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**FACTORS INVOLVING THE MOTIVATION BETWEEN TECHNICIANS  
AND TEACHERS OF A FEDERAL AUTARCHY IN  
A MULTIGENERATIONAL ENVIRONMENT**

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**ABSTRACT**

The traditional motivating measures to reward or punish workers only have a short-term palliative effect; however, many organizations, even knowing the motivational theories that go far beyond these traditional measures, fail to introduce them; therefore, their actions are often restricted to the theoretical discourse and, because they are not applied properly, they end up having an opposite effect, generating the employees' disappointment and discouragement. This effect can be aggravated when the multigenerational environment is not considered. This article aims to compare the motivation of the technical and educational servants of education in a multigenerational environment, through a case study, using the quantitative method with questionnaire closed questions. The analysis of results, from the perspective of Motivational Theories, showed points to be improved by people management, such as the need for charismatic leaderships, better working conditions, server recognition, training and capacity building. The multigenerational environment presented a balanced distribution of generations among the technicians, but among the teachers the age distribution was irregular, thus showing, among other factors, a lack of renewal, with the non-entry of new teachers.

**Keywords:** Motivation; Public service; Educational Institution, Multigenerational Environments.

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## 1. INTRODUCTION

Businesses exist because an organized activity is required to meet people's demands. To operate and function, organizations depend on individuals who plan, organize and control their activities (Pontes, 2009).

According to Souza (2013), the contracting of new servers through tenders must comply with a previous planning, in which a diagnosis of the real shortage of new servers is performed for certain sectors, thus avoiding what normally occurs, such as the service provided to emergency situations or purely political issues.

People management is usually concerned with motivation versus job satisfaction, without regard to worker happiness, and as happiness is something very subjective, it is defined in organizations as welfare, which should also be a concern of people management (Véras, 2008, p. 15).

According to Navarro (2009), motivation at work is a competitive advantage and this theme has received more attention in the last decades, thus becoming extremely important for the management of people.

Many executives still believe that it is possible to motivate through awards and punishments. In fact, leaders cannot lead their led staff. They can only provide the conditions so that the motivation that the led ones bring within themselves is released (Bergamini, 2002).

Silva and Madruga (2007: 25) affirm that "motivation is specific to the situation, and the high income of an employee derives from the skills he has and the support he receives, as well as the motivation".

Organizations need to face global competition and high market competitiveness, so they need competent and creative people. Engaged and skilled employees become a plus in the organization, which gains a competitive differentiation from the competition (Ramos, 2009).

Public educational institutions are not immune to this competition, because each will compete with the others for the best students, the best professionals and different sources of resources.

Multigenerational environments are those work environments that have several generations of workers. The People Management area is seen in many companies as a strategic area, as it values information and knowledge, as well as promoting actions so that these assets are not lost. In order to

attract the best professionals, and retain them and motivate them at work, it is necessary that these processes have different focuses for each generation of workers. It is essential that the organization knows its characteristics and needs so that it optimizes the performance of professionals of all generations, promoting conflict reduction and resistance to changes, thus maximizing productivity (Malafaia, 2011).

According to Silva and Borges (2013), the interaction between the generations (X, Y and Baby Boomers) influences the organizational environment, and actions must be taken that promote quality of life, motivation, professional development and commitment of the team.

In the light of the main motivational theories, Herzberg's two-factor theory (1959) and Vroom's theory of expectations (1964), the research problem is to find the determining factors for motivating public servants.

This research is justified by the fact that, although there is a consensus that motivation originates in the needs of individuals with particular needs and that these individuals motivate themselves individually, as stated by Gil (2007), it is also true that several companies, perhaps most of them, are still failing to employ measures that actually motivate their employees. Authors such as Hunter (2011), Bergamini (2002) and Véras (2008) argue that companies know how to promote discourses on motivation, including the application of motivational and leadership courses. However, these same companies that spend their resources with palliatives still cannot apply the motivational theories in practice. The use of palliative methods ends up generating an opposite effect because their employees perceive that the speech is one and the reality is another. Many companies continue to work with already outdated forms of rewards and punishments, as well as choices of people to positions where they are not fit, for example. In this context, some government bodies and institutions can go for years without promoting new competitions, making the organization "oxygenation" unfeasible. In this way, the gulf between generations and the conflicts caused by the clash between generations tend to be strengthened, and Strategic People Management must act in a way that the differences between them are narrowed (Malafaia, 2011).

This research aimed to study the motivation of technical and administrative staff and teachers of a unit of a federal education autarchy to compare the motivation of these two categories of education professionals in a multigenerational environment that will serve to utilize the strategic management of people of this institution and other institutions of the public service in general.



## 2. THEORETICAL FOUNDATION

### 2.1 Motivation in the Public Sector

Leite et al. (2017) state that “employee motivation can become a differential for companies that aim to be among the most profitable on the market, as this is one of the factors that can increase productivity in companies”.

According to Silva et al. (2014), “The reform of public management has focused on results, efficiency, governance and the orientation of public management to administrative practices more adequate to the requirements of a citizen more informed and in tune with the virtual technologies”.

According to Ribeiro and Oliveira (2016), motivation in public administration is a strategic tool that is not remembered by managers who do not recognize the commitment and the work goals achieved by the servers. This is because, like the employees of a private company, public servants must meet schedules and perform daily tasks, many of them with set deadlines, and therefore, these workers also need to be motivated so that they can present a work of excellence and ambition the success of the organization.

The public sector has some very particular characteristics in relation to the private sector’s standards regarding the motivation and behavior of its workers (Rodrigues et al., 2014).

This is complemented by Bergue (2010) when he states that the motivation of people in the public sector, when compared to that of the private sector, is characterized by a greater complexity due to several factors, such as server legislation, work and function processes, cultural, political and economic nature of the public service, and the very environment in which the server is inserted.

For Costa (2010), it is important to analyze the human resources practices and the perception of the servers in relation to these practices. By understanding the behavior of the server, it is possible to implement the necessary changes to the modernization of the public service.

According to Gomes and Quellas (2003), the public bodies, in terms of performance of their activities, are supported by three major “pillars”: the left is the material resources, the central and most important in sustaining the organ or organization is the of human resources, and the right is the “pillar” of financial resources.

As shown in figure 1 below, the main “pillar”, that of human resources, is composed of two large “pillars”: professional capacity and motivation. These columns are the most

important for efficiency and effectiveness in fulfilling the organizational mission.

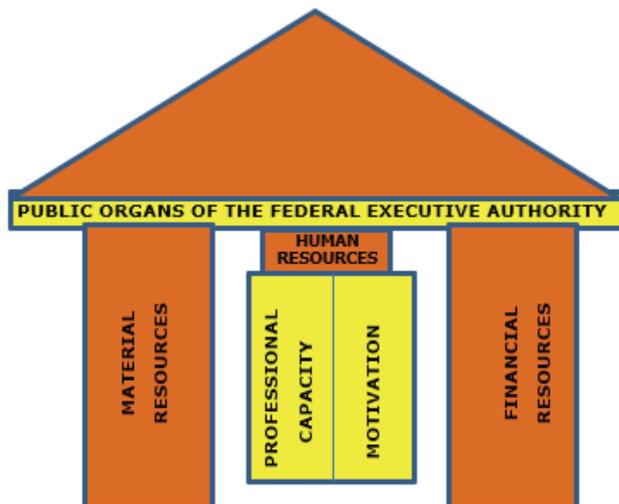


Figure 1. Sustainability of the management of public bodies

Source: Gomes and Quellas (2003)

### 2.2 Motivational Theories

#### 2.2.1 Theory of the Two Factors of Herzberg (1959)

The psychologist Frederick Herzberg contributed much to the knowledge on the motivation of the workers when developing the theory of hygienic and motivating factors. Hygienic factors are not enough to promote motivation, but they must be satisfying (or satisfied) so as not to cause people to become unmotivated. The motivational factors are those that actually promote motivation, thus, by not being satisfactory, such factors do not contribute to motivation (Gil, 2007).

In his research, Herzberg concluded that people gave a certain type of response when they felt good at work and another kind of significantly different response when they felt bad. From there, Herzberg concluded that the intrinsic factors are related to job satisfaction, since the extrinsic factors are more related to the dissatisfaction (Robbins, 2000).

According to Gil (2007), the hygienic and motivational factors are subdivided as follows:

- Hygienic factors: wages and benefits, working conditions, company policy, status, safety at work, supervision;
- Motivational factors: responsibility, recognition, challenges, achievement, growth.



According to Freitas (2006), Herzberg's theory suggests that managers who want to motivate their employees should be concerned with meeting the motivational factors and, if they also want to have unsatisfied workers, they must take care so that hygienic factors are taken care of.

According to Gil (2007), hygienic factors cannot be disregarded. For example, an increase in wages may not necessarily motivate employees to work harder but may leave them satisfied so that other factors can motivate them. On the other hand, paying little for the work done or not paying attention to other hygienic factors causes dissatisfaction, making people unmotivated, having no other way to motivate them.

According to Robbins (2000), Herzberg's theory of motivation-hygiene was widely used by managers. Many companies have been struggling to combine actions to keep their employees from becoming dissatisfied, while taking steps to increase job satisfaction and motivation.

### 2.2.2 Theory of Vroom Expectations (1964)

For Bergue (2010), the theory of expectation (or expectation) was created by Victor Vroom (1964), a renowned psychologist, behavioral specialist in organizations, particularly in the areas of leadership and decision making. His theory is one of the most recognized studies on human motivation. "The motivation of a person for a particular action is subject to the perceived probability of achieving a given result and the value attributed to it".

According to Costa (2010), motivation has three components:

- Valence or how much a person wants a reward. That is, the value that the person gives to the reward;
- Expectation or the estimate that effort will result in a successful performance. That is, the person believes that his effort will reach his goal;
- Instrumentality, which is the degree of perception that the performance achieved will result in the desired reward. That is, the fulfillment of the goal or target will generate a reward.

According to Navarro (2009), employees tend to rationally evaluate the options of different sectors and types of service, choosing those that will bring them greater rewards and results. This idea is reinforced by Gomes and Quellas (2003), when they affirm that the motivation of the individuals in the theory of the expectation is derived from the

reasoning of the individual that is connected to external factors, thus being a purely rational behavior.

For Costa (2010), the theory developed by Vroom shows that the individual motivates himself according to the values and expectations that he has in obtaining good results for himself.

### 2.3 Multigenerational Environments

The diversity of the workforce is represented by the heterogeneity of each organization's workforce. This diversity occurs according to gender, race (for example, Hispanic, Asian and African American), origin (immigrants), age, physical disability, partners (homosexual, heterosexual, bisexual, single, etc.) and religion (for example, depending on the religion there are days when employees cannot work) (Robbins, 2009).

According to Guedes and Oliveira (2017), factors, such as increased life expectancy, improved communication, interaction between people and the increasing speed with which information moves, have given rise to a unique current scenario in world history, in which it is possible to find up to five generations living in the same environment or in the same reality.

According to Veloso et al. (2016), organizations need to manage heterogeneous groups of workers that are formed due to the diverse characteristics of these professionals. One of them is the one of the age, which presents its own needs to be considered and attended, according to each age group.

According to Nascimento et al. (2016), "Generations share common experiences in social, economic or cultural processes and, because of their integration into the labor market, collective thinking/action and the sharing of actions and processes are necessary".

For Malafaia (2011) years ago, the social, economic and political contexts in which people grew were a more stable scenario, thus the generations alternated at greater intervals. Today, however, due to rapid social, economic and technological changes, one can note the formation of a new generation whose characteristics are substantially different from the previous one at intervals of only 15 years or less.

According to Silva and Borges (2013), the interval between generations was identical to the succession of fathers by their children, with a 25-year interval between generations. Currently, mainly due to the acceleration of technology, this time interval is around 10 years.

Chiuzi et al. (2011) state that "generations are products of historical events that have profoundly influenced the values of its members' vision of the world".



Authors such as Robbins (2009), Malafaia (2011), Silva and Borges (2013), France (2011), Nascimento et al. (2016), among others, present several very similar groups of generations, mainly in relation to their names, of which we can cite as the main ones: Veterans, Baby Boomers, Generation X, Generation Y, and, more recently, Generation Z. Among these generations, those that can be found in companies are the Baby Boomers, Generation X and Generation Y, and these are the most studied ones. However, there are also records of the most recent entry of Generation Z workers into enterprises, mainly for the learning and/or internship functions (Malafaia, 2011).

Nascimento et al. (2016) emphasize that the literature does not present a consensus regarding the temporal division of the generations; the beginnings and ends of each generation are found with similar intervals; however, sometimes there are divergences.

For teaching purposes, according to the presentation of authors such as Robbins (2009), França (2011) and Veloso (2016), among others, below is the Chart 1, which was created to show a more convergent form for the beginning and end of each generation.

As can be seen in Chart 1 above, the generation of veterans is almost extinct in companies, with the predominance of the generations Baby Boomers, Generation X, and Generation Y, as well as the recent entry of Generation Z.

### 2.3.1 Key features of each generation

According to Robbins (2009), values and needs vary from person to person, but reflect the society in which the individual was raised. The study of the various generations is important for the explanation and prediction of behavior. For example, workers in their 60s can accept authority better than the younger generations. On the other hand, workers in their 30s often rebel more than their parents as opposed to overtime and work on weekends and holidays. In addition, younger generations are more likely to abandon a career in the middle to seek a career that offers them more leisure time.

The presence of several generations living and working in the workplace imposes the challenge of taking advantage of the best characteristics of each group, and for this, organizations must rebuild all their agreements, such as respect for authority, dress codes, working hours, and the more flexible hours of work (Malafaia, 2011).

The characteristics of the generations that have contributed to the labor market since the middle of the 20<sup>th</sup> century are indicated below:

#### Veterans

For Robbins (2009), these professionals valued hard work, conservatism, conformism and loyalty to the organization.

According to Chiuzi et al. (2011), the veterans, also called the silent generation, admired the previous generation, who fought in World War II, and their values of patriotism and self-sacrifice for the common good. They inherited a “better world,” in peace, and from there, sought to understand this world rather than change it.

Although this generation has practically left the labor market, its study is important to understand its characteristics, obtaining a better understanding of the changes that occurred in later generations and the main values of each one (Malafaia, 2011).

#### Baby Boomer Generation

They distrust authorities more than the previous generation. They are pragmatic and believe that ends can justify the means. The organization is only important for the development of their careers. They seek personal fulfillment and social recognition (Robbins, 2009).

According to Andrade et al. (2012), the Baby Boomers wanted to build a solid career and valued loyalty to work. For them, the career should bring fulfillment and not just material goods. In leadership positions, they employed participatory and motivational theories and were concerned with maintaining a good working environment and justice.

Chart 1. Multigenerational panel

Generation	Birth	Entry into the labor market	Output from the Labor Market	Age in 2018
Veterans	1930-1944	1950-1964	1985-1999	88-74
Baby Boomers	1945-1965	1965-1985	1980-2020	73-53
Generation X	1966-1980	1986-2000	2021-2035	52-38
Generation Y	1981-2000	2001-2015	2036-2050	37-18
Generation Z	2001	From 2016 to the present day	2066 or more	17

Source: The authors themselves



### Generation X

The members of this generation work to live, but do not live to work. They are easier to recruit, but more difficult to maintain in their jobs. They change organizations according to the needs of the family. They are also entrepreneurs, ambitious and immediate. They do not only seek professional achievement, they want it to come together with quality of life (Andrade et al., 2012).

These characteristics are complemented by Robbins (2009), who describes the members of this generation as people who attach great importance to family and relationships. They attach importance to money, but they are not willing to change the quality of their personal lives, with more time for leisure and the company of friends and family for salary increases, titles, promotions, etc. In addition, they are less willing to sacrifice themselves for their employers than previous generations.

Andrade et al. (2012) remind us that in this generation there is a more effective participation of women with an increase in their autonomy within society, and that members of this generation have revolutionized the internet, creating Google, Amazon and YouTube.

### Generation Y

This generation is made up of workers who have recently joined the labor market. They were created using technology. Like the previous generation, they like to work in teams, yet they rely more on themselves than on the team itself. They value freedom and a life of comfort and value money more than the previous generation (Robbins, 2009).

According to Guedes and Oliveira (2017), "Due to the fact that this generation was the first created within the technology, it is mostly connected and innovative and, therefore, does not believe in traditional institutions".

For Andrade et al. (2012), the members of this generation are questioners and collide with the traditional model of hierarchy, have self-confidence and, therefore, do not fear unemployment. Work is a means and not an end. They are flexible, individualistic and competitive. They have greater agitation, impatience and need to be connected. In the workplace, they are more concerned with their own careers than with the smooth running of business processes. They mix personal and professional life at a higher intensity than previous generations. If they observe a greater difficulty of growth within a company, they seek a new company more quickly than previous generations, becoming less stable in organizations. It is a generation that sees no clear boundaries between personal and family life and work. Many have

a home office and still expect to work anytime, virtually anywhere, with more flexibility.

Some characteristics of Generation Y become more intense in Generation Z, according to Malafaia (2011) and France (2011), as the lack of respect for parents, leading to indifference in terms of authority, admiring more real competence (and good examples in the company), not simply the hierarchy. In addition, they live with information overload, presenting difficulties to correlate the contents and having the need to be connected, and yet, they are agitated, anxious and immediatist.

### Generation Z

This is a generation that grows by observing, copying, and expanding their need for connectivity learned from their elders. They seek professional results, the measure of which can be determined together with the possibility of career growth. They are more interested in math and science than in arts and social sciences. Studies in Brazil reveal that this generation is composed of youngsters who, for the most part, may be living in their parents' homes from the age of 25 to 35, with relative independence, contributing only their own college expenses, locomotion and clothing. It is a generation more protected by the parents, who still bear many expenses to support them; in addition, these young people have a greater difficulty in planning their lives for the future (França, 2011).

The members of this generation are constantly witnessing changes, developing multitasking and seeking varied challenges. They need a world similar to yours, connected, open to dialogue, fast, and global (Nascimento et al., 2016).

Malafaia (2011) complements by stating that the Z generation is more individualistic, impatient and more connected than previous generations. It emphasizes the need for the strategic management of people to be prepared in order to have the knowledge of the profile of this generation, positioning themselves adequately to meet the needs of satisfaction and motivation at work, in the most appropriate way possible, thus helping to maximize their potential.

## 3. METHODOLOGICAL PROCEDURES

For Gil (2002, p. 41), exploratory research aims to provide greater familiarity with the problem, seeking to make it more explicit or seeking to constitute hypotheses. This type of research usually involves: bibliographical survey, interviews and analysis of examples.

In this research, it was used the methodology that, according to the purposes, uses the exploratory method and, in



terms of media, uses bibliographical and documentary research (Gil, 2002), also including the application of the case study in a representative unit of the research institution (Yin, 2004).

The use of the quantitative or qualitative method will depend on the interest of the researcher and the type of study developed. It is important to stress that these two approaches are interlinked and complement each other (Prodanov e Freitas, 2013).

According to Prodanov and Freitas (2013, p.69), from the point of view of the problem approach, the research is classified in:

**Quantitative research:** is the one that can quantify the information, transforming it into numbers that are classified, processed and analyzed;

**Qualitative research:** considers the existence of a subjectivity that cannot be translated into numbers. There is no use of statistical methods and techniques.

This research adopted the quantitative method. Questionnaires with closed questions were used. The results were consolidated and analyzed by means of statistical methods and techniques for the proposal of the theme to be achieved.

According to Yin (2004), the case study is only one way of studying in the field of social sciences. This method is used when the researcher has little control over events and seeks to study contemporary phenomena within some real-life context.

This article applied the single case study, having as object of research the technical-administrative servants and teachers of a representative unit of a federal teaching institution. According to Gray (2012), this method is used for a wide variety of topics, such as evaluation of training programs, organizational performance, project performance and implementation, analysis of policies and relationships between different sectors of the organization, comparison between organizations, etc.

According to Sweeney et al. (2015), the sample survey is the process in which data are collected from a sample. The census is a research process (survey) to collect data corresponding to an entire population. This research uses the census process, collecting data from as many servers as possible from the respective unit of study.

Lakatos and Marconi (2003) mention that the pilot research is to test the instrument of data collection. The pre-test looks for the reliability, validity and operability of

the information. The pre-test is always applied for a reduced sample. When failures are found, the search appliance should be fixed.

From the perspective presented, the questionnaire was applied to a pilot sample of four randomly selected interviewees to validate the research instrument, giving more precision and safety to the results.

According to Gray (2012), the questionnaire with closed questions offers the respondent a set of response options such as "yes/no", multiple choice answers, etc. Closed questions are useful for giving the respondent a set of answers.

The research instrument collected the data through a questionnaire with closed questions, addressed to the teachers and technical-administrative of the analyzed unit. The first questions collected the personal data of the respondents, from whom information about academic training could be obtained. Afterwards, ten closed questions were elaborated from the Theoretical Referential, among which seven questions were related to Herzberg's Theory of Factors (1959) and then to three questions were related to Vroom's Theory of Expectation (1964).

Data collection was carried out with 65 teachers (63.10% of the 103 teachers in active contact) and 43 technical-administrative professionals (that is, 84.31% of the 51 technicians in contact).

Teachers had a mean age of 44 years, with approximately 11 years of service in the institution; the technicians, in turn, presented average age of 43 years and 13 years of service time.

The institution is a centennial federal autarchy, linked to the Ministry of Education, which has administrative, patrimonial, financial, didactic and disciplinary autonomy. The unit researched, created in 1999, is decentralized, possessing administrative and financial autonomy.

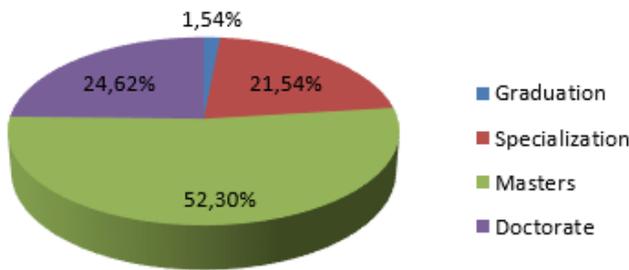
The unit studied was chosen because it is among the best high schools in the country, the result of a quality work developed by the team of teachers that has all the support offered by the technical-administrative staff teams. It is located in the city of Rio de Janeiro, very close to the municipality headquarters.

#### 4. ANALYSIS AND DISCUSSION OF RESULTS

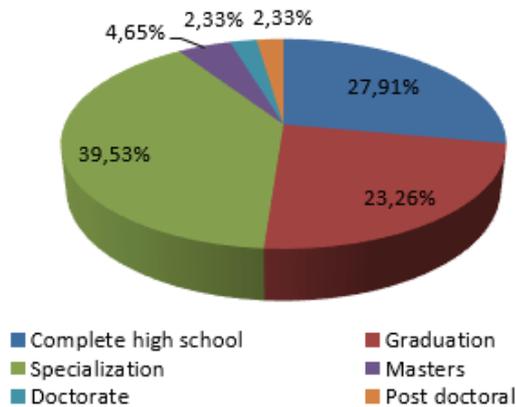
When comparing the academic formation of the teachers and technical-administrative, great differences in the formation of these professionals were noticed. Among the professors, it was observed that 52.31% have a master's de-



gree and 24.62% have a doctorate, totaling 76.93% of those with masters and doctorates, more than 3/4 of the total, and none of the teachers has only high school level. Among the technicians, there are still those who only have a high school, 27.91%, or more than 1/4 of the total, and as far as the conclusion of masters and doctorates is concerned, technicians are left with a performance, with a total of only 6.98%, not even reaching 1/10 of the total number of technicians. These results are presented in Figures 2 and 3 below.



**Figure 2.** Academic training of teachers  
 Source: The authors themselves



**Figure 3.** Technical education of technicians  
 Source: The authors themselves

The analysis of the results was carried out from the perspective of the motivational theories of Herzberg (1959) and Vroom (1964).

In the perception of the servers related to Herzberg’s factor theory, an attempt to maintain the division proposed by this theory in hygienic factors and motivational factors was made.

Hygienic factors are not enough to promote motivation; however, they must be satisfactory (or satisfied) so as not to cause people’s demotivation (Gil, 2007).

For teachers, the hygienic factors that need to be improved are: good working conditions (cleanliness, adequate

temperature, good light, furniture, equipment, etc.) and status (nature of office, authority, relationships with colleagues, internal prestige, etc.).

Among the technicians, the hygienic factors that can be improved in order to prevent demotivation among these workers were: good working conditions, professional status, and implementation of informal norms in relation to their duties.

In the comparison between teachers and technicians, the latter presented a higher level of dissatisfaction, requiring more attention to their demands.

Motivation factors are all factors that contribute to job satisfaction, which is motivating (Robbins, 2000).

The teachers presented only one motivational factor that needs to be satisfied: the work did not meet their expectations. The technical-administrative ones presented the following factors: expertise (basic, technical and practical knowledge) to carry out their tasks, little recognition and the work is not adequate to their expectations.

On both the hygienic and the motivational factors side, the technical-administrative ones presented more unsatisfied factors than the teachers and in a greater degree of dissatisfaction, which indicates that the management of people should have a greater attention with the workers of this career, in order to have a greater influence in increasing the motivation of these professionals.

In the perception of the servers related to Vroom’s theory of expectations, an attempt to maintain the division proposed by this theory in expectation, instrumentality and valence was made.

The Expectancy component, which is the expectation or estimation (probability) that workers have that their effort will result in a successful performance, thus achieving their goal, showed that almost 1/4 of the teachers believe that they will have to work harder than the necessary to achieve their goals. The result among the technicians was even worse, showing that for more than 1/3 of them, the effort will have to be more than enough to achieve their goals.

According to Costa (2010), the high level of effort made by technicians to achieve the objectives and rewards can be due to technicians having to solve problems that are totally outside their functions or capabilities. It should be pointed out that, in the servers profile, the technical training of the technicians was presented, which is far behind in comparison to the teachers; moreover, according to Herzberg’s theory, the technicians showed dissatisfaction with the implementation of informal norms in relation to their attribu-



tions (hygienic factor) and dissatisfaction with their expertise (motivational factor) to perform tasks. At this point one can clearly perceive one theory by validating the other.

The next component to be analyzed is that of instrumentality. For Bergue (2010), instrumentality is a relation between performance and reward. A little more than half of the teachers believe that, even though they perform well, they will not be rewarded. However, among the technicians, this index reached almost 3/4 of the total. These results deserve special attention for both categories, not only of teachers but also of technicians, because, according to Costa (2010), in the instrumentality the employees evaluate how much they should perform to obtain their reward. As these results are the perceptions and needs of each individual, the reward does not have to be a promotion; it may even be an acknowledgment for performing the task, recognition in front of co-workers, etc. The manager must know the existence of these results to verify what he has done, tracing changes according to the needs of the workers and thus increasing the performance of their servers.

The last component analyzed was valence, which according to Costa (2010), is the value that the person gives for a reward. Among the teachers, only 15.38% showed that, for them, the reward will be less than significant and, among technicians, this result rose to 20.93%. It can then be concluded that the reward will be significant for the vast majority of teachers and technicians.

Figure 4 below shows the frequency of teachers' ages, in which a higher frequency of teachers in the 51-55 age group can be observed, with 13 professionals. The mean age was 43.85 years and the standard deviation was 11.38 years.

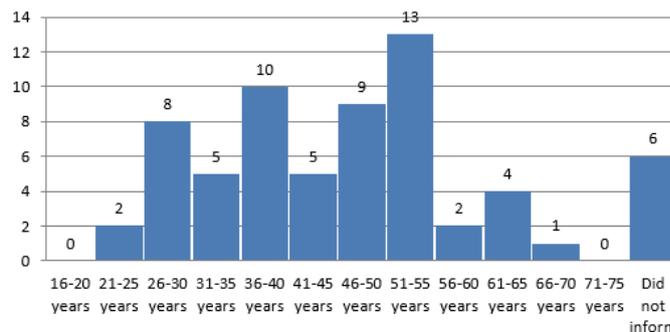


Figure 4. Frequency of teacher ages  
 Source: The authors themselves

Figure 5 below shows the frequency of technicians' ages, with a higher frequency of these professionals in the 31-35 age group, with 7 respondents. The mean age is 42.52 years, close to the mean age of teachers of 43.85 years, and the technical standard deviation is 12.96 years.

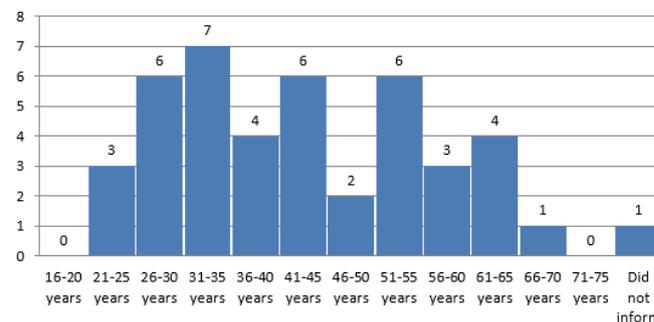


Figure 5. Frequency of technical-administrative ages  
 Source: The authors themselves

With the information shown in figures 4 and 5 above, and Chart 1 - Multigenerational Panel, one can trace Table 1, below, of the multigenerational environment of the researched unit.

As shown in Table 1 above, the category of technicians presents a balanced distribution of generations among its members. Generation Y is the most representative, with 38.10% of workers in the 16-35 age group. As there is a balance between the generations that make up the group of technicians, it becomes more important to understand the

Table 1. Multigenerational Environment

Generations	Age group in 2016	Technicians	Percentage	Teachers	Percentage2
Baby Boomers	51-71	14	33,33%	20	33,90%
Generation X	36-50	12	28,57%	24	40,68%
Generation Y	16-35	16	38,10%	15	25,42%
Total	-----	42	100,00%	59	100,00%

Source: The authors themselves



values and needs of each generation, so that they can be attended to, motivating these generations and thus contribute to the optimization of productivity.

It is also possible to observe, in table 2 above, that the group of teachers presents the group of generation X most preponderant, with 40.68% of the total of professionals of this group. Generation Y represents only 25.42%, which means only 1/4 of the total. This may highlight the lack of “oxygenation” of the organization with the absence of new competitions or the difficulty of retention of teachers, or even the difficulty of approving the youngest candidates at the beginning of their careers, and even a system of unattractive rewards and salaries for new professionals; however, all these possibilities can be verified and deepened by the strategic management of the institution.

Finally, according to Malafaia (2011), the study of multi-generations is important in the organization and serves to avoid conflicts between generations. For the author, “Everyone wants the same things, but the order of priorities is different”. The characteristics of each time shape each generation. It is also important to keep in mind that technology occupies a prominent place, “and is decisive to create time frames”.

## 5. FINAL CONSIDERATIONS

The present article sought to analyze the motivation, in a multigenerational environment, of federal public school teachers and technicians from a unit of a federal education autarchy, through a case study.

The research objective was met. The motivation of the professional categories of technical-administrative and teaching staff was compared in a multigenerational environment.

The theoretical framework sought to deepen and discuss the theme of motivation in a multigenerational environment through Herzberg’s theory of factors and Vroom’s theory of expectation, as well as the theoretical foundation on the main generations that shaped and shape the labor market in the present.

Through the analysis and discussion of the results, one can conclude that these theories are validated and complemented. The results presented important points in which managers should promote actions that motivate the servers.

Teachers presented different needs from the technical-administrative ones, and for them, managers’ actions should focus on important and specific points, such as good working conditions, professional status, non-adequacy of

work in relation to their expectations, system of rewards and needs adhering to the characteristics of generation X.

The technical-administrative ones presented a set of needs greater than the teachers, in which the actions of the people management should focus mainly on the following factors: good working conditions, professional status, implementation of informal norms in relation to their duties, improvement of the skills (basic, technical and practical knowledge) to carry out their tasks, poor recognition and work not suitable to their expectations, high level of effort to achieve its objectives and the rewards system, mirroring the distribution of generations more balanced than that of teachers and therefore covering diverse needs.

The results also pointed to a significant deficiency in the training of technicians, thus affecting their motivation and productivity.

Generations of technical-administrative and teaching categories were last analyzed. The technicians presented a greater balance between the generations than the teachers, who presented more mature generations. People management must be aware of the reasons that are causing this imbalance in the teacher population; as previously mentioned, the probable causes may be: the difficulty of retention of new teachers, the lack of periodic competitions or the difficulty of approving younger first-time graduates, low salaries, and even an unattractive rewards system and lack of work adequacy in relation to their expectations, as pointed out by the motivational theory. This set of possibilities may be responsible for the lack of renewal in the career of teachers.

The knowledge of the representativeness of each generation in the institution is important so that the strategic management can plan actions aimed at optimizing the productivity of each generation and also to avoid the conflict between the generations.

This research presents itself as a further option for future research and the application of its proposals can be used not only in public but also in private organizations.

Finally, there are still aspects that could not be further verified by this research and could be the subject of further research, such as variations in the working conditions that exist in the administrative sectors of the institution, technical-administrative training, as well as the application of other motivational theories.

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