

# Wood, management and dust: analysis of the Context of Production of Goods and Services (CPGS) of an academic woodwork

Isabella von Mühlen Brandalise<sup>a,\*</sup>, Paula Macedo César<sup>b</sup> and Clara Cristina de Souza Rêgo<sup>c</sup>

<sup>a</sup> *Industrial Design Department, University of Brasilia, [isabrandalise@gmail.com](mailto:isabrandalise@gmail.com), DF, Brazil.*

<sup>b</sup> *Industrial Design Department, University of Brasilia, [paula.macedocesar@gmail.com](mailto:paula.macedocesar@gmail.com), DF, Brazil.*

<sup>c</sup> *Industrial Design Department, University of Brasilia, [claracsrego@gmail.com](mailto:claracsrego@gmail.com), DF, Brazil.*

**Abstract.** The CGPS of the woodwork of a public university was observed and analyzed. Apart from what is usual in the field of Ergonomics' studies, it is an academic context, where there is not a direct implication of profit, productivity and clientele. The group tried to sever negative and broadcasted opinions about the place by analyzing it from a different point of view. This work was considered relevant, since it is related to neglect of education and citizenship. For this case study, it was used the Ergonomics Analysis of Work with all workers at the woodwork. The instruments were documental analysis, free observation with photographic register, semi-structured interview with the workers and survey Pontos de Verificação Ergonômica. The results are presented by the perspective of work conditions, work organization and social-professional work relationship. The present study brought several contributions, such as the complementation of the theory and a new perspective of the analyzed context, observed now by the worker's point of view. As a result of the analysis, it was questioned about citizenship and the neglect with the public good, even though the relevant social role that this academic institution plays. In conclusion, the group suggests some proposals that modify positively the CGPS of this academic woodwork.

Keywords: citizenship; education; neglect.

## 1. Introduction

The present study started as an academic assignment for the Ergonomics 1 class of the Department of Social and Work Psychology at the University of Brasilia, given by Prof. Dr. Carla Antloga on the first semester of 2010. Thus, the goal of this project was actively pursued by the developer group. The theme of this study was chosen for its academic context, which implies that there is no profit involved, nor productivity rewards and direct contact with customers, but rather a broader universe, related to education and citizenship. Besides, the group had already had previous contact with the chosen woodwork, where

they listened to various complaints related to the workspace and its employees. By applying the ergonomic analysis, the group tried to learn more about the object of study from a different perspective, evaluating and analyzing the way workers adapt and interact with the environment, possibly breaking the established preconceptions about the subject.

Main goal: Describe and analyze the Context of Production of Goods and Services (CPGS) of an academic woodwork.

---

\* Corresponding author. E-mail: [isabrandalise@gmail.com](mailto:isabrandalise@gmail.com).

## 2. Practice innovation

### 2.1. Participants

All employees participated, being them one scholarship student and one regular worker.

### 2.2. Instruments

The study was made using the presuppositions of the Ergonomic Analysis of Work, following the franco-phone line of the study of ergonomics. The instruments applied to the study were the documentation analysis, free observation with photographic records, semi-structured interview with the woodwork worker and the questionnaire Pontos de Verificação Ergonômica (Ergonomics' Points of Verification).

### 2.3. Procedure

First of all, the field of study was chosen: an academic woodwork in the Institute of Arts of a federal higher education institution. The woodwork operates like a common workshop, with the difference that its customers are exclusively students working on academic projects. The workers were given an appropriate explanation on the goals of the study, so they could get more comfortable with the subject, and then the analysis itself took place. Initially, the goal was to make a documentation analysis and compare the written description of the work with the actual work executed by the employees. However, when asked for documents and written procedures, the workshop refused in providing them, even though the workshop is linked to a federal, public institution such as the University. The group then opted for a free observation, accompanied by a photographic record. Approximately six hours were spent on observations, which were made in different periods and days of the week. From that point, a semi-structured interview was made with the regular worker. It was observed that the worker had great difficulties in creating a mental representation of his workflow, clearly revealing the need for a systematic observation of the activity. However, due to the seasonal, random nature of the work, the group was not able to do it. The following step, then, consisted in applying the questionnaire Pontos de Verificação Ergonômica (Ergonomics' Points of Verification) focused on the work conditions, which made the access to proper data about the subject easier. Throughout the study, it was possible to take note of several important aspects of the CPGS

not only by observation, but also from inferences. Finally, the collected data was compared and analyzed so it was possible to properly evaluate the working life of the employees and their customers.

## 3. Findings

The group chose to use the CPGS for its adequacy to the subject proposed for the study, enabling a realistic observation of the workspace, as well as the diversion between prescribed, written work flow and the actual work activity, and also a broad understanding of organizational culture.

### 3.1. Work conditions

Some of the important difficulties observed on the physical workspace are thoroughly described on the pictures on the right. It was also observed that there were complaints related to the low wage, as well as the lack of additional benefits, such as food and transportation vouchers. The employees are not previously trained to perform their activities, nor are they provided specialization courses in either woodwork or management. Finally, there are no plans of funding any improvements to the workshop.



Fig. 1 – Old, noisy machinery lacking maintenance; lack of decent cleaning and ventilation in the workspace.



Fig. 2 – Exposed wires without adequate protection against electric shocks or fire.

### 3.2. Work organization

It was observed that the employee working as a Woodwork Technician is also responsible for the management of the workshop, which includes, among other activities, the maintenance of the workspace. Despite accumulating activities, there is no further supervision on the activity, on the employee's time shifts, or even the quality and effectiveness of the work. There are no closed timetables to receive new requests and clients, thus turning them unpredictable. When they come in an inappropriate time of the day, they can't be promptly received, thus becoming a source of dissatisfaction for both parts. Besides, there is no control or reinforcement related to safety standards, procedures or the usage of safety equipment. The employees claim that such equipment affects their precision and fine control of the tools used in the workshop.

### 3.3. Social-professional work relationships

The social interaction in the workshop happens solely between the regular employee, the scholarship student and people who work near the workshop. It was noticed that the workload is highly seasonal, tending to grow more towards the end of each semester, which is when students and teachers get to have contact with the workshop's employees. Several projects and requests have a high cognitive load when it comes to understanding and finding solutions to the problems and challenges presented. Besides, some students act in an arrogant way, sometimes requesting higher priority in their projects, thus generating a high affective cost.

## 4. Discussion

The study brought up several important contributions to the group: more than just complementing the theory studied in class, it also showed a new perspective of the analyzed context, from the employee's point of view. However, the group face some difficulties such as the limited time available and the lack of experience on the subject. There were also problems related to obtaining documents and information from the Institute of Arts, which didn't provide enough support for the group. The quality of the data obtained on the interviews and questionnaires was also compromised, since the workshop's employee had trouble in

answering the questions asked, mostly because of his lack of an appropriate view of the subject. Based on the analyzed data, the group proposed some changes to the woodwork's CPGS. Starting with the work conditions, many improvements can be made, as long as there's enough funding. As for the workers themselves, it is important that the institution recognizes and invests in their work by offering specialization courses and additional benefits to improve their performance. On the workshop's physical structure, many suggestions for improvements were made: refurbish the available equipment, providing it with a regular maintenance plan, place ramps on gaps and uneven surfaces, and reinforce the safety indications and signage. On the work organization and social-professional work relationships, it was observed that there's a heavy overload of activities. The cleaning, for example, should be done by specialized personnel. The relationship between the worker and his boss should be more direct, too, so results and numbers can be frequently followed and analyzed. Another suggestion is the implementation of a fixed timetable with specific times to receive the students and their projects, thus organizing the workflow. These suggestions, however, face heavy restrictions on their implementation, due mostly to the limited time available. Finally, the conclusion of the study allowed the group to clearly see the negligence that scars public institutions not only by the Institute but also from the academic management, despite the important role of the institution to society. Such conclusion led to deeper questions regarding citizenship as the supremacy of general will, clearly evident in individual efforts without any interest regarding the welfare of public institutions.

## References

1. C. P. de Almeida, *Custo Humano, Estratégias de Mediação e Cidadania: Atendimento Presencial ao Público em Agências da Previdência Social*. Brasília: Universidade de Brasília, 2007. Ministério do Trabalho/Fundacentro. Pontos de verificação ergonômica. São Paulo: Fundacentro, 2001.
2. F. Guérin, A. Laville, F. Daniellou, F. Duraffourg and A. Kerguelen, *Compreender o Trabalho para Transformá-lo: A Prática da Ergonomia da Atividade*. São Paulo: Edgar Blücher, 2001.
3. M. C. Ferreira, *Análise Ergonômica do Trabalho*. Dicionário de Trabalho e Tecnologia. Cattani, A. D. e Holzmann, L. (Orgs.). Porto Alegre: Editora da UFRGS, 2006a.
4. I. Iida, *Ergonomia: projeto e produção*. São Paulo: Edgard Blücher, 2005.