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SUBJECT AREA: PEOPLE AND INTELLECTUAL CAPITAL MANAGEMENT

# The Influence of the Overqualification and Learning on Individuals' job Satisfaction

*A Influência da Sobrequalificação e da Aprendizagem sobre a Satisfação do Indivíduo no Trabalho*

*La Influencia de la Sobrecualificación y del Aprendizaje sobre la Satisfacción del Individuo en su Trabajo*

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## ABSTRACT

The purpose of this work was to check the influence of overqualification and individual's learning at work about their satisfaction. In order to achieve this objective, a survey was conducted that featured a final sample of 238 observations. The hypotheses held negative influence of overqualification and exploitation learning on satisfaction. Another hypothesis presented the positive influence of the exploration learning on satisfaction. Before the hypotheses checking, the scales were subjected to exploratory factor analysis and their internal consistency and dimensionality were assessed. With the construct validity and consistency of measurements

guaranteed, the Multiple Regression Analysis was applied to test the hypotheses. Results showed, as expected, that overqualification and exploration learning influence the satisfaction indeed, but the exploitation learning does not influence satisfaction, as supported by the third hypothesis.

**Keywords:** Learning. Overqualification. Job satisfaction.

## RESUMO

O objetivo do presente trabalho foi verificar a influência da sobrequalificação e da aprendizagem do indivíduo no trabalho sobre sua satisfação. Para sua consecução foi realizado um levantamento

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(*survey*) que contou com amostra final de 238 observações. As hipóteses sustentavam influência negativa da sobrequalificação e da aprendizagem do tipo *exploitation* sobre a satisfação. Outra hipótese apresentava influência positiva da aprendizagem do tipo *exploration* sobre a satisfação. Antes da verificação das hipóteses, as escalas foram submetidas à Análise Fatorial Exploratória e tiveram dimensionalidade e consistência interna avaliadas. Com a validade de construto e consistência das medidas garantidas, foi aplicada a Análise de Regressão Múltipla para teste das hipóteses. Os resultados apontaram, como previsto, que a sobrequalificação e a aprendizagem tipo *exploration* influenciam de fato a satisfação, mas que a aprendizagem *exploitation* não exerce influência como sustentada pela terceira hipótese.

**Palavras-chave:** Aprendizagem. Sobrequalificação. Satisfação no trabalho.

## RESUMEN

El objetivo de este trabajo fue verificar la influencia de la sobrecualificación y el aprendizaje de un individuo y su satisfacción en el trabajo. Para su ejecución, se realizó un análisis (*survey*) que contó con una muestra final de 238 observaciones. Las hipótesis sostenían una influencia negativa sobre la sobrecualificación y el aprendizaje de tipo explotación sobre la satisfacción. Otra hipótesis presenta la influencia positiva del aprendizaje de tipo explotación sobre la satisfacción. Antes de la verificación de las hipótesis, las escalas se sometieron al Análisis Factorial Exploratorio, evaluándose su dimensionalidad y consistencia interna. Con la validez del constructo y la consistencia de las medidas garantizadas, fue posible aplicar el Análisis de Regresión Múltiple para probar las hipótesis. Los resultados mostraron, como era de esperar, que la exploración del tipo de sobrecualificación y del aprendizaje influyen en la satisfacción, pero no influye en la explotación de aprendizaje sostenida por la tercera hipótesis.

**Palabras clave:** Aprendizaje. Sobrecualificación. Satisfacción en el trabajo

## I INTRODUCTION

One of the major contemporary concerns is related to the changes in organizations and the need to understand how learning can influence response of organizations and its employees in dynamic environments. In this scenario of changes, “learning is recurring irrespective of the level of analysis, and includes the individual and their interactions: group, intergroup, organizational and inter-organizational” (ANTONELLO, GODOY, 2010, p. 324). Such clarification is necessary in order to avoid confusions given how interdisciplinary the organizational learning concept is, and, despite having apparently paradoxical issues, this concept allows us a multifaceted theoretical view of a given organizational phenomenon (GIOIA, PRITE, 1990).

While the complexity of this issue may be related to the interest of scholars from different schools of thought, the starting point in relation to the concept was provided by Argyris and Schon (1978), who used the expression “organizational learning” to explain the process wherein organization members play the role of learning agents for the organization.

In this regard, while this paper focuses on individuals, particularly based on March's (1991) work, from the *exploration* (new possibilities) and *exploitation* (old certainties by means of improvement of the same process, without recurring to innovation) concepts, we should point out that the results aimed exceed the individual dimension, as this is a multi-pragmatic perspective (LEWIS; GRIMES, 2005). We decided to keep the original terminology for the concepts given the significant amount of local research already using this topic as theoretical framework, particularly the work of Weick and Westley (2004).

A matter underlying the learning process is the professional qualification, as it is the ability of individuals to meet organizations' expectations in connection with their performance and

behaviors. While organizations are seemingly likely to want qualified professionals, in certain cases, the investment in professional and academic qualification may be a reason for non-promotions or even dismissals.

According to Boucinhas Filho (2008, p. 13), this irregular conduct, herein called discrimination for overqualification, “has pervasive social effects, as it discourages investment in education and professional qualification, and violates the right to subjective development of each individual.” While the “overqualification” is easily found as a research field in Law studies, the matter seems to be very promising also in management studies, as in the work of Maciel and Camargo (2013), who relate overqualification to attitudes and behaviors in the work environment.

For Erdogan and Bauer (2009), the literature tends to address overqualification as a negative phenomenon, although a paradox lies in this observation. While some researchers defend that negative attitudes in the workplace are related to qualifications perceived that exceed job requirements (BURRIS, 1983; JOHNSON, MORROW, JOHNSON, 2002; MAYNARD, JOSEPH, MAYNARD, 2006), others defend that those employees who perceive themselves as overqualified, although being more likely to leave the job, have better performance as their supervisors see it.

The company’s attitude, intermediated by its managers, in connection with the existence or non-existence of recognition, results in the level of satisfactions of its employees. While job satisfaction is a complex phenomenon as it is inherent in the perception of each individual, we understand that it is influenced by internal and external powers in the immediate workplace (FRASER, 1983), and may have an impact on the professional or even social behavior of individuals (LOCKE, 1976).

Considering that individuals’ learning is a critical factor in dynamic environments and that tenure or termination of their contracts with organizations relies on how they interpret the environment where they are, the use of job satisfaction can be seen as a variable directly

related and dependent, as the way a given individual feels in relation to their jobs and what such jobs mean to their lives, is a critical element in the employment experience.

A paradox comes up as an issue yet to be explored in the relationship between organizational learning and employee perception regarding the activities performed in the organizations vis-à-vis the qualifications they believe to have. On the other hand, continuous learning in activities representing challenges and growth perspectives can be represented by intrinsic factors and, therefore, be linked to motivational factors, but also by factors necessary only to keep the knowledge already obtained, which may or may not be related to job satisfaction. We observed that there is a subjectivity level inherent in the very individual and that needs to be explored, even though the complexity and existence of different variables have to be acknowledged, when “job satisfaction” is placed as a variable.

Based on the foregoing, this paper intended to check the influence of learning (*exploration* and *exploitation*) and overqualification (mismatch dimension) of the individual in the workplace on their satisfaction. For this objective to be achieved, we conducted a survey with a final sample of 238 observations.

Thus, the definition of the aforementioned research issue is explained by the theoretical materiality of linking individual attitudes mainly influenced by the type of work (i.e., overqualification and learning) on a cognitive and emotional consequent, which is satisfaction. Under a management practice perspective, the results offer important subsidies for a more comprehensive understanding of job satisfaction, particularly regarding the definition of plans focusing on individual and team behaviors.

The overall paper is presented following this structure: (1) brief introduction to the research context; (2) theory on job satisfaction, overqualification and organizational learning (*exploration* and *exploitation*); (3) methodological procedures; (4) data analysis and discussion of results; and (5) conclusions.

## 2 REFERENCE EMPIRICAL THEORETICAL FRAMEWORK AND HYPOTHESES

The empirical theory on which this research is based is divided in three subsections: *exploration* and *exploitation* learning, overqualification and job satisfaction.

### 2.1 Job satisfaction

There are a number of researches on job satisfaction linked to the psychology field. Researchers in this field of knowledge argue that the way individuals feel about their jobs and what their jobs mean to their lives are critical experience elements in organizations (RAFFERTY, GRIFFIN, 2009). These scholars argue that, while most of their reviews of empirical studies related to satisfaction address such items as dependent variables, some others defend that the matter is a social construct, as it is mediated by relationships between work conditions and individual and organizational consequences (DORMANN, ZAPF, 2001).

Many researchers are dedicated to explore the relationship between job satisfaction and individual performance. However, we should point out that this issue is more comprehensive, as in the relationships with *turnover* (HOM et al., 1992; WRIGHT, BONNET, 2002), *absenteeism* (THARENOU, 1993) and *satisfaction with life* (RODE, 2004; TAIT, PADGET, BALDWIN, 1989).

The definition of job satisfaction is complex, as it is possible to expand perspectives to different schools of thoughts, and include analysis in the behavioral and cognitive levels. For measurement purposes, Locke (1969; 1976) suggests that elements causing job satisfaction are related to content, recognition and promotion, workplace, relationship with colleagues, subordinates and superiors, in addition to the conditions established by means of policies and competences required by the company.

According to Rafferty and Griffin (2009), researchers have different definitions for job satisfaction: emotional reaction in the

workplace; emotional reaction, which results from comparison between current results to those expected; the state of emotional pleasure resulting from the assessment of values of a job; an emotional response, which is generally measured as an assessment of attitudes at work in relation to individual internal or external patterns. While some papers define job satisfaction differently, it is possible to observe that all of them converge to a behavioral or cognitive state, as proposed by Weiss (2002).

Most scholars recognize that job satisfaction is a global concept which includes several aspects (RAFFERTY, GRIFFIN, 2009). The most typical classification was proposed by Smith, Kendall and Hulin (1969), who identified five aspects, including: salary, promotion, work colleagues, supervision and work itself. For Locke (1969), job satisfaction is the total of assessment of elements comprising satisfaction.

We observe a historical interest in this matter that is still very evident, especially because it is linked to a non-exact science with difficult measurement levels, which may vary according to the context and current situations of each individual in the organization, with significant impacts on absenteeism, turnover, retention, motivation and, as a result, job satisfaction, which makes this field of study focusing on organizations more attractive.

### 2.2 Overqualification and learning as precedents of job satisfaction

In this section, overqualification and learning are discussed as preceding elements, therefore with potential influence on job satisfaction. The theoretical relationship between overqualification and satisfaction exists because overqualification is defined as an assessment whereby workers deem to be in a situation in which they have qualifications, such as education, skills and knowledge, exceeding the requirements for their job (KHAN, MORROW, 1991). On the other hand, learning is seen as an element also preceding satisfactions, but that operates to contribute to an increase in this dependent

variable. Thus, overqualification adversely affects satisfaction, whereas learning is positively related to this construct.

A significant gap in literature on the matter is the identification of potentially negative or positive variables that may be directly related to individual decisions regarding the tenure of workers in an organization. We understand that such decisions are related to the attitudes and behaviors based on the perception and desires of workers regarding overqualification, and that understanding this relationship may contribute not only to the evolution of organizational studies on a matter not much studied in the Brazilian context, but also to provide organizations with important subsidies to deal with the negative effects of overqualification on attitudes and volume of business, in addition to leveraging the positive effects.

The situation becomes even more complex upon recognition that subjectivity occupies more and more space in this understanding. In the overqualification school of thought, the Relative Deprivation Theory defends that the objective situation of individuals is rarely sufficient to explain how they feel and behave in the work environment, as individual reactions in relation to a given situation depend on subjective assessments (FELDMAN, LEANA, BOLINO, 2002; JOHNSON, MORROW, JOHNSON, 2002).

In this regard, in situations in which individual realize the difference between what they have and what they understand they are entitled to, the consequence will be negative reactions (GURR, 1970), which generates non-satisfaction. Indeed, considering that individuals build a repertoire of knowledge and skills over their lives, it seems to be natural that their expectations are submitted to personal judgment, based on the effort to gain such knowledge and skills, and this influences satisfaction.

For Feldman (1996, p. 387), “overqualification can be considered as part of a wider definition of the sub-employment term, i.e., a situation of lower quality job in comparison with some standard job.” While this argument seems to be extreme at first, and other variables to be

considered are recognized, many of such variables are frequently treated as synonyms or with hardly any difference between them (SMITH, 1986; JOHNSON, MORROW, JOHNSON, 2002).

Maybe the “sub-employment” term is not the most appropriate definition, given the lack of theoretical studies, but considering that there are important studies focusing on the relationship between overqualification and non-satisfaction in the workplace, it does not seem to be so far from reality. Fine and Nevo (2008), based on studies on the matter, state that overqualification and non-satisfaction may be linked to several variables (responsibilities, salaries, challenges, perspectives, among others) and may lead to greater intention of terminating an employment relationship with a given company than in the case of other duly qualified workers. The following hypothesis arises from a cognitive and emotional assessment that the individual assigns to their jobs and their relationship with overqualification:

H<sub>1</sub>: Overqualification is negatively related to the job satisfaction of an individual.

On the other hand, as mentioned above, learning operates on the satisfaction oppositely in relation to the overqualification influence. This arises from the learning characteristics, as the learning process, instead of showing that the individual has more skills than necessary to their jobs, evidences that the worker faces possibilities to improve their qualification. However, understanding how the learning process takes place is a critical factor for organizational managers to define actions to monitor the inevitable changes stemming from more dynamic environments.

The work of March (1991) contributes significantly as it addresses how the learning process effectively takes place in the organizational environment. According to the author, the *exploration* and *exploitation* concepts represent, respectively, the concern about how the innovation and exploration processes of old certainties take place (HOLLAND, 1975; KURAN, 1988; SCHUMPETER, 1934). In other words,

*exploration* refers to those activities intended to seeking new knowledge for the organization, and *exploitation* is the use of the knowledge already gained (LEVINTHAL, MARCH, 1993).

For March (1991), both are fundamental for the organization, but they compete for scarce resources, which may have organizations explicitly or implicitly choose them. Explicit choices are connected to calculated decisions on investment alternatives and competitive strategies; implicit choices are based on several organizational and cost characteristics, such as: procedures related to the accumulation and reduction of day-offs, research rules and practices, ways to set and change goals, and incentive systems.

According to Gupta, Smith and Shalley (2006), based on March (1991) work, *exploration* is linked to the need of organizations to learn from attempts to collect and gain new knowledge. Because it is linked to uncertainties and, to certain extent, non-continuity, this position adopted by the organization may lead to some conflicts with employees' expectations, if they do not have the appropriate profile for a given position, if they have been assigned to an inappropriate place, or even if they are part of an organization with which they do not share values and beliefs.

Understanding the choices and improving the balance between both ways to learn is complicated, as both change not only in relation to the expected values, but because they are directly linked to their variability, time and distribution within and outside the organization. In this regard, the processes to allocate resources between them involve intertemporal, interinstitutional and interpersonal dimensions, as well as risk preferences.

In a subsequent work, still in line with March (1991) proposal, Adler, Goldoftas and Levigne (1999) relate the term *exploitation* to the use of knowledge in search for efficiency by means of the number of resources used to consolidate the experience acquired. Unlike the discontinuity, this kind of learning tends to explicit knowledge, by presenting an idea of clarity, continuity and establishment of routines and patterns. While such observation is clearer in industrial processes,

such as economies of scales by means of repetition and enhancement of techniques and practices, the establishment of routines and expected behavior patterns may reach learning as an institutional level, capable of being internalized with long-term perspectives.

One of the returns related the exploration is that they are more variable and distant in time, whereas returns related to *exploitation* in the domestic context are more certain and closer in time (HE, WONG, 2004). In other words, the companies seeking to innovate and try new challenges and learning are subject to obtaining substantial performance, and failure, whereas more conservative companies tend to generate more stable performance.

Such stability may also be linked to the convictions and expectations of employees working in the organizations, as extrinsic (outside) or intrinsic factors related to the activities performed by them can also influence job satisfaction. Therefore, from the moment the learning process involves people and their perceptions in the work context, it is significant to understand this relationship, as strategies and choices made by the organizations will influence and, to certain extent, condition the behaviors of individuals by requiring new knowledge and skills.

In this regard, *exploration* learning allows the work to be enriched vertically and horizontally, as routines of activities of a given position are reduced. Such characterization enables more satisfaction of the individual in the workplace. On the other hand, the *exploitation* learning negatively influences satisfaction, as this learning takes place by means of more skills, routines of activities, which means a "poorer" work. Thus, despite both *exploration* and *exploitation* being effective ways of learning at the individual level, both operate differently on the global assessment (positive or negative) by the individual on the work: one has the potential to increase satisfaction, whereas the other has the potential to reduce it. Therefore, the following hypotheses of this work:

H<sub>2</sub>: *exploration* learning is positively related to the satisfaction of the individual in the workplace.

H<sub>3</sub>: *exploitation* learning is negatively related to the satisfaction of the individual in the workplace.

### 3 METHODOLOGY

The establishment of this survey included decisions as to the method, time extent, level and unit of analysis and limits (population and sample), according to the elements identified by Babbie (1998). The investigation method is the survey. The research adopts cross-sectional in temporal dimension. The level of analysis is individual and the unit of analysis is the individual (BABBIE, 1998). The population was determined by five organizations in the city of Curitiba (PR) which operate in the service industry, with no relationship among them. The selection criteria were: availability or organizations to take part in the survey, operation in the service industry, maximum size of 180 employees not to include companies with different structures, benefits or other elements that distinguish large from small companies. These companies totaled approximately 670 employees.

During data collection, all employees were invited to answer a questionnaire, which included guidelines on how to prepare the form and informed that it should be placed in a locked box, to which only the researchers had access. In addition, they were told that data would be disclosed in aggregate only, by means of an average of all employees. The organizations participating in the survey were: computing school, college, retail of electronic products, driving school and collection company. The sample by adhesion allowed us to have database with 238 valid observations, which accounted for a response rate of approximately 35%. As far as gender is concerned, the sample comprised 64.10% men and 35.90% women. The percentage of operational/technical employees was 75.50% and overseeing or higher position employees, 24.50%.

The average age was 29 years old and 4.2 years of tenure. In addressing the data, we applied the Descriptive Statistics techniques, Confirmatory Factor Analysis (CFA) and Multiple Regression Analysis. Software used was PASW<sup>®</sup> version 18 and AMOS<sup>®</sup> version 18.

#### 3.1 Description and evaluation of measurements

The data collection tool comprised the following control variables: gender (0, female; 1, male), position (0, operational/technical; 1, higher position), tenure (average of years transformed by means of Log of the variable) and age of respondents (average number of years transformed by means of Log of the variable). Main effect variables (i.e., overqualification, *exploration* learning, *exploitation* learning) and dependent variable (satisfaction) comprised multiple indicators in a five-point Likert scale. Overqualification was assessed by four indicators used by Johnson, Morrow and Johnson (2002) for the Perceived Mismatch dimension, and the organizational learning scale at the individual level was prepared based on six indicators for each definition of *exploration* and *exploitation* found in the literature (GUPTA, SMITH, SHALLEY, 2006; HE, WONG, 2004; LEVINTHAL, MARCH, 1993; MARCH, 1991). The dependent variable (satisfaction) was measured base on the five indicators proposed by Brayfield and Rothe (1951).

In order to validate the measurements, interval variables were initially examined in relation to their distribution by means of graphical inspection (HAIR JR. et al., 2009) and then submitted to the Confirmatory Factor Analysis. None of the variables was assessed as normal. Then, skewness and kurtosis indexes were checked. Skewness ranged from -0.948 to 0.514 and kurtosis, from -1.072 to 1.660. as these amounts were not high, particularly skewness, data was submitted to unqualified multivariate techniques. Schumacker and Lomax (2004) state that variables with skewness of  $\pm 1.5$  allow the application of multivariate techniques assuming normality without incurring in Error Type I or Error Type II. In applying the Confirmatory

Factor Analysis, we adopted the maximum likelihood estimation method.

The final factor structure required the exclusion of two manifest variables (one indicator of the *exploration* learning and one of the *exploitation* learning) whose loadings were below 0.40. When these indicators were excluded, the model with the four latent variables resulted in good adjustment of the empirical matrix of data to the theoretical matrix. The adjustment was assessed based on the following measurements:  $\chi^2_{[306,586]}/\text{Degrees of Freedom}^{[146]} = 2.10$ , RMR = 0.05 and RMSEA = 0.07 (HAIR JR. et al., 2009). Indicators CFI = 0.94, IFI = 0.94 and TLI = 0.93 are also above benchmark of 0.90 (SCHUMACKER, LOMAX, 2004). Internal consistency of factors (latent variables) was assessed by calculating the Cronbach's alpha ( $\alpha$ ), which was above 0.70 for the four factors. In addition

to the internal consistency, we also examined the Composite Reliability and Average Variance Extracted (AVE). Composite Reliability of latent variables was also above 0.70. AVE ranged from 0.46 to 0.69. Even though the benchmark is 0.50 for this measurement, we should point out that it was mainly generated to examine the discriminant validity of the factors. The converging validity of the indicators in their corresponding factors was ensured as the standard loading of each indicator was statistically significant ( $p\text{-value} < 0.01$ ). In order to attest the discriminant validity of the measurements, we adopted the procedure proposed by Fornell and Larcker (1981). The correlation between each pair of latent variables was squared, and then compared to the AVE. As no correlation exceeded the AVE, we detected the discriminant validity of factors.

**TABLE 1** – Confirmatory factor analysis

Description of Manifest Variables and Reliability of Latent Variables	Loading
<b>Exploration (AVE = 0.65; Composite Reliability = 0.90; <math>\alpha</math> = 0.90)</b>	
Over the past 6 months, I have found things that could be innovated at work.	0.896***
Over the past 6 months, I have found opportunities of changes for the organization.	0.904***
Over the past 6 months, I have found benefit innovations for the organization.	0.847***
Over the past 6 months, I have been seeking and found new ways to perform my job.	0.646***
Over the past 6 months, I have innovated in the way I perform my job.	0.693 <sup>(*)</sup>
<b>Exploitation (AVE = 0.69; Composite Reliability = 0.91; <math>\alpha</math> = 0.91)</b>	
Over the past 6 months, I have increased the efficiency in the way I perform my job.	0.597***
Over the past 6 months, I have learned better to perform my job.	0.875***
Over the past 6 months, I have increased the productivity in the way I perform my job.	0.916***
Over the past 6 months, I got to do my job more quickly.	0.896***
Over the past 6 months, I got to do my job more practically.	0.827 <sup>(*)</sup>
<b>Overqualification (AVE = 0.46; Composite Reliability = 0.77; <math>\alpha</math> = 0.76)</b>	
My formal education qualifies me more than what it takes to perform my job.	0.692***
My professional experience qualifies me more than what it takes to perform my current job.	0.723***
Frankly, my qualification is more than what it takes to perform my job.	0.760***
My talents are not fully used in my job.	0.518 <sup>(*)</sup>
<b>Satisfaction (AVE = 0.64; Composite Reliability = 0.90; <math>\alpha</math> = 0.90)</b>	
I am satisfied with my current job.	0.730***
Most days, I am excited about my job.	0.808***
I really enjoy when I am at work.	0.823***
I consider my job very pleasant.	0.810***
Each day of my job seems to goes really quickly, so good it is.	0.832 <sup>(*)</sup>

**Source:** the authors.

\*\*\*  $p < 0.01$ .

<sup>(\*)</sup>: non-calculated significance (benchmark fixed at 1).

$\alpha$ : Cronbach alpha (Benchmark = 0.60). AVE: Average Variance Extracted (Benchmark = 0.50).



#### 4 DATA ANALYSIS AND DISCUSSION OF RESULTS

After validating the measurements used in the study, we generated scores for the factors with the averages of indicators. Subsequently, these scores were submitted to a correlation analysis, whose result is together with the average and standard deviation of each variable in Table 2.

As one can notice, satisfaction is the factor or construct with the lowest average. Both learning dimensions have higher measurements (3.73 and 3.46) in absolute figures. Overqualification has average equal to 3.30. We should point out that the job satisfaction variable had statistically significant correlations ( $p\text{-value} < 0.01$ ) with all independent variables.

**TABLE 2** – Average, standard deviation and correlation between latent factors

	$\bar{x}$	$S$	<i>Exploration</i>	<i>Exploitation</i>	<i>Overqualification</i>	<i>Satisfaction</i>
Exploration	3.46	0.72	1			
Exploitation	3.73	0.66	0.577***	1		
Overqualification	3.30	0.78	-0.029	0.037	1	
Satisfaction	2.85	0.92	0.277***	0.233***	-0.379***	1

**Source:** the authors.

\*\*\* $p\text{-value} < 0.01$

Reading the results of the correlation table contributed to the choosing of the Multiple Regression Analysis to test the hypotheses. In applying this technique, we opted for the estimation method of Ordinary Least Squares. In order to assess the influence of independent variables on the dependent variable (*i.e.*, satisfaction), four models were designed. In the first model, we included only control variables. The results of this model are the basis of comparison with the others, to check, for instance, whether the  $R^2$  of models with main effect variables are increased due to control variable effects. In the second model, we tested only the overqualification effects on the job satisfaction. In the third model, both types of learning were defined as main effect variables. In the fourth model, the three main effect variables were included at the same time. The discussion of hypotheses considers the results of the last model.

All models were assessed in terms of multivariate outliers, linearity, homoscedasticity, multicollinearity, normality and independence of the residuals. In order to check the existence of multivariate outliers, we extracted the Mahalanobis distance ( $D^2$ ) and then calculated the probability of chi-squares with degrees of freedom for all

observations. Considering a  $p\text{-value} < 0.01$ , we detected no multivariate outlier. The linearity was observed by means of a visual inspection of the relationship between pairs of variables and also by the estimation of linear, square, exponential and cubed curves. All tests indicated the non-existence of a non-linear standard in associating variables of the four models tested. Homoscedasticity was attested graphically by detecting a random pattern in the dispersion residuals around the line, also for all models. In order to check independence of residuals, we extracted the measurement of Durbin-Watson. The amount of this test ranged from 1.695 to 1.884, with benchmarks close to 2 as indicators of lack of serial correlation. Multicollinearity of models was assessed by VIF, which should be lower than 5. In all regressions, this amount was lower than 1.460. Finally, residual distribution was assessed by the normality test of Kolmogorov-Smirnov. None of these tests presented results with  $p\text{-value} < 0.10$  and, therefore, we detected normal residual distribution for the four regression models. The results of the four proposed models and a summary of indicators used to assess the assumptions of applying this technique are in Table 3.

**TABLE 3** – Results of the regression analysis models

	Model 1	Model 2	Model 3	Model 4
<i>Dummy</i> Cargo	-0.042	0.006	-0.004	0.040
<i>Dummy</i> Gender	0.061	0.062	0.068	0.071
<i>Log</i> Tenure	0.010	0.050	0.007	0.047
<i>Log</i> Age	0.105	0.125	0.099	0.118
Overqualification		-0.385***		-0.381***
<i>Exploration</i>			0.229***	0.203***
<i>Exploitation</i>			0.124	0.147**
F	1.165	8.475***	4.723***	10.524***
R <sup>2</sup>	0.021	0.167	0.118	0.260
R <sup>2</sup> adjusted	0.003	0.147	0.093	0.235
Durbin-Watson	1.695	1.806	1.784	1.884
VIF (higher limit)	1.390	1.390	1.450	1.460
Kolmogorov-Smirnov	0.954	0.825	0.803	0.547

**Source:** the authors.

\*\* *p-value* < 0.05

\*\*\* *p-value* < 0.01

The model of control variables has shown that they are not statistically related to the dependent variable ( $F = 1.165$ , *p-value* > 0.05), which indicates that the power to explain the subsequent models lies in the main effect variables. Model 2 preserved the control variables and added the overqualification independent variable. This model presented adjusted  $R^2$  of 0.14 ( $F = 8.475$ , *p-value* < 0.01) given the statistically significant influence of the main effect variable (*i.e.*, overqualification). Model 3, which included the control variables and both types of learning, presented adjusted  $R^2$  of 0.09 ( $F = 4.723$ , *p-value* < 0.01). In this model, the *exploration* learning effectively contributed for the model to be significant, whereas the *exploitation* learning variable proved not to influence satisfaction when paired with only one more main effect variable (*i.e.*, *exploration* learning). On the other hand, model 4 included all independent variables. This model presented an adjusted  $R^2$  of 0.23 ( $F = 10.524$ , *p-value* < 0.01) and evidenced that all main effect variables are related in a statistically significant fashion with job satisfaction. Against one of the hypotheses, the validity of the *exploitation* learning relationship was positive. Therefore, hypotheses  $H_1$  (overqualification and

satisfaction) and  $H_2$  (*exploration* and satisfaction) were confirmed. Hypothesis  $H_3$  (*exploitation* and satisfaction) was rejected given the negative beta value.

As regards hypothesis 1, which establishes a negative association between overqualification and satisfaction, we detected that, as the individual believes to have knowledge, skills and education beyond those required for their position, they effectively has less job satisfaction. Confirmation of this hypothesis indicates that the unbalance between demand for knowledge and skills in job activities and the individual's perception of their qualification plays a central role in the degree of satisfaction. Such finding expand the argument of other authors who privilege, in their analyses, the impact of organizations' characteristics and the environment in satisfaction (*e.g.*, RAFFERTY, GRIFFIN, 2009; SMITH, KENDALL, HULIN, 1969), as they evidence that the assessment of the workers themselves in terms of qualification compared to the extent of these qualities used at work also influences satisfaction. Therefore, all benefits that an organization may collect from employee satisfaction and other variables thereby influenced seem to depend on the matching of employee qualities and the level and type of

assignment given to these qualities while they perform their jobs.

As regards confirmation of hypothesis 2, which addresses the relationship between the *exploration* learning and satisfaction, we corroborated the idea that finding innovations makes individuals have their job satisfaction increased. Finding things that can be considered innovations, identifying opportunities to promote changes in the organization, and identifying new ways to perform activities are elements that contribute for the individual to achieve job satisfaction. This revelation reflects the idea that innovation does not have an impact only on organizational variables (*e.g.*, prestige, reputation, return on assets), but also attitude-related variables, such as job satisfaction. Therefore, opportunities given for the employees to innovate not only represent potential gains in terms of new processes and products, but also and mainly the strengthening of the connection between the individuals and the organization by means of a global positive assessment of the job.

On the other hand, rejection of hypothesis 3, which addresses the negative relationship between *exploitation* learning and satisfaction, shows that this type of learning is actually a stimulus to job satisfaction, as the relationship between these two variables, opposite to what has been previously established, has positive validity. Such finding evidences that acquiring information and understanding, developing more skills at work, being more efficient at work, and performing activities in a more practical and quick fashion significantly and positively influences satisfaction. This means that opportunities to exercise innovation, even if intended simply to enhancing what is already in place rather than finding new ways completely different to conduct processes, or to propose ideas for products other than those existing, end up positively impacting satisfaction. Accordingly, non-confirmation of this hypothesis, but mainly the result that the relationship between *exploitation* learning and satisfaction is positive, requires new thoughts on the oxymoron attributed to learning in organizations. This means having organizational

learning, which takes place at the individual level, be re-specified as far as its effects on other variables are concerned when considering the *exploration* and *exploitation* learning. Indeed, both types of learning seem to be positive, at least when satisfaction is considered a result variable. The idea of learning as an oxymoron (expression with contradictory terms) should be therefore rethought in terms of its consequents. The results of this study indicate that differentiated processes, such as *exploration* and *exploitation* learning, end up producing the same effects, even though through different ways. In this regard, both types of learning at the individual level are placed as options to control the degree of job satisfaction. It is possible to have an employee more or less satisfied by means of the degree of opportunities for them to exercise either type of learning.

## 5 CONCLUSIONS

This survey addressed the relationship between overqualification of an individual at work, types of learning (*exploration* and *exploitation*) and job satisfaction. The study was conducted based on a non-probabilistic sample comprising five different organizations, which certainly requires attention upon generalizing results. In this regard, we should point out that the generalization allowed by our findings is only for analysis, *i.e.*, for theory and not for the study universe. In addition, conclusions included herein can be considered as starting points for future research.

We conclude that both types of organizational learning, *i.e.*, *exploration* and *exploitation* learning, at the individual level, have similarities as far as job satisfaction is concerned. In addition, we also specify that these effects were observed in a model that also considered overqualification of an individual at work and this overqualification promotes a higher degree of variance in satisfaction than both types of learning. Adjusted  $R^2$  in the model with overqualification as an independent variable explained 14% of variance in satisfaction, whereas the model with

the types of learning as independent variables presented adjusted  $R^2$  of 9% only. Thus, we point out the importance of the higher influence of overqualification on job satisfaction of an individual. At times in which higher education can be more easily accessed, and companies heavily invest in training sessions, the number of workers who perceive themselves as qualified is higher and higher. It is important to highlight that it does not necessarily mean that these workers are more qualified for having attended higher education courses or the training sessions offered by the organizations. It means that such factors contribute to an increase in the assessment made by the individual about their own qualifications in comparison to the qualifications, knowledge and skills required for the performance of their activities.

To sum up, we point out the importance of the need for balance between demand for knowledge and skills in activities, and the qualification perceived by each employee, as well as the role of two learning alternatives that are available for organizations, for the employee to feel more satisfied.

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