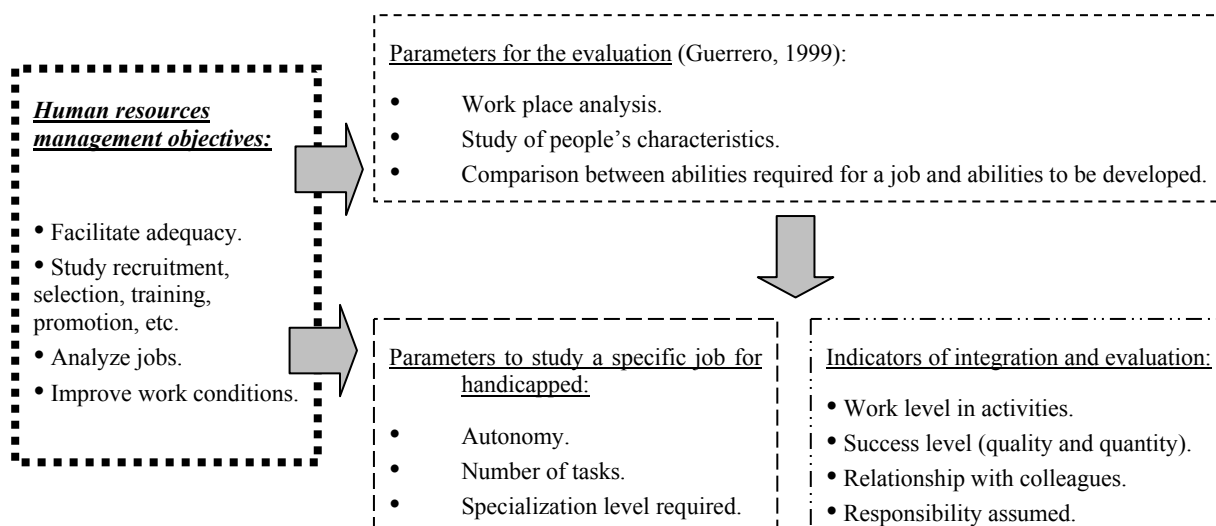


Figure 2. Indicators for integration and evaluation of disabled.

These indicators are used in integration and evaluation policies for human resources management as it is showed in Figure 2. Also, we can use more indicators, in order to achieve in a general way the following human resources management objectives:

- Facilitate adequacy between person and job.
- Identify and study some variables about human resources policies as recruitment, selection, training, promotion, etc.
- Analyze jobs.
- Improve work conditions.

Although we can find indicators about disabled people referring to personal characteristics (for instance: memory, attention, self-cleaning, talking, spatial concepts, perception capacities, information processing, family relations, etc.), our work is focused in production processes. In this context, we can observe in Table 2 some useful labour indicators for psychical handicapped:

Table 2. Indicators for disabled.

Concept	What is about?
Work Attendance	Absentism
Punctuality	In the beginning of the day and after breaks
Focus	Concentration in tasks
Constancy	Continuous work
Work rithm	Speed about development of tasks and non usual changes
Risks or mistakes	Because of a lack of attention
Use of tools	Use of tools and machines to develop the tasks of the production process
Learn about tasks	Gradual learning about new activities
Care of material	Good use of resources
Organization	Location and order of resources to do tasks in a better way

Cleaning	Of the work place
Understanding	Exigency level of tasks according to previous explanations
Autonomy	The employee do (not) need special supervision
Initiative	Generation of ideas to face difficulties
Interest in work	Attitudes in the company, ask for the results of processes
Responsibility	Ability to make decisions about tasks and resources
Help others	If some people have a problem.
Adaptability	Rotation of jobs or tasks
Motivation factors	Individual or group job, internal or external job, etc.
Relationships	They are about hierarchy, colleagues, stakeholders, etc.
Integration in a group	Isolated or leader

3. Conclusions

In conclusion, organizing work and design jobs for disabled people is a difficult task. On one hand, people have limitations to take into account about the responsibilities and activities to be developed. On the other hand, some companies are not interested in these employees. The measurement of human resources practices is complicated. To be able to measure the performance of employees, we use standards and indicators. For this, we showed different indicators for evaluation, integration, and others in general, to be applied in the performance measurement of disabled, not only valid in this kind of work centres but also in ordinary firms that may integrate disabled individuals in their workforces. Also it is interesting to show the implementation of these indicators inside a global performance management system designed and successfully applied in some SWD for psychical handicapped. Its validation trough different case studies demonstrate how some serious motivation problems of disabled workers can be minimized by considering heterogeneous indicators adapted to every individual.

Acknowledgements

Partially supported by Project TIN2008-06872-C04-02 from Spanish Science and Innovation Ministry, PAID-05-08-002-721 and PAID-06-08-2431 from Universidad Politécnic de Valencia.

References

- ADEPSI (1997). La formación para el empleo de la persona con discapacidad psíquica, Manual de profesionales de centros ocupacionales. Las Palmas de Gran Canaria.
- Candau, P. (1985). *Audit Social. Méthodes et techniques pour un management efficace.* Vuibert, Paris.
- Canós, L.; Miralles, C. (2007). Evaluation of performance indicators for sheltered work centres for disabled. 37th International Conference on Computers and Industrial Engineering, Alejandría (Egipto).
- Couret, A.; Igalens, J. (1988). *Audit social.* PUF, París.
- Chi, C.F. (1999). A study on job placement for handicapped workers using job analysis data. *International Journal of Industrial Ergonomics*, Vol. 24, 337-351.

Hammer, M. (2007). The 7 deadly sins of performance measurement (and how to avoid them). MIT Sloan Management Review, Vol. 48 N° 3, 19-28.

Lantegui Batuaak Fundación (1999). Método de los perfiles, Edición propia, DL Bi-423-99.

Miralles, C.; Garcia-Sabater J.P.; Andres C.; Cardos M. (2007). Advantages of assembly lines in Sheltered Work Centres for Disabled. A case study. International Journal of Production Economics doi:10.1016/j.ijpe.2007.02.023

Soler, G. et al. (1998). Nuevas formas de empleo para personas con discapacidad. Promi.

Truch, E. (2001). Knowledge management: auditing and reporting intellectual capital. Journal of General Management, Vol. 26 N° 3 Spring, pp. 26-40.

Webman, P.; Sale, P.; Parent, W.S. (1992). Supported Employment: Strategies for integration of workers with disabilities. Andover Medical Publisher, Massachusetts.