

**A link desirable:
the vocational training institutions and the
occupational classifications -
- the Brazilian case**

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1. Introduction

Brazil is a country with large territorial extension and it possessed, in the year 2000, about 170 million inhabitants (an average of 20 inhabitants per Km²), with a strong urban concentration (81%). The economically active population in 1999 was of 82,3 million, which corresponded to 51% of the total population of that year.

Among the employed population, 51% were in the informal sector (workers without their employment book signed and independent workers). That is a datum that reveals part of the structural heterogeneity of the Brazilian labor market.

In the nineties, that structural heterogeneity was enlarged in an outstanding way, once the companies, in function of the adoption of new production and organization technologies, started to demand young and schooled workers. For 78% of the economically active population, composed by workers with age superior to 24 years and for 50% that possess up to 8 years of education, the possibilities of permanence in the employment (for whom was employed), and of professional re-insertion (for whom was unemployed) became worse.

Since 1977, Brazil has classified its occupations reflecting the heterogeneity of the market in terms of the occupational structure.

Pressured by the several institutions that act in the labor market and in function of those structural changes happened in the nineties in the Brazilian economy, the Ministry of Labor and Employment of Brazil began, in 1997, a process of restructuring of the Brazilian classification of occupations. Some conditioning factors were present in that process:

- a) Considering the heterogeneity of the labor market it would be necessary that the restructuring covered again all the existing situations in the labor market, involving directly workers and companies;
- b) Considering that the changes in the labor market would proceed accelerated in next years it would be more efficient, starting from the initial restructuring, to systematize a group of mechanisms and to organize a net of collaborating institutions to make possible to establish a permanent process of updating.

The present document tries to synthesize what that recent experience of Ministry of Labor and Employment in the restructuring of the Brazilian classification of occupations has been. That synthesis was elaborated from the point of view of one of the partners institutions of the Ministry in that task work: SENAI – National Service of Industrial Apprenticeship – an institution that acts for 60 years in Brazil in the field of the professional education for the industry.

SENAI was present with the Ministry from the first movements for the choice of the method to be used in the description until the final stage of conclusion of the process of restructuring of the classification.

It is necessary to consider, however, that the total restructuring of the classification only became possible in function of the partnership that the Ministry established with other three institutions: Foundation Institute of Economical Research (FIEP-USP); Federal University of Minas Gerais (CEDEPLAR - UFMG); State University of Campinas (UNICAMP).

A work of such extent, as the one of the restructuring of the Brazilian classification of occupations, demanding an unprecedented dynamics in the history of the occupational analyses in Brazil, was only possible through the efficient performance of Ministry of Labor and Employment coordinating the actions developed by the four partners institutions mentioned above.

We hope, with that document, to contribute for the debate about the mechanisms of analysis that could be used to accompany and, in good measure, to anticipate the effects of the process of restructuring of the economies on the labor market.

2. Presuppositions of the New Brazilian Classification of Occupations

In the latest years, several countries updated their occupational classifications in function of the modification of the *systems of work*, provoked by the diffusion of new technologies, new forms of organization of the work and new competences that the world of the work imposes the workers. In that way,

employment systems relatively steady are being substituted by more dynamic employment systems, turning inadequate aggregations of work positions in fixed qualifications.

According to Ministry of Labor and Employment, “the Brazilian Classification of Occupations (CBO) is the normalizing document of recognition, nomination and codification of titles and contents of the occupations of the Brazilian labor market having its basic structure been elaborated in 1977, taking as base the International Uniform Classification of Occupations of 1968.” (Technical Notes, M.T.E., 2001)

In spite of the fact that CBO has suffered some fittings, since 1977, the same ones did not represent alterations of theoretical-methodological order. To adapt to the reality of the new economy and of the labor market, it was used the concept of competences in the construction of the nomenclature of New CBO. The word “competences” was considered as being the group of knowledge, abilities and attitudes mobilized for the acting of the activities of an employment or work.

In addition, the new proposed structure joins the employments for common competences demanded in the exercise of a field of more elastic work, composed by a group of similar employments, instead of placing the observation “magnifying glass” on the work positions. That grouping of necessary similar employments to the acting of any work type was denominated: “**occupational family**”.

2.1. Structures of New CBO

The structure of New CBO is based on the International Uniform Classification of Occupations CIUO88, elaborated by the International Organization of the Work. “New CBO, following the orientation of CIUO88, hierarchically is structured in four levels: great group (GG), main subgroup (SGP), subgroup (SG) and occupational family (FO)” (Technical Notes, M.T.E., 2001).

The first digit of the code of the classification refers to the great group, having been sketched 9 great groups for NEW CBO.

The 2nd digit refers to the *main subgroup* and it was created to improve the hierarchical balance between the number of great groups and subgroups and to perfect the aggregations by domain. In NEW CBO there are about 50 SGP.

The 3rd digit or subgroup indicates, in wide way, the domain of the professional fields of joined occupational families. In NEW CBO there are about 200 SG.

The 4th digit refers to the *occupational family*, which contains employment situations or similar occupations. In NEW CBO there are about 590 occupational families.

3. Dacum Method: the method used for the description

As it was possible to observe, the more disaggregated professional fields to be used in New CBO are denominated of occupational family. For its construction, in each occupational family the occupations that today take part of BC094 were rearranged.

It was necessary, then, to choose a method that allowed accomplishing the description of the occupational families, considering that characteristic of composition.

In April of 1998 Ministry of Labor and Employment requested SENAI to accomplish a research about methods used in international classifications, and the chosen method was DACUM (*Developing a Curriculum*).

Once chosen the method, a group was composed, integrated by SENAI and the Ministry, to accomplish a course on the method, which was supplied by CAPRA-CVA, in Canada.

Back to Brazil, the group adapted the method to the Brazilian reality and to the project of the New CBO, through the accomplishment of a pilot experience, which should test the operational procedures and the form of description of a heterogeneous occupational family.

It was chosen, then, the building site area and the family of the “Tile makers, Parquet Layers and kindred (Rigid Coatings).”

The aim was defined in an inclusive way, since we had to contemplated the work accomplished in any area of the country, in any construction type, for employees in companies or for autonomous workers, using traditional and modern methods.

The pilot experience reached its basic objective, which is, the one of testing the form of application/adaptation of the DACUM method in the description of an occupational family.

Based on the results reached in the pilot experience, the manuals that defined the parameters for the accomplishment of the description and of validation meetings could be concluded, for the construction of New CBO: Manual of Procedures and Manual of the Facilitator.

The next step was to qualify personal in the Dacum method to act as facilitator in the project. Several courses on the method were supplied by Capra-CVA so that altogether, more than 100 technicians of the participant institutions of the project were qualified.

As mentioned previously, for the description of the occupational families the Ministry reckoned upon the collaboration of 4 (four) institutions:

- SENAI (National Service of Industrial Apprenticeship);

- Foundation Institute of Economical Research (FIPE-USP);
- Federal University of Minas Gerais (CEDEPLAR - UFMG)
- State University of Campinas (UNICAMP).

Altogether, 590 occupational families were described and validated, being distributed like this:

- SENAI: was responsible for describing 252 occupational families related to technicians and workers of the industry;
- FIPE-USP: was responsible for describing 183 occupational families related to the segments of the trade, services, health, transport, administration and leaders of companies and professionals of the social and human sciences;
- CEDEPLAR - UFMG: was responsible for describing 105 occupational families involving technicians and workers of the agricultural and forest sectors, and professionals of the sciences and of engineering;
- UNICAMP: was responsible for describing 50 occupational families of the teaching segments, juridical and of attendance to the public and culture.

Using the Dacum Method, New CBO was built in a participative way, involving about 7.000 (seven thousand) specialist workers. As the referred method makes it possible to get to develop curricula, besides its functions turned to the labor inter-mediation and employment/unemployment statistics, New CBO will be used for the planning of professional re-qualifications, among other uses.

4. The construction of an occupational family in practice

The beginning of the process of construction of New CBO was deflagrated when the Ministry set up the first occupational structure based on occupational families. To validate that initial structure, that it was elaborated by Ministry of Labor and Employment in partnership with the Brazilian Institute of Geography and Statistics, the Ministry promoted a series of meetings with syndicates, organs of professional formation, technical schools, universities and research institutes.

The following step, as we have seen, happened with the accomplishment of the course on the Dacum Method, in Canada, and of the accomplishment of the pilot experience, what turned feasible the idea of grouping employments and similar occupations in a same occupational family.

When each one of the four institutions partners of the Ministry received the groups of occupational families to be described, it was initiated a wide description and validation process, whose first stage was set with the definition of the aim of each occupational family. In that stage some fittings were proposed to the Ministry, as for instance, occupations that should be reallocated for other families, titles that should be substituted, among others. Depending on the nature of those fittings, the Ministry either deliberated by itself or requested that it was directed for the following stages. In other situations, the structure proposed by the Ministry was maintained, as in the example below:

“The study of aim of the Occupational Family of the Professionals of Biotechnology demanded a careful work, especially for being a new occupational family. This family is formed by the following occupations: Bioengineer, Biotechnologist, Geneticist. Starting from the contacts accomplished for the definition of the aim, it was possible to observe the principal characteristics of that occupational group. The professionals of the biotechnology are enlarging their participation in the labor market, because of the paper that the genetics has been assuming in the scientific research, turned to human and animal reproduction, new treatments of diseases of the alive beings, among others. That professional of multi-disciplinary formation is capable of manipulating genetic material, of analyzing genome, of producing biological compounds and of developing equipments, devices and processes of biological use. Those professionals are employed, fundamentally, in institutes of researches, and medical and pharmaceutical laboratories.” “(...) the final matrix came to be very objective, but extremely specific and it portrayed the activities of that occupational family. This result indicates that it is pertinent (...) the formation of that occupational family and that it will allow the creation of a space so that the professionals of the technology that work on health can have their place in the classification, as well as so many other professionals that are devoted to the most several of the bioengineering areas”. (CEDEPLAR-UFMG, 2002)

The following stages were constituted by the meetings of description and of validation. The principal objective of the referred meetings was to describe and

to validate the professional competences of each occupational family. Both meetings were coordinated by a Facilitator that counted on the help of a Relater, both trained in the DACUM method. Other people, previously chosen, could participate in the meeting, in the quality of Observers.

In the ambit of the project of New CBO, the method made possible the definition of the professional competences of the specialist workers. Such definition was made through the verbalization of the activities accomplished by the specialist workers, which were registered by the relater and presented, by the facilitator, to the committee of specialist workers.

Those reports took the form of a statement, and the facilitator should be attentive so that a statement filled out the following conditions:

- It must be a sentence that expressed an action very well specified, with *verb* and *object*;
- It must have very well defined *beginning* and *end*.
- It must have been accomplished in *relatively short periods of time* (for instance, seconds, minutes, hours), but rarely in days, weeks or months.
- It must be *observable*
- It must be *measurable*
- It must be *independent of other actions*

To have a clearer notion of the accomplished work, we will describe succinctly the meetings of description and validation.

4.1 Meeting of Description

The meeting of Description involved the participation of specialist workers in exercise of the profession, selected by their technical competences (recognized performance in their work and minimum 5 years of acting in the occupation) and personal qualifications (articulation capacity, communication and easiness of interacting with the group). The meeting counted with the minimum of 8 and the maximum of 12 specialist workers and it had the duration of two days.

As seen previously, before the meeting of description, the facilitator gathered information on the objective of the occupational family. This information contributed to familiarize the facilitator with the accomplished activities, tools and/or used machines, work conditions and words used commonly by workers for the description of their work. The form of collection of this information was under the responsibility of the Facilitator, being possible to happen through interviews with workers in the area, technicians of Schools or researches in existent documents as, for instance, CBO 94, occupational classifications of other countries and didactic manuals. Based on this information, the Facilitator would remove eventual doubts with the coordination of the project, before the Meeting of Description.

Starting from the analysis of the aim the facilitator would lead off the work of location of the specialist workers and appoint them for the meeting. In that stage, it needed to be spent a lot of effort, once the exemption from the work to attend the meeting had a group of circumstances that escaped to the control of the facilitator.

In the meeting of Description the following activities were accomplished:

- Completion of Cadastre of the Specialists (Personal and Professional Data, education degree; position in the occupation; occupation represented in the meeting);
- Survey of the Common Competences and Specific, Technical and Personal Competences;
- Confirmation of the title of the Occupational Family and of the Occupations;
- Confirmation and amplification of the list of Synonyms;
- Identification of equipments, machines and instruments.

After the meeting, the coordination of the project and the Ministry would analyze the information and verify the observations of the facilitator about the preparation and accomplishment of the meeting, giving feed-back, to the facilitator, soon after, for him to prepare the meeting of validation.

4.2. Meeting of Validation

The meeting of Validation would involve the participation of two workers from the meeting of description and of supervisors, syndical representatives or other people that occupied prominence or hierarchical positions in the described occupations. This group of people (Validating People) had as objective to validate the description accomplished in the meeting of description.

The Meeting of Validation would have the duration of one day during which the following activities were accomplished:

- Completion of Cadastre of the Specialists (Personal and Professional Data, education degree; position in the occupation; occupation represented in the meeting);
- Validation of the Common Competences and Specific, Technical and Personal Competences;
- Validation of the title of the Occupational Family and of the Occupations;
- Confirmation and amplification of the list of Synonyms;
- Identification of equipments, machines and instruments;
- Questionnaire about Requirements of Formation/Experience and Conditions of Work

4.3. The dynamics of the meetings

A first aspect that deserves to be pointed out refers to the difficulty of composing the committees of specialist workers to participate in the meetings. The reasons that took the companies not to liberate their specialist workers were invariably linked to production needs. For some industrial sectors that were in a phase of larger production growth it became unviable to release, for two days, the specialist worker who worked in the company. In families in which the presence of autonomous workers was necessary, the problem was placed in a more outstanding way, once they would not get paid unless they worked. Many

were the occupational families where those facts happened and the solution found was to reinforce the meeting of validation with the presence of the specialist workers, representing the absent occupations in the meeting of description.

Besides that fact, during the process of description and of validation a very large number of changes were observed in the occupational structure and in the titles of the occupational families proposed initially by the Ministry. That was related to at least three factors: intensity of workers participation, degree of heterogeneity of the occupational families and changes in the labor market.

Those factors also influenced the composition of the committees of description and of validation and they interfered in the dynamics of the meetings, being commented ahead.

Intensity of workers participation

By placing, in a same space, specialist workers representing different integral occupations of an only occupational family, with the objective of describing what they usually do to build a classification of occupations to the Country, conditions were created that favored an unprecedented exchange of experiences and knowledge. The richness of that interaction and the power that was given to the specialist workers, made them dedicate in an extremely rigorous way, leading to revisions of a lot of families, although they had been worked

exhaustively in the previous stages. To illustrate that point, we detached some specialist workers' declarations:

“... I started to take more conscience of the activities developed in my profession, starting from that meeting.”

“... it is good to know that I, being a final-touching worker, contributed to the inclusion of that occupation in the family. That updating will help a lot the future professionals.”

“... the Ministry is valuing (...) the workers. I liked it a lot to take part of the team (...) and to have helped in the updating of my profession.”

“... those meetings make us to see how much important we are in our professions; they make us to see another side of our work, that we are not just employees but competent professionals.”

On the other hand, the result of the meetings becomes very dependent on the composition of the committee, on the technical knowledge, on the characteristics and even on the personality of the specialist workers present in the meeting.

In such case, we can initially raise the hypothesis that, in many cases, the active participation of the specialist workers and the degree of subjectivity implicit in the meetings, led to changes in the titles of the occupations and of the

occupational families, as well as to alterations in the composition of the families, as it is illustrated ahead.

Changes in the title of the family

In the meeting of the Technicians in Pharmaceutical Manipulation, the specialist workers added the magisterial word, once the same is specific to the activity of manipulation of allopathic and homeopathic formulas, present in the pharmaceutical manipulation.

Changes in the composition of the family

Ministry of Labor proposed the title of Sensorial Testers, for an occupational family composed by tasters (of cocoa, coffee, tea and wine and liqueurs). The facilitator, when doing the analysis of aim, suggested changing the title of the family for Sensorial Analysts, once the professionals of that family taste and accomplish sensorial tests. The specialist workers suggested dismembering that family in two other: Oenologist, and Sensorial Creators.

In the meeting of the occupational family of the Workers of the classification of textile fibers and wool washing, the specialist workers suggested the creation of the occupational family of Classifiers of Textile Fibers and that the occupation of wool Washer should be transferred for the Occupational Family of the Workers of preparation of the weaving.

The discussions accomplished in the stages of definition of the objective, description and validation, led to a more necessary detailing of the occupations that compose the occupational family of Drivers of vehicles, as one can see below:

- “Aim analysis: Dump Truck Driver. Truck driver (regional and international routes). Truck-concrete mixer driver. Tow-truck Driver. Tractor Worker (except agricultural and forest activities).
- Description: autonomous Truck driver (regional and international routes). Truck driver (regional and international routes). Operational Mechanic Driver of tow-truck. Tractor Worker (except agricultural and forest activities).
- Validation: autonomous Truck driver (regional and international routes). Truck driver (regional and international routes). Operational driver of tow-truck. Piling Machine operator and similar. Operator of Embankment Machine and similar.

Besides, the specialist workers present to the two meetings even suggested the substitution of the term “conductors”, in the title of occupational family, for the term “drivers”. Inside of that generic denomination, that designates the occupational family in its group, there are two very different groups, according to the terminology adopted throughout Brazil: the “driver”, exactly saying (employee of the company where he works), and the “autonomous truck driver.” This last one works by himself” (FIPE-USP, 2002).

Delimitations of the fields of attributions

In function of the composition of the committee, in some meetings disputes happened to delimit the fields of attributions.

It was the case of the occupational family of the Technicians in topography, land-surveying and hydrography, where the presence of an observer, representing the engineering advice, resulted in warm discussion, that only came to term when the Facilitator telephoned the Ministry of Labor. In the case, the technicians would say they were accomplishing a certain activity and the representative of the engineers would affirm that that activity did not belong to the field of the attributions of the technicians, once it was exercised by the engineers.

Also, in the meeting of the occupational family of Technicians in graphic arts there was not consent about the title of the occupational family: the syndicalists defended the title suggested by the Ministry (Technicians in Graphic Arts) and the representatives of the employers defended the title of Graphic Technicians.

Heterogeneity

It was possible to observe the existence of several heterogeneity types, derived from the composition of the occupational families:

a) Heterogeneity based on the fact that the family contained occupations that do not share of large areas of competences, that is, they mobilize different types of knowledge, abilities and attitudes.

In the meeting of description of the family of Appliers of Ceramic Coatings, Tablets, Stones and Wood, it was suggested by the committee of specialist workers to remove from the family the occupation of floor Polisher.

In the meeting of description of the family of Workers of finishing, dyeing and Printworks of the textile industries, it was suggested by the specialist workers to remove the occupations of folding machine Operator and Operator of cloth winder.

b) Heterogeneity based on the fact that the family was composed by wagedworkers and autonomous workers.

In the meeting of description of the family of Workers of masonry structure happened a serious divergence, between the autonomous worker and the wagedworker, in the moment of the ordainment of the following activities: “Specifying the materials; calculating the materials; estimating the service.”

c) Heterogeneity based on the fact that the family was composed by workers submitted to industrial and handmade processes.

In a same family composed by workers submitted to industrial processes and handmade processes, the large areas of competences mirrored in an unequivocal way that heterogeneity: the handmade workers develop, step by step, all the necessary stages for the obtaining of a certain product, while the industrial workers, in spite of contributing to the production of similar products, develop activities of operation of equipments. Examples: Cigar manufacturers; Bakers and confectioners.

d) Heterogeneity based on the fact that the family was composed by a very large amount of occupations.

Some families possessed a very large number of occupations, so that it was necessary to rearrange them in homogeneous groups to allow composing the committees of description and of validation.

Changes in the labor market

Also in function of changes in the labor market, product of the incorporation of the technical progress, of restrictions imposed by subjects of environmental nature or by the appearance of new raw materials, some occupations stopped existing, while others can be considered as emergent.

Emergent occupations:

Technicians in Photonics

They work with applications of the domain of the photonics that is defined as the generation, manipulation, transport, detection and use of the luminous information and energy, whose unit is the photon.

Technicians in Mechatronics

They project automation systems analyzing processes/products for automation; evaluating the conditions of the work place; identifying automation alternatives and defining flows of processes, among other activities.

Operators of Machines and Centers of Manufacturing of Wood CNC

They operate machines of wood manufacturing (CNC), verifying operation conditions, referencing axes, selecting programs, checking measures of tools and positioning tools in magazines, among other activities.

Operators of vehicles operated and controlled remotely

They drive vehicles with remote control, casting vehicles to the sea, being guided by navigation instruments, monitoring sensors and alarms of behavior and positioning of the vehicle, among other activities.

Occupations in extinction

Naval and of Aircrafts Carpenters

The occupation of Carpenters of aircrafts is extinct. After consultation to several organs and institutions, it was gotten to the conclusion that the wood is no longer used in the production of airplanes, once today it is used the aluminum and other fibers.

In the Occupational Family of Operators of vapor machines and kettle, the following occupations are extinct or shot to the verge of extinction: **Stokers of embarkations.**

According to assay accomplished at organs linked to naval transport, it was gotten to the conclusion that no longer exists occupation of stoker of embarkations. It is no longer used the vapor (that was obtained mainly by the burning of coal and wood) as source of energy, once today the more used source is the diesel oil.

Stoker (vapor locomotives)

It is an occupation that only exists linked to cultural entities and not to companies of rail transports, in function of the preservation of the memory of the Brazilian rail transport.

Operator of battery of coal gas

According to specialists of ceramic companies, in the past the coal was used as source of energy and through the burning of it the coal gas was generated, then, this itself was also used as fuel by the companies. There was a professional that was responsible for the production of that gas but, with the use of new fuels, this occupation is no longer present in the companies.

5. Perspective of permanent updating of New CBO

During the process of modernization of the CBO we could identified many aspects derived from the point of view of the each society sector.

1. The specialist workers had the opportunity to keep a professional updating and growing process;
2. The facilitators achieved more knowledge about occupational dynamics and production processes;
3. The institutions partners have learned about the different types of occupational heterogeneity of the labor market and have identified many occupations that are in a process of extinction and others that are emerging.

Therefore we can consider the modernization process of the CBO as a wide collective learning process.

From this collective learning process we have now a modern instrument that has a strong capacity of articulation of public policies of the labor market. And we have too institutional capacity to keep a continuous learning in order to:

- Organize virtual and presential meetings involving specialists, enterprises and unions to improve the New CBO;
- Keep trying to understand the heterogeneity of the labor market and the process of extinction and emergence of occupations;
- Make the CBO more efficient for the process of intermediation of manpower;
- Make the CBO a strong referential to the vocational training programs.

Considering these aspects and the expected changes in the Brazilian labor market in the next years and the great effort spent by the Ministry, partner institutions, companies and workers for the construction of New CBO, it exists now, on the part of several segments of the Brazilian society, the expectation that the Brazilian classification keep updated.

In that sense, the Ministry is developing a project, denominated of Net of Occupational Information, which has as objective to establish a continuous process of revision of New CBO. It is an intention of the Ministry that the same partner institutions that participated in the phase of restructuring of New CBO be kept to implement the phase of continuous revision.

According to the Ministry, “the partner entities have, today, the knowledge of the method used for the description of New CBO and they possess the capacity installed to consolidate, with larger speed and efficiency, the subsequent stages of the net of occupational information. Such entities count on approximately 100 occupational analysts in the DACUM method, adapted in Brazil to describe occupational families.” (Ministry of Labor and Employment, Project of Development of the Net of Occupational Information, 2002)

Parallely, SENAI is implanting the Senai System of Occupational Information (SINO) that has as general objective to develop and to implement a system of information about the content and the transformations of the occupational

families of the industry, as to supply subsidies to anticipate actions and to define politics of professional education.

Besides, SINO has the following specific objectives:

- To create permanent mechanisms of monitoring of the transformations of the occupational families of the industry;
- To produce information about the content and the transformations of the occupational families of the industry.
- To implement systematics of diffusion of information about the dynamics of the industrial occupational families.

For the permanent updating of the Base of Occupational Data of the SINO, nets of occupational informers will be constituted, coming from the New Project CBO, composed by:

- a) Net of Specialist Workers (about 3.000);
- b) Net of Companies (about 1.800);
- c) Net of representative Entities of industrial sections (about 300);
- d) Net of Technicians from SENAI (about 150)

From the Base of Occupational Data and from the Nets of Occupational Informers, the SENAI System of Occupational Information will try to create a systematics of permanent updating of information, as to favor the process of curricular updating of the institution.

The creation of that systematics will happen, at a first moment, through the test of procedures and updating mechanisms. For that, it was developed, in the first semester of 2002, a pilot experience, involving two occupational families. From that moment, SENAI is defining strategies for the amplification of the SINO, reaching new occupational families.

In the ambit of SINO/SENAI the DACUM method is being used for the updating of the professional profiles, in the same way that happened for the construction of the New CBO.

Besides, SINO/SENAI is totally aligned with the Net of Occupational Information of Ministry of Labor and Employment, so that the country counts, today, on an excellent infrastructure for the development of occupational analyses turned to the updating of the Brazilian Classification of Occupations and for its use for educational ends.

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