

Job satisfaction of teachers of the Electronic Engineering career in a Public Higher Education Institution**Satisfacción laboral de los docentes de la carrera de Ingeniería Electrónica en una Institución de Educación Superior Pública**

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Abstract

In the present investigation, the level of satisfaction that exists between the base academic personnel and the honorary personnel who are working as teachers in the electronic engineering career in a Public Higher Education Institution was determined. Using a descriptive study, using the descriptive transectional design and applying a data collection instrument created from the Job Satisfaction Scale proposed by Warr, Cook and Wall (1979). On the scale, the intrinsic factors that were considered are: freedom to choose one's own work method, recognition obtained for a job well done, assigned responsibility, the possibility of using one's own abilities, possibilities of promotion, contract conditions and the variety of tasks. that are done at work. Regarding extrinsic factors, there were: physical conditions of work, co-workers, immediate superior, salary, relations between management and workers in the company, management, work hours and job stability. The participating population was 22 people, which represents the entire academic plant that is in the study program. The results showed that the fee-based staff is satisfied in 69% with the intrinsic factors and 57% with the extrinsic ones; while those of base are satisfied 49% for the first and 24% for the second.

Resumen

En la presente investigación se determinó el nivel de satisfacción que existe entre el personal académico de base y el de honorarios que se encuentran laborando como docentes en la carrera de ingeniería electrónica en una Institución de Educación Superior Pública. Empleando un estudio de tipo descriptivo, utilizando el diseño transeccional descriptivo y aplicando un instrumento de recolección de datos creado a partir de la Escala de Satisfacción Laboral propuesta por Warr, Cook y Wall (1979). La escala los factores intrínsecos que se consideraron son: libertad para elegir el propio método de trabajo, reconocimiento obtenido por el trabajo bien hecho, responsabilidad asignada, la posibilidad de utilizar las propias capacidades, posibilidades de promoción, condiciones de contrato y la variedad de tareas que se realizan en el trabajo. Respecto a los factores extrínsecos se tuvieron: condiciones físicas del trabajo, compañeros de trabajo, superior inmediato, salario, contratación, relaciones entre dirección y trabajadores en la empresa, dirección, horario de trabajo y estabilidad en el empleo. La población participante fue de 22 personas, que representan la totalidad de la planta académica que está en el programa de estudio. Los resultados mostraron que el personal por honorarios está satisfecho en un 69% con los factores intrínsecos y un 57% con los extrínsecos; mientras que los de base se encuentran satisfechos un 49% para los primeros y un 24% para los segundos.

Work satisfaction, Teaching, Public sector

Satisfacción laboral, docencia, sector público

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Introduction

One of the aspects that any organisation should consider is to diagnose the level of satisfaction of its employees, because it is a factor that impacts on the productivity of human resources. Therefore, this research addresses this issue applied to a higher education institution in the public sector, considering that education is an elementary part of any society.

The theoretical framework is composed of the independent variable established as job satisfaction, delving into the different theories proposed by some authors to measure it through various indicators and the dependent variable represented by the higher education institutions (HEI) contextualising the object of study which in this case was the educational programme of electronic engineering belonging to the Tecnológico Nacional de México/Instituto Tecnológico de Toluca.

It also describes the problems detected, emphasising the classification of the academic staff and explains the method used to develop this work, citing and referencing the methodological elements implemented.

The data collection instrument designed on the basis of the Job Satisfaction Scale proposed by Warr, Cook and Wall and adapted to Spanish by Pérez Bilbao and Fidalgo Vega through the NTP394 standard issued by the National Institute for Safety and Hygiene at Work belonging to the Ministry of Labour and Social Affairs of Spain is shown. The information obtained is then tabulated and the results are presented in the form of graphs.

Finally, the conclusions obtained regarding the comparison between basic and honorary staff in terms of the perception of intrinsic and extrinsic factors of job satisfaction are mentioned.

Frame of reference

Theories have been developed that explain motivation as a fundamental element of job satisfaction; among them we have Abraham Maslow's hierarchy of needs theory which refers to five levels: physiological, security, love or social, esteem and self-fulfilment. McClelland's theory of needs identified three needs: achievement, power and affiliation.

As for Skinner's operant theory, a "positive reinforcer" is required to achieve a desired response which leads to a positive consequence in the work environment and tends to be repeated.

Another theory is Vroom's model, which is based on expectancy and defines it as the degree to which a person thinks that a specific action will lead to a particular outcome. It states that there are two types of expectancy, "effort-performance" and "performance-outcome". The first is for a person to believe that increased effort will actually lead to increased performance. The second is believing that a certain performance will lead to a particular outcome. The author states that work motivation is a multiplicative function of employees' expectations of future outcomes times the personal value they place on these outcomes.

The Porter-Lawler expectancy model determines that an employee's individual effort depends on the value of the expected reward and the perception of the effort involved in performing and obtaining the reward.

One of the most widely used theories is the motivation-hygiene theory of F. Herzberg. The author's study was to classify various needs of people into two groups: hygiene factors or dissatisfiers and motivational factors or satisfiers. He states that hygiene factors are dissatisfiers because if they are present at work, people will not be dissatisfied; therefore their presence does not really motivate workers. However, by removing any of these, extreme dissatisfaction can occur. With regard to motivational factors, these are the aspects of the task or the job itself. They are comprised of challenge, opportunity for personal advancement and performance feedback. These factors are of great value for employee satisfaction and have a positive effect on performance.

Herzberg's theory is linked to the concepts of "content" and "context" of the job. The former relates to the job, since motivational factors arise from the work-worker relationship, they are included in the job content. The term "intrinsic" is commonly used because these factors pertain to the job itself and to the employees. As for the job context brings together hygiene factors; they are determined as "extrinsic" because the job context or hygiene factors are outside the job and the employee.

(Terry & Franklin, 2017) Motivational or intrinsic factors have more relative importance because it is more desirable to have motivating factors; but motivating factors are never completely satisfactory unless the hygiene or extrinsic factors are reasonably satisfactory and effective. The two are closely related in most work situations.

There are different conceptualisations regarding the elements that comprise job satisfaction, so it is necessary to approach various scholars on the subject to determine the ideal methodology to apply in the definition and measurement of the aspects that represent it in any entity.

(Chiavenato, 2019) highlights the concept of organisational effectiveness, which should be directed at "intangible assets" and not measured only with accounting or financial indicators. To achieve it, three conditions must be met: achievement of organisational objectives, maintenance of the internal system and adaptation to the external system. He concludes by stating that "effectiveness means the satisfaction of the organisation's stakeholders". And these are: shareholders, managers, employees, suppliers, creditors, consumers, government and community. Based on this proposition, he determines that the indicators that should be used to measure organisational effectiveness are: production, efficiency, satisfaction, which are short-term; adaptability and development, which are medium-term; and survival, which is long-term.

This author defines satisfaction as "meeting the demands of the environment through social responsibility, ethics, voluntarism, etc.". Satisfaction indicators include staff attitudes, turnover, absenteeism, complaints, grievances, etc.". And he concludes that all the indicators mentioned depend on the human factor of the organisation.

(Werther, Davis, & Guzmán Brito, 2014) establish as indicators to evaluate job satisfaction the professional performance, management, organisation and function, tasks and activities, working hours, company and social environment and work climate. From their perspective, "A better work climate translates into higher levels of job satisfaction".

(Pedraza Melo, 2020) specifies that job satisfaction represents an emotional state, product of the appreciation that employees form about how much their jobs and the organisations where they provide their services provide them with stimuli that meet their needs and expectations in exchange for what they contribute to the organisation.

(Naumov Garcia, 2018) comments that one of the key functions of "total human capital management" is the administration and management of key people, which consists of retaining key people because they see their potential and future in the organisation. Therefore, management consists in carrying out the planning, organisation and control of human talent. This involves designing "the planned development and ensuring the satisfaction of key people, based on their results". The elements considered are: promoting key people to the positions established in the development plan; giving them higher compensation; investing in training programmes according to the needs of the company; maintaining a minimum number of key people in the programme (which will depend on the number of personnel and size of the company); integrating key people in identifying new talents and participating in their development; and communicating to all the company's personnel that this type of programme is in place so that people are motivated to participate in it.

(Escobedo Portillo, Cuautle Gutiérrez, Maynez Guadarrama, & Estebané Ortega, 2014) in their study "Escala de Satisfacción Laboral a partir de Factores Socioculturales y Ergoambientales para los Docentes de las Instituciones de Educación Superior en México" define that job satisfaction (LS) is the feeling of the individual in their workplace, but this does not just happen. The LS has several methods and instruments that help the company and the individual to know the degree (positive or negative) of LS in which they find themselves. Thus it is possible to determine how employees achieve their goals, as well as the conditions and factors that influence their achievements.

In their research, they considered the Sociocultural Factors (SCF) made up of: relationship with colleagues, boss supervision, working conditions, freedom of action, gender, age, religion, place of birth, marital status, origin, economic dependents, length of service, last degree of studies, current studies, school of origin, graduate of the same institution, years of professional experience. And the ErgoenvIRONMENTAL Factors (EEF) constituted by noise, lighting and temperature. They also used the "General Satisfaction Scale" from Warr, Cook and Wall.

One point of view to consider is that of (Cavalcante Silva, 2004) who states that "Although, since the 1930s, interest and research into job satisfaction has increased rapidly, the understanding of its causes is far from being unquestionably clarified and systematised" and goes on to comment "Today, we are trying to understand whether the determinants of job satisfaction are the same as those that determine it, Today, we are trying to understand whether the determinants lie in the nature of the work itself, in the variables inherent to the professional, or whether, on the other hand, it is the result of the interactions established between the active citizen (respective life history and personality) and the specificities of the context of his or her work". Thus, within the infinity of existing methodologies, the factors or indicators to be analysed are as diverse as the aspects to be measured. After examining some of the aforementioned methods, it was decided to apply, for this research, the "Overall Job Satisfaction Scale" belonging to Warr, Cook and Wall developed in 1979.

(Pérez Bilbao & Fidalgo Vega, 1993) made a Spanish translation of Warr, Cook and Wall's research, and translated it into the NTP394 standard issued by the National Institute of Safety and Hygiene at Work belonging to the Spanish Ministry of Labour and Social Affairs. The characteristics of this scale are as follows: it operationalises the construct of job satisfaction, reflecting workers' experience of paid employment; and it captures the affective response to the content of the job itself.

The scale was created after detecting the need for short and robust items that could be easily completed by all types of workers regardless of their background. Based on the existing literature, a pilot study and two research studies with manufacturing workers in the UK, the final fifteen-item scale was developed. The scale is in line with those who establish a dichotomy of factors and is designed to address both intrinsic and extrinsic aspects of working conditions. As determined by Frederick Herzberg

It consists of two subscales, the first, the intrinsic factors subscale, addresses aspects such as: freedom to choose one's own method of work, recognition obtained for work well done, responsibility assigned, the possibility of using one's own abilities, possibilities for promotion, attention paid to suggestions made, and the variety of tasks performed at work. This scale consists of seven items (numbers 2, 4, 6, 8, 10, 12 and 14).

And the second, extrinsic factors subscale: physical working conditions, co-workers, immediate superior, salary, management-worker relations in the company, the way the company is managed, working hours and job stability. This is made up of eight items (numbers 1, 3, 5, 7, 9, 11, 13 and 15).

Figures 1 and 2 below show the relationship that Pérez Bilbao and Fidalgo Vega (1993) make between Herzberg's theory and the general satisfaction scale of Warr, Cook and Wall:

MOTIVATIONAL FACTORS		
SATISFYING	Factors that when they go well produce satisfaction.	Factors that when they go wrong do not produce dissatisfaction.
	Successful completion of work	Lack of responsibility.
	Recognition of the success obtained by managers and co-workers.	Routine, boring work, etc.
	Company promotions, etc.	

Figure 1 Motivating factors

Source: Pérez, Fidalgo (1993)

HYGIENIC FACTORS	
DISSATISFYING	Factors that when they go well do not produce satisfaction
	Factors that when they go wrong produce dissatisfaction
	<ul style="list-style-type: none"> - Bad interpersonal relationships. - Low salary. - Bad work conditions, etc.

Figure 2 Hygienic factors

Source: Pérez, Fidalgo (1993)

One of the pillars of a country's development is education, hence the importance that every HEI must have, among other resources, an academic staff that meets the requirements established in the job profiles described in the organisational manual. But this is not enough; it is also necessary that teachers are motivated to carry out their work, that they are really satisfied, as this will result in the training of professionals who have the competences established in the graduate profile. In this sense, on joining an educational institution, teachers seek, on the one hand, to identify with its mission, vision, values and objectives and, on the other, to feel motivated to carry out their work efficiently, which translates into job satisfaction. Therefore, it is necessary to determine the aspects or elements that, by having them, the worker will feel satisfied.

This research focuses on higher education and according to the National Association of Universities and Institutions of Higher Education (ANUIES, 2023) in the state of Mexico during the school year 2021-2022 there was an enrolment of 548, 756, of which 296, 364 were women and 252, 392 men. They were enrolled in public and private HEIs. Based on the statistics presented by the Ministry of Public Education (SEP, 2023) in the document called "Main Figures of the National Education System" during the period 2021-2022 there were a total of 5,847 higher education institutions, with 2,379 belonging to the public sector and the rest to the private sector. Of this total, 133 were Federal Technological Institutes, with an undergraduate enrolment of 344,104 students.

The setting where the study was applied is the Instituto Tecnológico de Toluca (ITTol, 2023), belonging to the Tecnológico Nacional de México, which houses, among others, the Federal Technological Institutes. ITTol is currently located in the municipality of Metepec, State of Mexico, and offers nine engineering courses: Electromechanics, Electronics, Business Management, Industrial, Logistics, Mechatronics, Chemistry, Computer Systems and Information and Communication Technologies. The enrolment in the period August-December 2022 was 5,955 students and an academic staff of 239 teachers.

About the Electronics Engineering degree, which is the subject of study, 327 students were enrolled in the same period mentioned in the previous paragraph. Currently, there are 15 basic teachers, and due to the fact that it is not possible to meet the academic demands of the area, there is a need to hire personnel from outside the institution under the fee contracting modality; in the case of this department, there are 7 teachers in this modality.

With regard to the type of contracting, basic personnel are understood as those who hold a position with the category of subject lecturer or career lecturer. The definitions established in the Internal Working Regulations of the Teaching Staff of the Technological Institutes are as follows:

"Article 13. Subject teachers are those whose appointment(s) fluctuate(s) between 1 and 19 hours per week and are engaged in teaching in accordance with the limits established in these Internal Regulations.

Career teachers are those who, having met the specific requirements set out in these Internal Regulations, hold appointments of 20 to 40 hours per week, and receive remuneration in accordance with the category and level they have reached; they are engaged in teaching in accordance with the limits established in these Internal Regulations and other functions set out in Article 27 of these Internal Regulations".

As for the fee contract, it is a personnel that generates an employment relationship with the Instituto Tecnológico de Toluca for a determined time and hourly load; therefore, the benefits are not the same between the base and the latter.

Hence the relevance of carrying out a comparison of the level of satisfaction between these two types of recruitment.

Problem statement

The job satisfaction of human capital has always been a very important factor, both for public and private companies, because it is thanks to their personnel that they are able to achieve the goals and objectives proposed by these companies.

The job satisfaction of those who are in the day after day in the pursuit of these goals is one of the most important issues for officials and managers of companies, and is also one of the main problems within your organization, since the lack of employee motivation, When it is not sufficient or lacks stimulating incentives, it increases, first the poorly done work, and then the abandonment of the source of work, causing a high turnover of staff, which hinders the achievement of objectives and the smooth functioning and harmony of the companies.

For this reason, a harmonious and satisfactory working environment is recognised by managers and entrepreneurs as one of the main factors for a correct functioning and to be able to achieve the productivity goals proposed in the exercise of their business environment.

Satisfied and committed employees are a valuable capital for any company and knowing the state of their satisfaction is the first step to identify and generate proposals to improve or maintain job satisfaction in each employee in particular, and in the company in general terms.

Due to the aforementioned, the Electronics Engineering course at the Tecnológico Nacional de México/Instituto Tecnológico de Toluca has seen the need to carry out an investigation of the job satisfaction of its staff in order to improve the working environment and the permanence of its employees, allowing an increase in productivity and the good functioning of the organisation.

Methodology

The method used in this research has a quantitative approach with a descriptive type of study using the descriptive cross-sectional design.

Based on the stipulations of (Hernández Sampieri, Fernández Collado, & Baptista Lucio, 2010), the descriptive type of study is one that seeks to specify the properties, characteristics and profiles of individuals, groups, communities or any other phenomenon that is subjected to analysis.

In turn, descriptive cross-sectional designs aim to investigate the incidence of the modalities or levels of one or more variables in a population, which provides us with a more objective view of the same. The procedure consists of locating one or several variables in a group of people, living beings, objects, situations, contexts, phenomena, communities, etc. and providing their description (Hernández, Fernández and Baptista, op. cit).

The research was carried out in two phases: in the first phase, documentary research was carried out, in this part we proceeded to analyse the general and specific concepts of different authors in order to unify concepts and definitions, in addition to analysing the information available from previous studies, as well as the methodologies used and the validation of these.

In the second stage, field research was carried out: the study population was defined as the teachers of the Electronic Engineering course at the Tecnológico Nacional de México/Instituto Tecnológico de Toluca.

The General Satisfaction instrument by War, Cook and Wall, translated into Spanish and adapted by Pérez-Bilbao and Fidalgo, called the General Satisfaction Scale NTP 394, which measures two dimensions: intrinsic and extrinsic satisfaction, based on Herzberg's theory of hygienic factors, was used as a basis.

This scale operationalises the construct of job satisfaction, reflecting the experience of workers in paid employment, and captures the affective response to the content of the job itself. It is worth mentioning that the extrinsic factors include "Contracting conditions", since the aim of this study is to compare the job satisfaction of the staff who have a base and the staff who are hired on a fee contract (temporary contract); on the other hand, "the attention paid to the suggestions you make" was omitted, since the Institution has ISO 9001:2015 Certification and its Quality Management System includes attention to the complaints and suggestions of the technological community and it is through this means that they are given prompt attention. The instrument used to collect the information was the questionnaire consisting of the 15 questions described in table 1, these allow us to evaluate the intrinsic and extrinsic factors and thus determine job satisfaction.

In this study, a 5-level scale was used, 1 for very dissatisfied, 2 for satisfied, 3 for neutral, 4 for satisfied and 5 for very satisfied. Once the questionnaire was developed, it was subjected to a proof of concept and comments were taken into account for its subsequent implementation. The questionnaire was applied using Forms.

INTRINSIC FACTORS	
DEFINITION	FACTOR
Motivation factors that generate satisfaction.	I. 1. Freedom to choose your own working method. I.2. Recognition you get for a job well done. I.3 Responsibility assigned to you. I.4. The possibility of using your abilities. I.5. Ease of being promoted. I.6. The variety of tasks you perform in your job.
EXTRINSIC FACTORS	
DEFINITION	FACTOR
Unsatisfactory factors which include the work environment causing dissatisfaction.	E.1. Physical conditions of work. E.2. Relationship with coworkers. E.3. Relationship with your immediate superior. E.4. Your salary. E.5. Contract conditions. E.6. Relationship between management and workers of the institution. E.7. The way your company is managed. E.8. Your work schedule. E.9. Your job stability.

Table 1 Definition of intrinsic and extrinsic factors
 Source: Own elaboration

Sample Size

The study population is made up of a total of 22 teachers, 15 of whom are permanent and 7 are on honorary contracts.

It was decided to apply to all the staff and not to leave out the opinion of any teacher, to avoid them feeling excluded and considering that their opinion is not important. For this reason, a census was carried out, which consists of gathering statistical data on the entire population under study, so that the factors influencing work motivation can be known precisely.

A census implies that no hypothesis testing is performed as there is no sampling error. Inferences are drawn directly from the results obtained.

Descriptive analysis

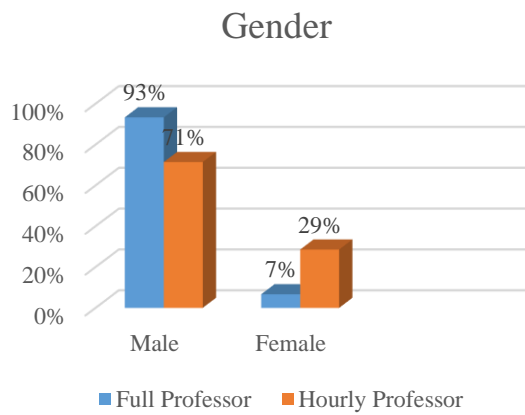
A descriptive analysis was carried out based on measures of central tendency (means) and dispersion (standard deviation) of the factors and sub-populations in order to find significant differences between them.

On the other hand, a correlation analysis of the factors (variables) of each of the subpopulations was carried out in order to detect the factors that show significant correlations. The aim of this last step is to identify the factors with a high degree of correlation so that in subsequent studies some of them can be eliminated to simplify the modelling.

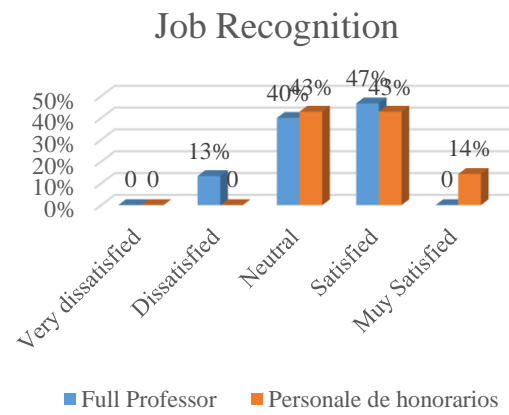
Results

The results obtained from the application of the instrument used are presented below.

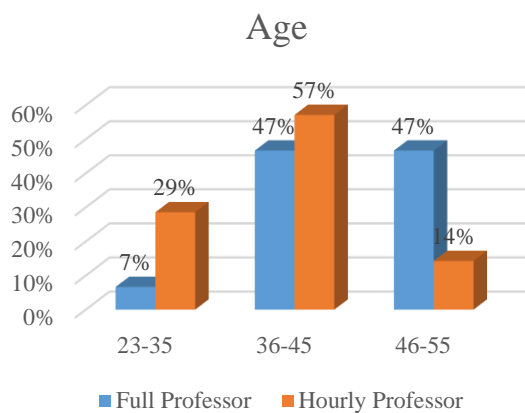
Graphics 1 and 2 correspond to the gender and age group of the teachers of the Electronic Engineering educational programme.



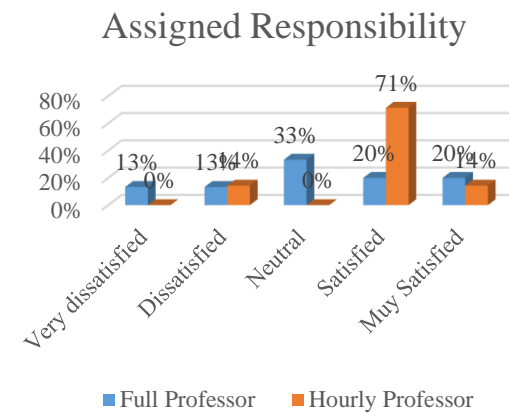
Graphic 1 Gender of teaching staff
Source: Own elaboration



Graphic 4 Recognition for a job well done
Source: Own elaboration

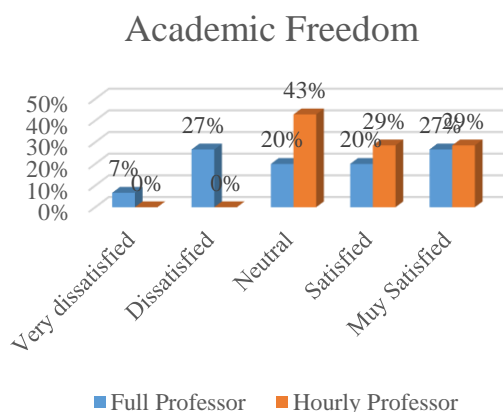


Graphic 2 Age of teaching staff
Source: Own elaboration

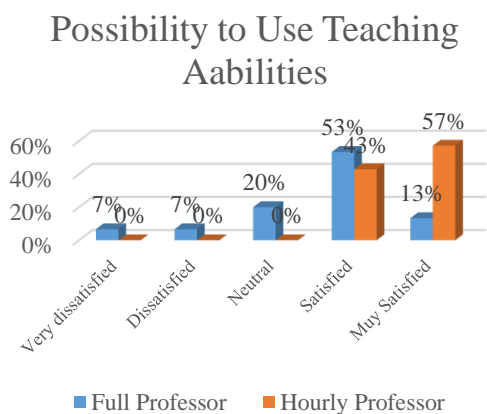


Graphic 5 Assigned responsibilities
Source: Own elaboration

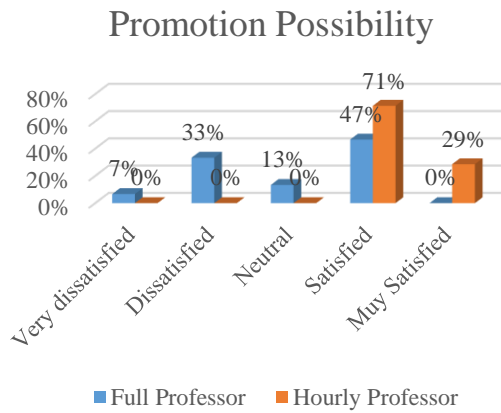
Graphic 3 to 8 correspond to intrinsic factors.



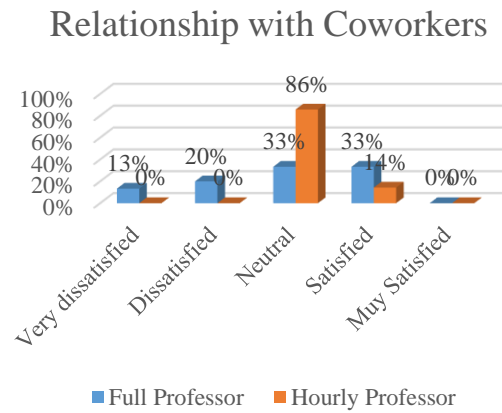
Graphic 3 Freedom to choose the teaching methodology
Source: Own elaboration



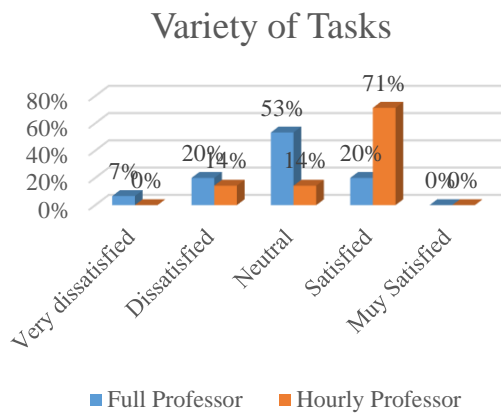
Graphic 6 Opportunity to apply teaching abilities
Source: Own elaboration



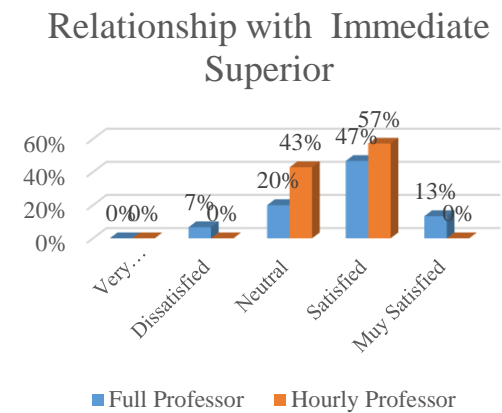
Graphic 7 Promotion Opportunities
Source: Own elaboration



Graphic 10 Relationship with coworkers
Source: Own elaboration

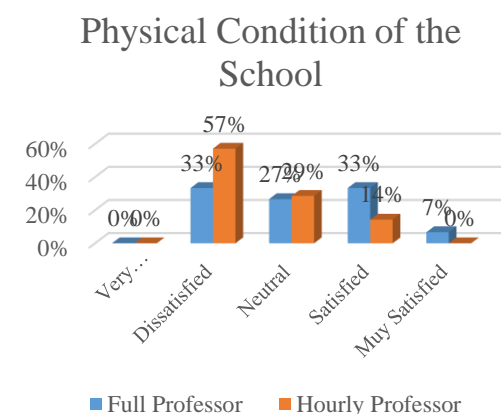


Graphic 8 Variety of tasks to undertake
Source: Own elaboration

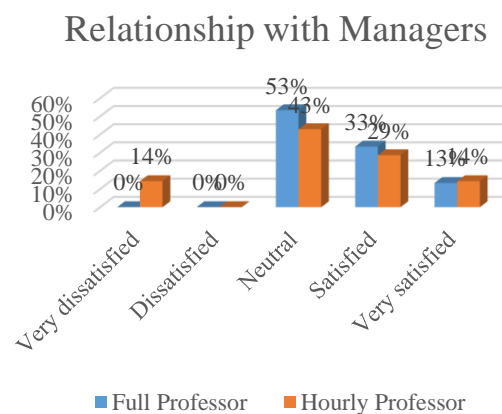


Graphic 11 Relationship with immediate superior
Source: Own elaboration

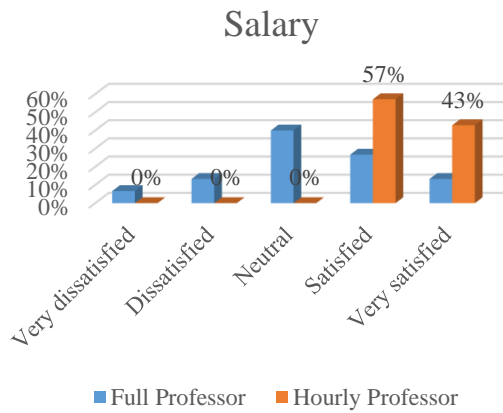
Graphics 9 to 18 show the results of the evaluation of extrinsic factors.



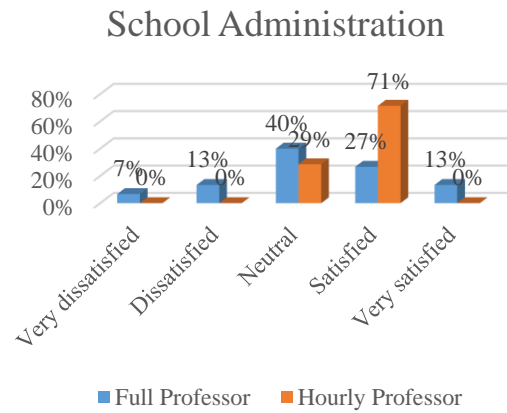
Graphic 9 Physical conditions of the workplace
Source: Own elaboration



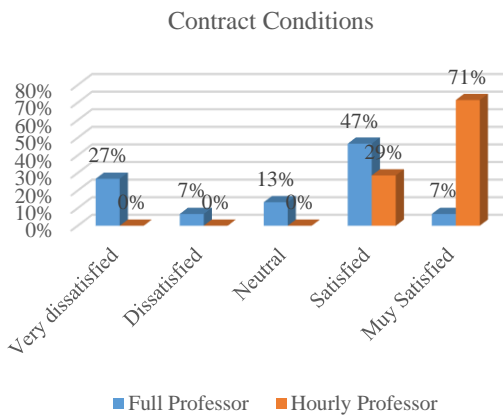
Graphic 12 Relationship with managers
Source: Own elaboration



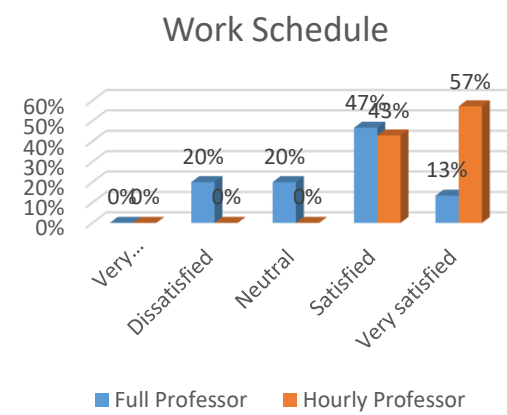
Graphic 13 Salary adequacy
Source: Own elaboration



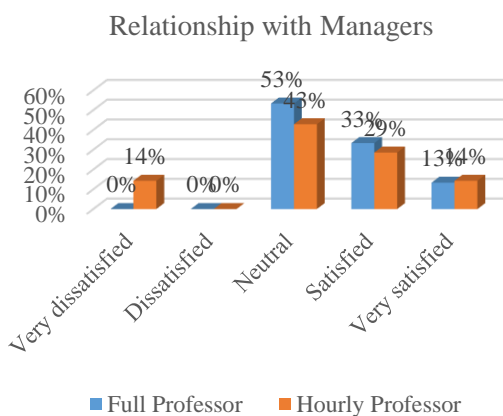
Graphic 16 Managerial work
Source: Own elaboration



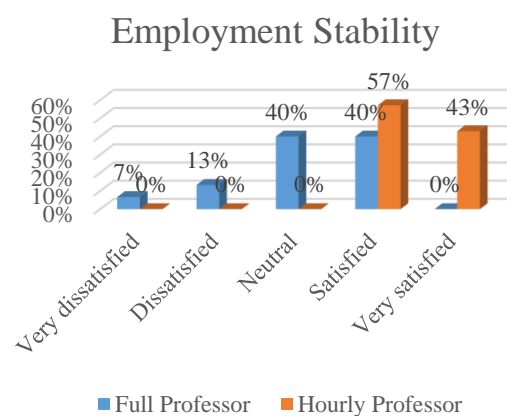
Graphic 14 Conditions of contract
Source: Own elaboration



Graphic 17 Suitable work schedules
Source: Own elaboration



Graphic 15 Relationship between the school administrators and the professors
Source: Own elaboration



Graphic 18 Stability at work
Source: Own elaboration

The following tables 2, 3, 4, and 5 show the job satisfaction of the basic and honorary teachers.

Intrinsic variables	1. Freedom to choose the working method	2. Recognition	3. Assigned responsibility	4. Possibility of using your abilities	5. Promotion	6. Variety of tasks to perform	Total	%
Very unsatisfied	0	0	0	0	0	0	0	0
Dissatisfied	0	0	1	0	0	1	2	5%
Neutral	3	0	2	0	3	2	10	24%
Satisfied	2	5	4	3	2	4	20	47%
Very satisfied	2	2	0	4	2	0	10	24%
Total	7	7	7	7	7	7	42	100%

Table 2 Intrinsic satisfaction of fee teachers
Source: Own elaboration.

In terms of intrinsic satisfaction, fee-paying teachers show a positive attitude with a level of 47% Satisfied and 24% Very Satisfied.

It should be noted that the variable, Recognition with 71% at the Satisfied level and 29% at the Very Satisfied level.

Intrinsic variables	1. Freedom to choose the working method	2. Recognition	3. Assigned responsibility	4. Possibility of using your abilities	5. Promotion	6. Variety of tasks to perform	Total	%
Very unsatisfied	1	0	0	1	1	0	3	3%
Dissatisfied	4	0	2	1	4	3	13	15%
Neutral	3	7	7	2	3	7	30	33%
Satisfied	3	6	4	7	3	4	27	30%
Very satisfied	4	2	2	4	4	1	17	19%
Total	15	15	15	15	15	15	90	100%

Table 3 Intrinsic satisfaction of basic teachers
Source: Own elaboration

As far as intrinsic satisfaction is concerned, the basic teachers show a mainly neutral attitude with 33%; Satisfied with 30% and Very Satisfied with 19%. Therefore, it can be seen that the basic teachers have a slightly positive attitude with 49% at the level of Satisfied to Very Satisfied in terms of extrinsic satisfaction.

Extrinsic variables	1. Physical working conditions	2. Co-workers	3. Relationship with your boss	4. Salary	5. Contract conditions	6. Relationship with your boss	7. Management of the company	8. Working hours	9. Employment stability	Total	%
Very unsatisfied	0	0	0	0	0	0	0	0	0	0	0
Dissatisfied	0	1	0	0	0	1	1	0	0	3	5%
Neutral	3	4	3	3	3	2	0	0	3	24	38%
Satisfied	2	1	2	2	2	3	4	2	2	20	32%
Very satisfied	2	1	2	2	1	1	3	2	2	16	25%
Total	7	7	7	7	7	7	7	7	7	63	100%

Table 4 Extrinsic satisfaction of fee teachers
Source: Own elaboration

In terms of Extrinsic Satisfaction, fee-paying teachers have a mainly Neutral attitude with 38% but inclined towards Satisfied with 32% and 25% in Very Satisfied. In this case we can say that fee-paying teachers in terms of extrinsic satisfaction have a favourable attitude with a percentage of 57% at a level from Satisfied to Very Satisfied.

Extrinsic variables	1. Physical working conditions	2. Co-workers	3. Relationship with your boss	4. Salary	5. Contract conditions	6. Relationship with your boss	7. Management of the company	8. Working hours	9. Employment stability	Total	%
Very unsatisfied	0	0	1	1	1	0	1	0	1	5	4%
Dissatisfied	6	3	4	4	4	6	6	2	4	39	29%
Neutral	4	7	3	3	3	4	6	2	3	35	25%
Satisfied	4	4	3	3	3	4	1	7	3	32	24%
Very satisfied	1	1	4	4	4	1	1	4	4	24	18%
Total	15	15	15	15	15	15	15	15	15	135	100%

Table 5 Extrinsic satisfaction of basic teachers
Source: Own elaboration

As for the Extrinsic Satisfaction of basic teachers, it shows a mainly negative attitude with 29% in the level of Dissatisfaction, followed by 25% in Neutrality, 24% in Satisfaction and 18% in Very Satisfied.

Tables 6 and 7 show the mean and standard deviation.

Factor	Level of Intrinsic Satisfaction					
	All professors		Full professors		Hourly professors	
	Mea n	S	Mea n	S	Mean	S
Freedom to choose working method	3.55	1.12	3.40	1.20	3.86	0.83
Recognition for a job well done	3.45	0.72	3.33	0.70	3.71	0.7
Assigned responsibility	3.5	1.03	3.33	1.07	3.86	0.83
Ability to use your capabilities	3.95	0.88	3.67	0.87	4.57	0.49
Ease of promotion	3.45	0.99	3.07	0.93	4.29	0.45
Variety of tasks to be performed	3.14	0.76	2.93	0.68	3.57	0.73
Total	3.50	0.96	3.47	0.96	3.98	0.77

Table 6 Level of intrinsic satisfaction*Source: Own elaboration*

Factors	Extrinsic Satisfaction Level					
	All professors		Full professors		Hourly professors	
	Media	S	Media	S	Media	S
Physical conditions of work.	2.95	0.93	3.13	0.96	2.57	0.73
Relationship with Coworkers.	3.05	0.71	3.00	0.82	3.14	0.35
Relationship with your immediate superior	3.55	0.84	3.53	0.96	3.57	0.49
Your salary	3.68	0.97	3.33	0.94	4.43	0.49
Contract conditions	3.73	1.09	3.27	1.00	4.71	0.45
Relations between managers and workers	3.55	0.78	3.6	0.71	3.43	0.68
The way your school is managed.	3.45	0.84	3.33	0.94	3.71	0.45
Working hours.	3.86	0.97	3.53	0.96	4.57	0.49
Your job stability.	3.59	0.89	3.20	0.75	4.43	0.49
Total	3.49	0.92	3.33	0.82	3.84	0.89

Table 7 Extrinsic level of satisfaction*Source: Own elaboration*

In table 8, the correlation analysis of all pairs of factors was performed and correlations greater than $|0.5|$ were identified, and then a regression analysis was performed to determine the significance of the correlation at the $\alpha = 0.05$ level. Table 8 shows the results of the analyses performed including the F-statistic and the p-value, where $r =$ correlation index; $FE = F$ calculated from the study; $FC =$ critical F and $S =$ Significance at a level of $\alpha = 0.05$.

	R	Factors	F_E	F_C	p-value	S
All professors	0.73	I4 vs E4	22.48	4.35	0.00012	Yes
	0.66	E1 vs E6	15.46	4.35	0.00082	Yes
Full professors	0.67	E1 vs E6	10.34	4.67	0.00676	Yes
	0.64	I2 vs E4	9.04	4.67	0.01010	Yes
	-0.60	I6 vs E1	7.36	4.67	0.01776	Yes
Hourly professors	0.84	I1 vs E9	12.14	6.61	0.01757	Yes
	0.80	E1 vs E2	8.93	6.61	0.03051	Yes
	0.71	E1 vs E6	5.18	6.61	0.07198	Yes
	-0.73	I4 vs I5	5.71	6.61	0.06235	Yes

Table 8 Relevant correlation indices and F-test*Source: Own elaboration.*

Conclusions

In terms of intrinsic satisfaction factors, the "Variety of tasks to perform" is rated as neutral by the core staff, which indicates that there is an area of opportunity to be taken into account. In terms of fee staff, the best rated factor is "Possibilities to use my skills" with a mean of 4.57 and a standard deviation of only 0.49, so we can consider that fee staff are very satisfied with the institution for allowing them to use their skills.

Comparing the data as a whole, it can be seen that all factors are only slightly above the overall mean of 3, which, in quantifiable terms, means that the intrinsic values are only slightly above neutral or indifferent.

From the data observed in the responses of the core staff, it can be seen that the majority (6 out of 7) have values above the overall average, which in this case is 3.

The factor that does not reach the overall average value is "variety in the tasks to be performed", with a very slight lower value (0.07), while the factor "possibility to use your skills" represents the highest value, exceeding the average with 0.67.

The dispersion in the responses is around the value of one, so it follows that the data are clustered in a normal distribution, with its graph in the shape of the classical bell of this distribution.

It is very significant that, when comparing the averages between regular and honorary staff, all the values given to each of the factors of the honorary staff are significantly higher than those given by the regular staff.

As for the extrinsic factors, the ratings given by the core staff are at the neutral level, while the fee personnel give "very satisfactory" ratings to the factors "Hiring conditions" and "Working hours", while the fee personnel give a rating between unsatisfactory and neutral to "Physical working conditions", it is important to note that this factor for the fee personnel was the only one that was rated below the "neutral" level, which represents an area of opportunity for improvement.

Contrary to expectations, fee-based staff are more satisfied than regular staff in these areas, despite the fact that the salary they receive is lower than that of regular staff and their schedules are assigned to cover subjects and schedules that were not covered by regular staff. One possible explanation for this assessment is that fee staff received a 50% salary increase in the current semester.

With regard to extrinsic factors, we observe that as a whole (core and honorary teachers), 7 of the 8 values are above the general average, with "Working conditions" being 5 tenths below this parameter. "Working hours" and "Job stability" stand out as the best evaluated factors.

When comparing the factor scores between fee and basic teachers, the higher evaluation of almost one point that fee teachers give to the indicators "Job stability" and "Salary" is worth analysing.

In an objective analysis of the comparison between both groups, 6 of the factors have a higher evaluation of the fee teachers and only "Physical working conditions" and "Relationship between management and workers" have a lower evaluation than the one given by the basic teachers.

Regarding the standard deviation, a significant difference is observed in all the factors, being the basic group the one that presents the greatest dispersion of the data, 6 of the standard deviation values, present values from 0.49 to 0.45. One of them ("Your department head"), presents an insignificant difference of three tenths and the last difference of 0.38.

For future studies and according to the results shown in table 8, it is advisable to eliminate from the analysis one factor from each pair of highly correlated factors such as I1 (Freedom to choose the method of work) and E9 (Job stability) which have a significant positive correlation of 0.84. Similarly, I4 or I5 can be eliminated since I4 (possibility to use my ability) and I5 (possibility of promotion) have a significant negative correlation of 0.73.

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