

127 - CONSTRUCTION AND VALIDATION OF THE MEASUREMENT INSTRUMENT OF QUALITY OF WORK LIFE BASED ON WERTHER E DAVIS THEORETICAL MODEL

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1. INTRODUCTION

It's notable that the work has evolved in the past decades. The advance in science and in technology made that the worker has adapted to these changes that affected the labor life and non-labor life. The health and the well being of the collaborators were gradually being valorized every time more and more. It was created indexes to evaluate the relation work-worker, in which it's embraced the Quality of Work Life (QWL).

In the past what could be called the humanization of work started with the Industrial Revolution, when workers demanded better conditions of work, a reduction of a day's work and a fair wage. Better work conditions were given to the workers, and it was realized that these conditions made workers more active in the in the company (PILATTI; BEJARANO, 2005). This shows that of the satisfaction of the man is directly related to the production. Valuing the relation work-man it's important to evaluate the QWL, in a reciprocal manner to the company and the worker.

QWL has been a theme widely discussed in the Knowledge Society, and it can be treated in a very wide and subjective term and it has become a challenge to conceptualize it. The subjectivity of QWL foments the creation of theoretical models distinguished for its evaluation. The most frequently used models found in the literature are from Walton (1973), Hackman and Oldham (1974), Westley (1979), Werther and Davis (1983) and Nadler and Lawler (1983).

Even though there's a great variety of theoretical models of QWL, most of those are not measurement instruments, which makes more difficult to procedure with empirical researchers that involves quantitative data for this variable. In this perspective the present paper has the goal of developing a QWL's measurement instrument based on the model of Werther and Davis (1983).

2. THE MODEL OF QWL OF WERTHER AND DAVIS (1983)

The work in post-industrial society has become humanizes, having a better valuation of the relation work-worker. It was realized from then, the importance of an evaluation of Quality of Life and Quality of Work Life, in reciprocal way to the worker and to the company.

Quality of Life and Quality of Work Life are wide and subjective terms, which became a challenge the form of conceptualizing them. Even there distinguished terms, these have a strong relation and it is not possible to dissociate both the variables (PILATTI; BEJARANO, 2005).

The relevance of the theme in exam fomented the search for ways to evaluate QWL. Although many factors influenced QWL, most are directly to the job redesign, turning them into something more productive and satisfactory. Other factors, such as supervision, the payment of benefits and the job project influence the QWL, but the job is the one closely related to the worker and because of that reaches a high level of QWL, it should have a job project since "the jobs are a link among the people and organization" (WERTHER; DAVIS, 1983, p. 73).

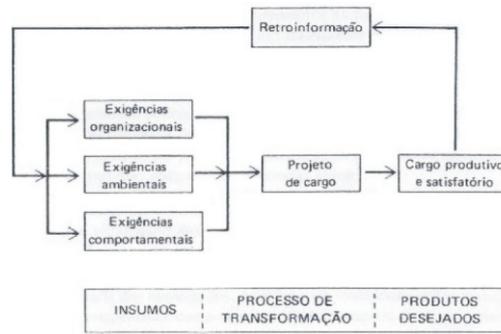
It's important to show that, according to Werther and Davis (1983), not all the problems are affected by the development of the work and can be solved through the job redesign. Factors such as technology, tradition and even production economy can interfere in any changes, and it's important the personal department have a good knowledge to confront organizational, behavioral and environmental challenges. It's necessary also a balance in the human needs and the goals of a certain job. Any changes in the balance in of these can affect directly the QWL. The factors that influence the QWL and job project are:

Environmental	Organizational	Behavioral
- Social	- Proposition	- Need of human resources
- Cultural	- Goals	- Motivation
- Historical	- Organization	- Satisfaction
- Competition	- Departments	
- Economical	- Jobs	
- Governmental	- Activities	
- Technological		

Chart 1 - Factors that influence the job project and QWL

Source: Werther and Davis (1983)

The job project is a challenge for the personal administration, to be appropriate in the elaboration. According to Werther and Davis (1983), to have a satisfaction in the company and the worker side, there are demands that need to be taken in consideration and appropriately combined with a job project, which will bring a productive and satisfactory job. These demands are in behavioral, organizational and environmental categories. However, when these demands are not done, it can cause a lack of balance, creating problems of satisfaction and demotivation to the worker. In picture 1 it is illustrated the material/product of a job design:



Picture 1 - Framework material/product of a job design
 Source: Werther and Davis (1983)

Seeing it's need a good understanding by managers to obtain a good job project and following a the index of QWL satisfactory, Werther and Davis (1983) show elements that can be taken into consideration for the job project, affirming that these are necessary for an effective job project:

Organizational Elements	Environmental Elements	Behavioral Elements
- Mechanical Approach - Work Flow - Work Practices	- Abilities and availability of workers - Social Expectation	- Autonomy - Variety - Task identity - Feedback

Chart 2 - Elements of job project
 Source: Werther and Davis (1983)

The elements of the job project are partitioned in a series of sub-categories. The organizational elements present in the job project are directly related to effectiveness in which the job of a worker can be efficiently projected to achieve the top notch of the productivity.

With the mechanical approach has the goal to minimize the time and effort to workers to identify each task of a job. The identification of tasks are grouped resulting in the specialization, therefore increasing the efficiency of the relation worker effort, time to finish a task, cost of labor and time of apprenticeship and training.

The work flow is strongly influenced by the nature of the product or service, where it's necessary to find a balance and sequence for each job, so the job is done effectively. The Work Practices are brought from traditions or collective wishes of workers. From this ideas which job has its own way of being done, and thus should proceed to finish the job.

The sub categories are related to the environmental elements of the job project and show the ability and availability of employees that need to be balanced with the efficiency of workers that will do a certain job, being the level of training suitable according the job. It's important to emphasize that the influence of the external environment and the social expectations cannot be ignored to the acceptance of a job project.

The worker needs to be fully satisfied with the job project which was given, otherwise the lack of satisfaction created makes a few vacancies of jobs difficult to be fulfilled, and it can damage the QWL.

To project a job, should not considerate only the efficiency, because it would be omitted the human needs. Therefore, it highlighted the importance of the behavioral elements, represented by the index autonomy, variety, task identity and feedback. The environmental elements interfere directly in the job project development.

The autonomy given to a worker and the responsibility from what its accomplished, providing the freedom to make decisions and more responsibility are what enhances the level of self-esteem and sense of acknowledgement. Without autonomy the worker can become apathetic and not do well his/her tasks.

The variety gives to the a worker a sense of competence and satisfaction for doing the different tasks e to execute different abilities, avoiding boringness and fatigue that can result in mistakes when doing an activity.

The task identity, when given to workers, brings with itself the sense of realization, because it's possible to see the job completed, evidencing the responsibility given. If the level of responsibility is decreased the workers usually feel less proud of themselves.

The feedback refers to the information available to workers about their own development. This information can evaluate the performance and if necessary improve it even more. In case of lack of feedback, the worker tends to feel demotivated.

To accomplish these changes objectifying the improvement of QWL is not an easy task, and in many cases the resistance of their own employees. It should be attentive to these changes not affect negatively another factor. There should be a balance among the organizational, environmental and behavioral elements of the job project so that this be satisfactory. Abarking many different facets of the labor life, these elements show the indexes to obtain QWL.

3. METHODOLOGY

The present research consisted in the construction of a QWL's measurement instrument based on the theoretical model of Werther e Davis (1983). The proposed instrument is formed by closed question and with answers based on a five-point Likert scale, following WHOQOL response scale, being the following scales used in the present study:

SCALE	0%	25%	50%	75%	100%
INTENSITY	Not at all	A little	A moderate amount	Very much	An extreme amount
	Not at all	Slightly	Moderately	Very	Extremely
EVALUATION	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
	Very poor	Poor	Neither poor nor good	Good	Very good
	Very unhappy	Unhappy	Neither happy nor unhappy	Happy	Very happy
CAPACITY	Not at all	A little	Moderately	Mostly	Completely
FREQUENCY	Never	Seldom	Quite often	Very often	Always

Chart 3 – Response scale of QWL's measurement instrument of Werther and Davis
Source: Adapted from Grupo WHOQOL (1998)

The present paper was done in different stages as following:

- a) Writing of a theoretical referential boarding the model of QWL of Werther and Davis, aiming to know the criteria and sub-criteria of evaluation in the referred model;
- b) The criteria and sub-criteria are transcribed in an interrogative form. All the questions were formulated from the five-point Likert scale, resulting in the QWL's measurement instrument;
- c) Content validity of the instrument through the judgment by researchers of the area;
- d) Application of the instrument in a sample of 70 workers, entailed to different sectors and age group, variety of education level and equally distributed among both genders.
- e) To guarantee the internal consistence of the instrument, it was used the Cronbach's alpha coefficient from the application of the instrument.

The methodology used in this study has aimed the psychometric satisfactory properties of the proposed instrument, to guarantee this to really measure the QWL and also to return reliable results to foment empirical researches of quantitative character in the labor area.

4. THE PROPOSED INSTRUMENT

Based on the organizational, environmental and behavioral elements of the job project chosen by Werther and Davis (1983), the instrument developed in this study is composed by 22 questions. Two of these show the general perception of the individual of his/her QWL, while 20 questions are related to three elements of the job project proposed by Werther and Davis (1983): environmental, behavioral and organizational. These elements are composed by dimensions and within each element were distributed the questions. The subsections present in each element were the same of the original model.

The questions are disposed at random sequence and in a way that the answers cannot be identified to which element of job project which question is related to. The questions that compose the instrument, separated by element of the job project and sub-criteria are:

Organizational Elements	Mechanical approach	Q2- How much do you find adequate the amount of time you spend to do your daily work activities? Q7- How often do you learn something through your job? Q11- How much the company where you work encourages you to improve your skills through courses or lectures?
	Work Flow	Q4- How much are you happy with you journey of work? Q13- How do you measure the activities that are before and after you develop you job are well planned?
	Work Practices	Q6- How the level of technology your company is suitable to your job? Q12- How do you evaluate the work practices (the way your job is done) in your company?
Environmental elements	Ability availability and of employees	Q10- How much of your job needs your abilities for complexes tasks? Q17- In which way your knowledge allow you to use the technology available in this company?
	Social expectations	Q19- How do you evaluate the image of the company you work transmits for the society? Q21- How much are you proud of working in this company?
Behavioral elements	Autonomy	Q9- How often do you have authority to take decision? Q16- How much are you satisfied with the autonomy given to you at work?
	Variety	Q5- How many different abilities does your job demand to finish a task? Q15- How often do you perform different tasks, that are not repetitive and boring activities?
	Task identity	Q3- How often do you do complete tasks, from beginning to end? Q14- How much do you know the complete operation of your job? Q20- How much are you proud of your job?
	Feedback	Q8- How much are you satisfied with the instruction that given to you? Q18 - How often do you receive feedback from your work performance?
General aspects of QWL		Q1- How much are you satisfied with the activities you do at work? Q22- How do you evaluate your job?

Chart 4 - Questions of QWL's measurement instrument of Werther and Davis

In all the response scales, index 1 represents the more negative answer, while the index 5 represents the more positive answer. The scores of the sub-criteria of elements in the job project are calculated based on the average of the question of each sub-criteria. The scores of the job project elements are based on the average of the sub-criteria from each element.

Cronbach's alpha obtained in the instrument application was 0,8858, presenting according to Freitas and Rodrigues (2004), an elevated internal consistency.

To calculate the score and descriptive statistics of the elements and sub-criteria of the job project, it was developed a tool on Microsoft Excel software which automatically creates this calculus. The scores were converted in a centesimal scale and shown in charts. All the calculus and charts are automatically done by the tool, and the researcher had just to tabulate the data in the worksheet. The referred tool and complete instrument developed in this study are available on the site: <http://www.brunopedroso.com.br/wertherdavis.html>.

5. FINAL CONSIDERATION

In the Knowledge Society the QWL evaluation is widely discussed. With humanization of work, the worker has been valued and has been given better work condition to do the job. From the moment when it was realized the true meaning of the worker for the company, the measurement of the QWL has intensified in the companies.

Being QWL a subjective variable, was developed throughout the decades many theoretical models to evaluate this one. Most of these models are not measurement instruments, being only qualitative theoretical models. The operationalization of these models allows to increase empirical researches in area.

Even being two decades old, most recent instruments to evaluate QWL having the focus on the job project that are not found in the literature. Through this angle, the study is built in the construction of a QWL's measurement instrument based on the theoretical model of Werther and Davis (1983).

The Cronbach's alpha of 0,8858 resulted from the application of the final version of the instrument and the content validity process done by researchers in the QWL area became possible to make available a specific instrument of QWL evaluation with satisfactory psychometrics' properties with the direction to organizational, environmental and behavioral elements of the job project.

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CONSTRUCTION AND VALIDATION OF THE MEASUREMENT INSTRUMENT OF QUALITY OF WORK LIFE BASED ON WERTHER E DAVIS THEORETICAL MODEL

ABSTRACT:

This paper aims the construction and validation of a measurement instrument of Quality of Work Life based on the Werther and Davis theoretical model. It was surveyed the criteria and sub-criteria of the Werther and Davis model, writing this indicators to the interrogative form, using a five-points Likert scale on the response scale. After that, it was realized the validation with the evaluation by researchers of the Quality of Work Life area and concluded by the instrument final version application, looking for measuring the internal consistency of the same. It concludes that was possible the creation of an specific measurement instrument of Quality of Work Life, with satisfactory psychometrics' properties, focused on organizational, environmental and behavioral elements of the task project.

KEY-WORDS: Quality of Work Life, measurement instrument, Werther and Davis model.

CONSTRUCTION ET VALIDATION D'UN INSTRUMENT D'ÉVALUATION DE LA QUALITÉ DE VIE AU TRAVAIL SUR LA BASÉ SUR LE MODÈLE THÉORIQUE DE WERTHER ET DAVIS

RÉSUMÉ:

Cet article demonstre le développement et la validation d'un instrument d'évaluation de la qualité de vie au travail à partir du modèle théorique Werther et Davis. À cette fin, nous avons effectué un sondage auprès des critères et sous-critères du modèle en question, en transcrivant les indicateurs à la forme interrogative, en utilisant une échelle de réponses du type Likert de cinq alternatives. Puis il y a eu la validation par l'évaluation de la par chercheurs dans le domaine examiné et finalisé par l'application de la version finale de l'instrument afin de mesurer la cohérence interne de celui-ci. On peut conclure qu'il a été possible la disponibilization d'un instrument spécifique pour évaluer la qualité de vie au travail avec des propriétés psychométriques satisfaisantes, en se concentrant sur les facteurs organisationnels, comportementaux et de l'environnement dans les occupations.

MOTS-CLÉS: Qualité de vie au travail, instrument d'évaluation, modèle de Werther et Davis.

CONSTRUCCIÓN Y VALIDACIÓN DEL INSTRUMENTO DE EVALUACIÓN DE LA CALIDAD DE VIDA EN EL TRABAJO BASADO EN EL MODELO TEORÉTICO DE WERTHER Y DAVIS

RESUMEN:

El presente trabajo tiene como objetivo la construcción y validación de un instrumento de evaluación de la Calidad de Vida en el Trabajo con base en el modelo teórico de Werther y Davis. Para tanto, se realizó un levantamiento de los criterios y subcriterios de tal modelo, transcribiéndose los indicadores para la forma interrogativa, utilizando una escala de respuestas del tipo Likert de cinco alternativas. Enseguida, se realizó la validación por medio de la evaluación por parte de pesquisidores de la

área en examen y finalizado por la aplicación de la versión final del instrumento, en el intuito de medir la consistencia interna deste. Se concluye que afuera posible la disponibilización de un instrumento específico de evaluación de la Calidad de Vida en el Trabajo con propiedades psicométricas satisfactorias, con enfoque en los elementos organizacionales, ambientáis y comportamentales del proyecto de cargo.

PALABRAS LLAVE: Calidad de Vida en el Trabajo, instrumento de evaluación, Modelo de Werther y Davis.

CONSTRUÇÃO E VALIDAÇÃO DO INSTRUMENTO DE AVALIAÇÃO DA QUALIDADE DE VIDA NO TRABALHO BASEADO NO MODELO TEÓRICO DE WERTHER E DAVIS

RESUMO:

O presente trabalho tem como objetivo a construção e validação de um instrumento de avaliação de Qualidade de Vida no Trabalho a partir do modelo teórico de Werther e Davis. Para tanto, realizou-se um levantamento dos critérios e subcritérios do modelo em exame, transcrevendo-se os indicadores para a forma interrogativa, utilizando uma escala de respostas do tipo Likert de cinco alternativas. Em seguida, realizou-se a validação por meio da avaliação por parte de pesquisadores da área em exame e finalizado pela aplicação da versão final do instrumento, no intuito de mensurar a consistência interna do mesmo. Conclui-se que fora possível a disponibilização de um instrumento específico de avaliação da Qualidade de Vida no Trabalho com propriedades psicométricas satisfatórias, com enfoque nos elementos organizacionais, ambientais e comportamentais do projeto de cargo.

PALAVRAS CHAVE: Qualidade de Vida no Trabalho, instrumento de avaliação, Modelo de Werther e Davis.