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**THE ACT OF
EDUCATION AS WORK:
ERGONOMICS ISSUES**

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Abstract: In the current and Brazilian cultural view, the university and its aspects, namely: teaching, research, and extension, are important not only because they exist, but because of their predominant speaker in contemporary society. Those who work in teaching have the impression that we are always chasing something, which is never attainable. The current changes proposed by the Federal Government, and the Pandemic starting in March 2019, have led educational institutions and teachers to adapt, adapt to new demands and requirements. As a result, higher education has been looking for management models that can support, or even understand, the current transformations occurring in teaching work and in the teaching-learning relationship. However, current management models have impacted the work of managers, such as the risk of precarious work. The main objective of this research is to discuss the teaching work in a Brazilian public university and in the context of suffering, the damnation of work. In addition, we have the drastic changes due to the Pandemic, which teaching has become remote. There is a concern with man in production – a concept of ergonomics – in which human relationships need scientific data. In the various moments, the worker interrelates his knowledge and skills, in which the result is the competence so that the teacher can walk within the teaching process. Quality of Life is a concept whose individual interpretation is associated with the social environment in which the human being is inserted and factors intrinsic to it. The methodology adopted was Walton's in his empirical evaluations. In the results, the biggest complaints from professors are related to working hours, among others.

Keywords: Higher education, work, occupational health and diseases, ergonomics.

INTRODUCTION

The university is attributed a wide participation in the training of thinkers and professionals in the most diverse fields of thought and cultural and social leaders in the country. In Brazil, the public university was introduced in the third decade of the 20th century, in which its private configuration had an administrative presentation and with a founding tradition already in the old empire, in which the faculties of Law and medicine stood out.

Higher education has the social space, which in the 2000s was strengthened with the contribution in 1996 of the law 9,394 Guidelines and Bases of National Education - LDB (see website: < <https://www2.senado.leg.br/bdsf/bitstream/handle/id/70320/65.pdf> > which, in article 1, says that: “*Education encompasses the formative processes that are developed in family life, in human coexistence, at work, in teaching and research institutions, in social movements and civil society organizations and in cultural manifestations.*”. And yet, in § 2nd “*School education must be linked to the world of work and social practice*”.

Since then, the Federal Government of Brazil works with public policies in order to change the education landscape in the country, specifically, that of higher education. According to Conception; Alves (2013), the Federal Government of Brazil has introduced concrete changes in the standard of evaluation, funding, management, curriculum and production of academic work, and also causes changes in the university field and in the identity of Higher Education Institutions.

What you perceive, currently, when Brazil manifests in a new, or another, university reform demonstrates another of this instability. Those who work in teaching have the impression that we are always chasing something, which is never attainable, in the expectation that higher education would

fit in a forceful way to the framework of the demands of the current model of society. This model is moving towards adapting to the example of the capitalist context.

The activity of working in teaching presents us with a daily life of stressing and psychosocial elements, inherent to the characteristics of the function.

Still, it is worth noting that many students regularly enrolled in higher education courses at Public Universities come from public elementary and middle schools. Thus, according to data from the government of the State of São Paulo, obtained exclusively by UOL via LAI (Access to Information Law), it was noted that every day, at least two elementary and high school teachers are physically attacked by students inside the classroom of state schools. In 2018, 434 ROEs (School Occurrence Records) were recorded regarding physical violence inside the classroom (see: < <https://educacao.uol.com.br/noticias/2019/08/22/a-cada-day-at-least-2-teachers-are-assaulted-in-state-schools-in-sp.htm>>).

With the various changes and contingencies for the education portfolio, governmental and social transformations arise, namely: the increasing inclusion of financially deprived young people in higher education and the disorderly expansion of this teaching modality have changed the role of the teacher and the functions of schools and universities as the social institutions.

The current changes proposed by the Federal Government, and the Pandemic starting in March 2019, have led educational institutions and teachers to adapt, adapt to new demands and requirements. As a result, higher education has been looking for management models that can support, or even understand, the current transformations occurring in teaching work and in the teaching-learning relationship. However, current management

models have impacted the work of managers, such as the risk of precarious work.

GOAL

The main objective of this research is to discuss the teaching work in a Brazilian public university and in the context of suffering, of the damnation of work, in which, when exercising this profession, and over time, it is increasingly under pressure in teaching activities. In addition, we have the drastic changes due to the Pandemic, which teaching has become remote. The main purpose of this research is to analyze and present a reference of quality of life in the professional scope of teaching in a public school of higher education, precisely at the Faculty of Architecture, Arts, Communication and Design of Unesp / Bauru / SP. The justification is the growing discouragement in working professionally in the teaching of many teachers who complain about various issues when exercising the profession.

DEVELOPMENT

UNIVERSITY TEACHING PROFESSION

Perrenoud (2000, p. 134) summarizes what a teacher must be able to do: analyze complex situations, having as reference readings by different authors; opt for strategies adapted to the objectives and ethical requirements of the profession; choosing appropriate techniques and instruments, structuring their approaches; adapt your projects based on experience; critically analyze your actions and results; learn, through reflection and continuous assessment, throughout your career.

The teacher, in addition to knowing the programmed content of the discipline, which he teaches, must also know when to start reflective and critical mediation with social transformations so that the student can question, reflect, think, make relationships

between the topics discussed in the classroom. of class.

In the new conceptions of knowledge, still dominated by the content of the past, the professional teacher is a specialist who needs to deal with the plurality of knowledge. Therefore, the specialist teacher needs to give way to the professional teacher (PERRENOUD, 2000, p. 204-205).

This teaching professional hired by the Brazilian public university has today to be multifaceted, being a scientific researcher, a professor present in the classroom and available to students in extra-classroom moments, preparing, organizing and managing university extension projects, in which involve students and the community in which the University is located and, preferably, be registered in a postgraduate course in which you will be responsible for teaching classes, organizing scientific events, lectures, round tables, workshops, and guiding students involved in research with master's and doctoral degrees. Also, the professor has to publish his research with the academic society so that he can disseminate his knowledge.

In this context, it must be noted that the teaching professional has a theoretical background of knowledge in the course of his academic trajectory. This baggage of knowledge is always attached to their superior values.

ERGONOMICS IN TEACHING WORK

Worker's Health is a term that includes work in the face of health and illness. In this interpretation, the concept of health and illness is directly linked to the productive development of the population. The need for production, working conditions and little concern for workers' health result in illness and death in this population (SIQUEIRA et al., 2013).

Consequently, the concern with man in production arises – a concept of ergonomics – in which human relations need scientific data. There was a mixture of various sciences (disciplinary) with their data and knowledge, which the human being is distributed in specific areas of work.

We must warn that the professional teacher is not inherent to the models of Taylor and Ford. Many professors, due to excessive work, make their classes repeater of routine mechanical gestures and seek greater production. Is this the fault of the teacher, or the teaching institution, or even the current society we live in?

In a brief summary, the professionalization of the Brazilian educator began to be designed in 1835, when the first school for educators was created in the city of Niterói, State of Rio de Janeiro.

Oliveira (2010) warns that knowledge is the basis for competence, but it has to be added to skill and other attributes that are very difficult to develop in the traditional classroom. This means that practices in the classroom have to change, as the development of current higher education can no longer ignore active methodologies and be based simply on the transmission of content (passing the material).

Is the teaching worker at this moment not doing more, and even more, what is already within his competence? Thus, the teacher becomes a worker, who is transformed once and for all into a factor of production, because he has the ability to produce more than what is necessary for his subsistence.

The quality of life in the teaching profession is inserted in the analysis and methodology of the Quality of Life at Work.

QUALITY OF LIFE AT WORK

Ergonomics in relation to QWL (Quality of Life at Work) is based on reflections,

essentially on the Franco-Belgian approach to ergonomics. From a social point of view, the relevance is manifested by the central role that the world of work assumes in life in society.

Quality of Life is a concept whose individual interpretation is associated with the social environment in which the human being is inserted and factors intrinsic to it. This way, the understanding of Quality of Life differs for each person, as it has a subjective, complex and multidimensional character, making its conceptualization difficult (ROCHA; FELLI, 2004).

The concept of Quality of Life has been transformed and evolved over time, Table 1 below presents some concepts and their characteristics.

The transformations that operate in public and private organizations in the area of education and, above all, the indicators of goals to be achieved and critical social indicators that have been produced strengthen the challenge of reconciling the well-being of

those who work and the satisfaction of the teacher / student. with the imperatives of efficiency and effectiveness in the contexts of producing results related to learning.

If we currently look at classrooms, the relevance is inscribed in a perspective of facing a set of problems present in the daily life of teaching work environments that place the quality of life at work as a real need.

In the context of teaching work, two aspects that characterize the transformations can be seen: the strengthening of the multifaceted demands of the teacher in relation to the assigned tasks, not only the classrooms, but also management issues, university extension, and scientific research. The other transformation is the teacher who needs to satisfy the teaching and learning issues. These questions that, to be exercised satisfactorily, would need more time for scientific readings, for thought, for reflections and analysis, among others. These questions lead us to think about the current lifestyle of the higher education teacher.

Quality of life concepts	Features and differentiations
1. QOL in a broad concept, WHO WHOQOL GROUP (1994, P.28)	Relates the individual to the environment and society where he lives, valuing aspects of culture and population.
2. health-centered QoL. Fleck at al (2003)	It suggests that health is the primary aspect for maintaining a good quality of life.
3. work-centered QoL, Comte (2003)	It indicates that the quality of life is directly and in a very incisive way related to the individual's satisfaction with his work.
4. QoL centered on the individual, Minayo, Hartz and Buss (2005)	Relates quality of life to a series of objective and subjective parameters.
5. QOL centered on comparison, Ferris (2006)	It considers the "endo" and the "exo" of the individual from the comparison of incident endogenous and exogenous forces, when considering the whole of the human organism.
6. QoL centered on the absence of disease, Kalschnig (2006)	It states that good quality of life conditions are closely related to the absence of pathologies of any origin.
7. QOL centered on the various dimensions of life. Toscano and Oliveira (2009).	It compares the various dimensions of individuals' lives, emphasizing that the absence of pathologies is just one factor to be considered.

Table 1 – Concepts and characteristics of quality of life.

Source: Beltrame (2009) apud Hauser (2012).

In addition to these two aspects mentioned, we have the current moment since March 2020 the new Corona Virus Pandemic, which put us in a situation of very drastic changes, in which the teacher had to understand how to teach classes to students outside the educational environment, that is, extra walls of the university. Adopting outputs such as: improving your computer, your internet, your smartphone to communicate with students remotely, I would say more, not only communicating, but making teaching, learning, assessment happen without loss of quality.

METHODOLOGY

There is an instrument that addresses the assessment of the Worker's Quality of Life, which consists of a questionnaire according to the model proposed by (WALTON, 1973) that comprises 8 dimensions, as shown in Table 2. The choice of this model for evaluation justifies It stands out because its 8 criteria cover with a wide range of basic aspects of work situations, which were adapted to teaching work. And also because it is a flexible instrument, since the criteria listed are not in order of priority, and can be arranged differently to assume other

CRITERIA	QWL INDICATORS
1 Fair and adequate compensation	Internal and external equity justice and compensation Productivity gains worksheet Proportionality between salaries
2 Work conditions	reasonable working hours Safe and healthy physical environment absence of unsanitary
3 Use and development of capabilities	Autonomy relative self-control multiple qualities Information about the total work process
4 Opportunity for growth and opportunity	career possibility Personal growth Salary advancement prospects job security
5 Social integration in the organization	Absence of prejudice Equality Mobility relationships sense of community
6 Constitutionalism	Worker protection rights personal privacy Freedom of expression impartial treatment Labor rights
7 Work and the total space of life	Balanced role at work timetable stability Few geographic changes Leisure time with family
8. Social relevance of work in life	Company's image Company social responsibility Product liability employment practices

Table 2: Fundamental Aspects Quality Work Life.

Source: Walton's Adaptation (1973).

importance according to the reality in each organization.

To identify the interviewee's perception of their QWL, a 5-point polarized scale (see Chart 1) based on Reis Júnior (2008) was used.

Numerical scale of answers	Interpretation
1	Not at all – Very low – Very bad – Very little
2	Little – Low – Rarely – Bad
3	More or less – Average – sometimes
4	Quite a lot – High – Often – Good – Very
5	Extremely – Very High – Always – Very Good – Completely

Table 1: Numerical scale and interpretation.

Source: adapted from Reis Júnior (2008).

Both instruments, that is, Table 2 and Table 1, were applied simultaneously to the same population of teachers, and the subject must take as a reference for the answers the year 2019 (February to September) that preceded the application of the questionnaire.

This methodology, therefore, addresses the quality and quantity of information resulting from the investigative questionnaire for conclusive analyses.

The questionnaire was applied using the Google Forms method in October 2019 to professors at the Faculty of Architecture, Arts, Communication and Design at UNESP, being a Public University located in the city of Bauru / SP. The population is made up of 85 teachers regularly hired for teaching duties. Of these 85 professors, only 53 answered the questionnaire.

The eight Questions of the questionnaire were thought and analyzed according to the situations perceived in the teaching work in higher education courses and in reference to Table 2.

1. At what point do you rate in your activities the questions of autonomy and previous information about your activities?				
very low	low	medium	high	very high
1	2	3	4	5

2. How do you rate personal growth and salary advancement issues in your activities?				
very low	low	medium	high	very high
1	2	3	4	5

3. How do you rate your activities on issues of personal relationships and sense of community?				
very low	low	medium	high	very high
1	2	3	4	5

4. On what score do you rate the issues of worker rights and freedom of expression in your activities?				
very low	low	medium	high	very high
1	2	3	4	5

5. On what score do you rate the issues of schedule stability and leisure time in your activities?				
very low	low	medium	high	very high
1	2	3	4	5

6. How do you rate in your activities the questions of responsibility in the exercise of teaching and responsibility in reference to the educational institution?				
very low	low	medium	high	very high
1	2	3	4	5

7. On what score do you rate justice and compensation issues in your activities?				
very low	low	medium	high	very high
1	2	3	4	5

8. How do you rate your activities on working hours and adequate physical environments?				
very low	low	medium	high	very high
1	2	3	4	5

DISCUSSIONS AND RESULTS

These eight Questions were applied by the method of Walton (1973), whose results were presented as follows:

The sample consisted of 53 professors who answered the questionnaire with 8 direct

questions. Therefore, each Question was analyzed for discussion.

Question 1 - *At what point do you evaluate the questions of autonomy and previous information about your activities in your activities*

Of these 53 teachers in the sample, we had 32 teachers who scored 3 (average). 8 professors scored 4 (high) and 13 professors scored 5 (very high). Therefore, we analyzed that the majority of professors understood that the information is not previously disseminated.

Question 2 - *How do you rate personal growth and salary advancement issues in your activities?*

Of these 53 teachers in the sample, we had 25 teachers who scored 2 (low), in this sample we had 18 teachers who scored 1 (very low), and 3 (average) only 5 teachers scored, and still, 4 (high) only 5 teachers scored. Therefore, most of the teachers in the sample related the issues of personal growth and salary advancement to the low score.

Question 3 - *On what score do you rate in your activities the issues of personal relationships and sense of community?*

Of these 53 teachers in the sample, 15 teachers scored 3 (average), 15 of the sample scored 4 (high) and another 15 teachers scored 5 (very high). However, 8 professors scored 2 (low). Therefore, there is an average agreement between teachers in the average, high and very high scores. It is understood that the professors feel well connected with the community.

Question 4 - *On what score do you rate issues of worker rights and freedom of expression in your activities?*

Of these 53 professors in the sample, 20

professors scored 4 (high), from the sample 17 scored 2 (low). However, 8 professors scored 1 (very low) and another 8 professors scored 5 (very high). Therefore, for most of the teachers interviewed, they understand that the issues of workers' rights and freedom of expression are high. But, we have 8 professors who understand these issues very low.

Question 5 - *On what score do you rate the issues of schedule stability and leisure time in your activities?*

Of these 53 teachers in the sample, we had 41 teachers who scored 2 (low), 10 from the sample scored 3 (average) and another 2 teachers scored 4 (high). Therefore, most professors in this sample understood the relationship between time stability and leisure time is low.

Question 6 - *At what point do you rate in your activities the questions of responsibility in the exercise of teaching and responsibility in reference to the educational institution*

Of these 53 teachers in the sample, 39 teachers scored 5 (very high), another 10 teachers in this sample scored 3 (average) and 4 teachers scored 4 (high). Therefore, if we assign very high and high, we add 43 professors, who understand their responsibilities regarding the exercise of teaching in reference to the educational institution.

Question 7 - *On what score do you rate justice and compensation issues in your activities?*

Of these 53 teachers in the sample, 33 teachers scored 3 (average), another 10 teachers scored 1 (very low), another 5 teachers scored 2 (low) and another 5 teachers scored 5 (very high). Therefore, fairness and compensation issues in their work activities most understand as average.

Question 8 - *At what point do you rate the issues of working hours and adequate physical environments in your activities?*

Of these 53 teachers in the sample, 44 teachers scored 3 (average), while another 9 teachers in the sample scored 5 (very high). Therefore, most professors understand that working hours and physical environments are adequate.

FINAL CONSIDERATIONS

Considering and pondering the analyzes presented, there is a need to ensure that there is effectiveness, efficiency and equity in teaching, in addition to quality. However, the precariousness of teaching work, with classrooms almost without agreement with the physical arrangement of the environment, the few conditions of training, salary and career plan, in addition to giving teaching an unattractive activity, can cause problems for the teacher physical and mental health.

The biggest complaints from professors are related to working hours. It is understood that excessive and diversified work in the areas of teaching, research, management and extension can make the teacher sick. Another issue of many complaints is related to the lack of time for leisure and even stability of working hours, since many teachers work inside the educational institution and also outside the institution, being at home or even answering questions from students of undergraduate and graduate studies by the media and community of research groups.

Another complaint is related to fairness and compensation. The professors are very dedicated to certain areas of the institution and it is not always recognized for working and dedicating so much to this area, for example: professors who dedicate themselves a lot to extension projects within the institution. And when it requests financial resources to develop the project, it is not

always contemplated. On the issue of salary advancement, professors feel frustrated, as it has been a while since salary replacements at state public universities have not reached the percentage they must have. This is not a salary increase but, when it happens, salary replacement.

The issue of responsibility for their activities with the institution and even with teaching is one of the beneficial considerations that teachers point out. Most professors understand that their work responsibilities in the areas of teaching, research, management and extension are relevant in the exercise of their activities.

Furthermore, it is worth noting the existence of a teaching group that has the capacity for resilience, which is the understanding of the real difficulties within the Institution. This group of professors understands that there can be major changes from the inside out, not accommodated to government policies. They are the teaching professionals imbued with improvement goals in various aspects within the institution. It is the stage in which these professors practice trust among themselves, establish new standards, and commit to their professional performance and to the institution.

Even before the pandemic, distance learning (remote form) was already being adopted by some higher education teachers, so, with the suspension of face-to-face classes due to the social isolation necessary to avoid contamination of COVID19, the domain of technologies was necessary and urgent. The degree of difficulties in dealing with remote teaching technologies showed that many teachers became anxious and frustrated in the process of teaching remotely. Studies on mental health as a result of the pandemic are still scarce because it is a recent phenomenon, but they point to negative repercussions on the health of teachers (SCHMIDT, 2020).

Schmidt (2020) in his studies on “Mental Health and Psychological Interventions during the Pandemic” states that scientific investigations and analyzes about the impacts on teachers’ mental health as a result of the pandemic caused by the Corona Virus are still incipient, because it is a phenomenon considered recent, but which already signal considerable negative implications.

Quality of life at work involves efforts not only from the worker, but also from the institution and society in general, with the aim of valuing and respecting them.

Understanding the importance of the teaching activity for society and for the institution and why not say it, for the teacher, is also fundamental in this interaction. Each person’s lifestyle also attributes benefits to the worker. Having a life project that involves the scope of the profession is relevant for the well-being and satisfaction in the professional performance of teaching. This makes the teacher have satisfactory physical and mental health to exercise the profession. Still, to think that one day we will get out of this pandemic situation.

REFERENCES

- FLEURY, M. T. ; FLEURY, A. L. (2001). **Construindo o conceito de competência**. In: RAC, Edição Especial, 2001, pp. 183-196.
- GONÇALVES, M. H. B.; WYSE, N. *Ética e trabalho*. São Paulo: ed. Senac. 1997, 80p.
- HAUSER, M. W. Análise da qualidade de vida no trabalho em operários da construção civil da cidade de Ponta Grossa, utilizando o Diagrama de Corlett e Manenica e o questionário Quality of Working Life Questionnaire – QWLQ - 78 /. **Dissertação** (Tese de Mestrado), Programa de Pós-Graduação em Engenharia de Produção. Universidade Tecnológica Federal do Paraná. Ponta Grossa, 2012.
- OLIVEIRA, V. F. Procuram-se engenheiros. In: **Revista Minas Faz Ciências**. Edição 42. Belo Horizonte. 2012. Disponível em: <http://revista.fapemig.br/materia.php?id=642>>. Acesso em: 22 out. 2018.
- PERRENOUD, P. **Dez novas competências para ensinar**. Porto Alegre: Artmed. 2000.
- REIS JUNIOR, D. R. Qualidade de vida no trabalho: construção e validação do questionário QWLQ. **Dissertação** (Tese de Mestrado), Programa de Pós-Graduação em Engenharia de Produção. Ponta Grossa, Paraná, 2008.
- ROCHA, S. S. L. ; FELLI, V. E. A. Qualidade de vida no trabalho docente em enfermagem. *Rev. Latino-Am. Enfermagem* [online]. 2004, vol.12, n.1, pp.28-35. ISSN 1518-8345. <http://dx.doi.org/10.1590/S0104-11692004000100005>. Acesso em 22 mai 2019.
- SIQUEIRA, C. E. et al. A experiência do Observatório de Saúde do Trabalhador (Observatoriost) no Brasil. **Revista Brasileira de Saúde Ocupacional**, São Paulo, v.38, n.127, p.139-148, jun. 2013.
- SCHMIDT, B. **Saúde mental e intervenções psicológicas diante da pandemia do novo coronavírus (COVID-19)**. *Estud. psicol.* Campinas, 2020.
- WALTON, R. E. Quality of working life: what is it? **Sloan Management**, v. 15, n. 1, p. 11-21, 1973.