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## 2. Quality Management in vocational training institutions

The increasing entry of new actors in the training scene, the availability of a blend of new financial funds and the necessary specificity sought from training programmes are, among others, the factors that have influenced in the genesis of the modernisation processes of the institutions. Currently, the processes of transformation and adaptation to change are priority issues in the VTIs' agenda.

The customers, training users in a diverse market, increasingly require knowing the best and more quality guaranteed offers. Both entrepreneurs and workers seek for efficiency signals. The financial resource providers are also interested in the best usage of the invested funds in vocational training. Quality-managed institutions represent a social guarantee to the efficiency of the public expenditure in vocational training. The same reasoning can be applied to the private funds: they must go to agencies that develop relevant, efficient and effective training processes.

### **Quality and technological development**

Some vocational training institutions are involved in the national quality policies and work in association with the national standardization and certification agencies. This joint work is evident by the certification of their Technological Development Centres (ISO 17025) to give services of metrology or rehearsal which are required for the fulfilment of the quality standards of different products in the national and international markets. This is the case of the National Technological Centres of SENAI and the efforts of the Technological Development Centres of SENA. They also developed training and assistance activities for enterprises during the implementation of quality management systems. This service is more and more available as part of the institutions' services. This is the case of the Small and Medium Enterprises Services Centres of SENATI which provide training with an emphasis in the improvement of quality.

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The growing interest in improving the efficiency and relevance of their activities is reflected in the adoption of quality management mechanisms and certification of quality.

This tendency is expressed by the adoption of institutional actions towards the development of a quality culture. Such actions, usually embedded in the

**Quality Management and Environment in Vocational Training**

**SENAI** in the Ceará State, in the North East of Brazil developed a project of environmental management system in the textile industry, which allows for the ISO 14000 certification of three units of one of the most important entrepreneurial groups of the sector. It worked together with the Regional Department of São Paulo and Santa Catarina. Ceará concentrates 10% of the textile GDP of Brazil with 350 enterprises and more than 60 thousand total jobs.

This year **SENATI** achieved the 14000:1996 ISO certification. The training institution of the Peruvian industrial sector exemplifies the environmental impact in electrical energy consumption, waste disposal, and noise pollution in workshops. Special attention deserves the environmental content of the training programme and its relation with working practices.

philosophy of continual improvement or in the processes of institutional modernisation, imply training activities for the personnel, search for critical factors, and clarification of mission and objectives, which in turn lead to institutional quality improvement.

On the other hand, some key aspects regarding organizational competitiveness are reflected clearly in the workers' labour performance. Nevertheless, the courses of the training programmes do not necessarily represent such aspects. Many times these aspects have to do with the learning environment. In issues related to Occupational Health and Safety a series of standards, which seek to preserve the adequate working conditions,

have been developed. If the learning environments reflect conformity to the standards, certain capabilities of the participants, which have to do with their competent performance, can be developed. In this way, a vocational training institution which develops a good practice of conformity to international standards on occupational health and safety in their workshops will be contributing to the development of participants' core skills. Something similar is taking place, for example, in the area of environmental protection and 14000 standards. In fact, many training activities are developed according to those standards which foster the generation of core skills and the employability of participants.

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Simultaneously, institutions have been looking for a quality external hallmark and have adopted the guarantee of quality certification of the ISO-9000:2000. All the services available at the institution can obtain quality recognition by the certification of conformity to certain standards. This is the case of the laboratories, which provide technological services certified by the ISO 17025.

But also the adoption of the quality philosophy and the process of certification imply the conformation of an organization supported by knowledge. Much of the knowledge accumulation process existent in the training institutions can be defined as knowledge accumulated in the working processes. In effect, the major advantage of institutional vocational training is the development of training institutions as learning organizations.

## **2.1 Some experiences on quality certification in vocational training institutions**

In Europe, since the beginning of the nineties, and later on in Latin America, the VTIs started activities towards quality management and guarantee. The first institutions implemented the total quality management mechanisms and almost all of them seek the ISO 9000 standards certification. In this section some institutional experiences<sup>8</sup> will be described and a review of the information obtained by a survey of the institutions which obtained the quality certification in the last years will be presented.

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The **National Industrial Training Service (SENAI)** of Brazil has one of the oldest experiences of the region with antecedents in the regional Department of Santa Catarina of the application of the 5 “S”<sup>9</sup> programme and the subsequent recommendation for the ISO 9000:1994 standard obtained in 1997. They have also acquired certification in the Regional Department of Paraná (in 1997 the Technological Institute of Paraná was the first vocational training institution of Brazil that got the ISO certification), Espírito Santo and Pernambuco. Also, the National Department of SENAI was certified with the

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<sup>8</sup> It will not be an exhaustive review. In the cases where information was available, the experiences are included.

<sup>9</sup> Japanese quality management system oriented towards the promotion of order and cleaning. The 5 “S” refer to: Seiri - to tidy, Serton - to order, Seisou - to clean, Seiketsu - to maintain, Shitsuke - to discipline.

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ISO 9001 standard applied to planning, development and co-ordination of strategic projects and operative improvement projects.

As antecedents of the work towards quality management in SENAI the following can be mentioned:

- Participation in the General Sub Programme III of the Brazilian Programme of Quality and Productivity (PBQP) in the role of coordinator institution in 1992: “Education and Training of Resources.”
- Participation in the Commission of the General Sub Programme IV of the PBQP – 1992 – “Adaptation of the technological services for quality and productivity.”

Since 1993, SENAI started to widely use an internal quality management and recognition system in its Training Centres, which certified them as “Model Centres of Vocational Training” or “National Centres of Technology”. The system was inspired by the criteria of the Quality National Programme: Process Management, Leadership, Strategic Planning, Customer and Market Centred Approach, and Information Results and Management. It included three progressive levels of conformity to the criteria, which defined three categories: Bronze, Silver and Gold.

**SENAI** is the vocational training institution for the industrial sector in Brazil. It was established in 1942 and it is in one of the oldest training institutions in Latin America. SENAI has 417 centres and 317 mobile units.

[www.senai.br](http://www.senai.br)

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The national project of the National Technological Centres (CENATEC) was a milestone in the work of SENAI towards total quality. Its central goal

was to introduce a quality management model in the technical schools. This was a national project, which included the following specific goals:

**SENAI’s mission:**

“To contribute to the strengthening of industry and the total and sustainable development of the country through the promotion of education for work and citizenship, technical and technological assistance, production and dissemination of information and adaptation, generation and dissemination of technologies.”

- To establish a strategic alliance between SENAI and the different social sectors linked to the productive sector in order to improve the technological training of the country.
- To create a network of competency poles in the different technological areas.

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- To consolidate quality management in the Technical Schools.
  - To absorb, adequate and disseminate innovation and technology with the objective of continual improvement of the process of teaching/learning.

This programme had a process, which seeks to fulfil the strict requirements of the national quality premium through the following stages:

- Conception through Planning (Strategic Management centred in Planning)
- Implantation (Total Quality Management)
- Evaluation (National Quality Award)

Lately, in 1996, because of the success of the CENATEC process, the National Department of SENAI developed another project to achieve total quality management in the learning schools. Its objective was to install in the CEMEP (Vocational Training Model Centres) the quality principles oriented towards training for work. Currently, these projects continue to be in execution and are known as SENAITEC and CEMEP. SENAI has 45 SENAITEC and 56 CEMEP. The SENAITECs are part of a Network of Centres which cover areas such as Textile Industry, Food Industries, Leather and Shoe Industries, Sanitation and Environment, Cellulose and Paper Production, Wood and Furniture Industry, Foundry, Food, Mechanics, Refrigeration and Construction Industry, among others.

**Quality Policy of SENAI, Regional Department of Pernambuco:**

“To seek for excellence in quality, based on the following principles:

- Continual improvement of services
- Development of partners, promoting continual growth
- To satisfy and surpass the customers’ needs.”

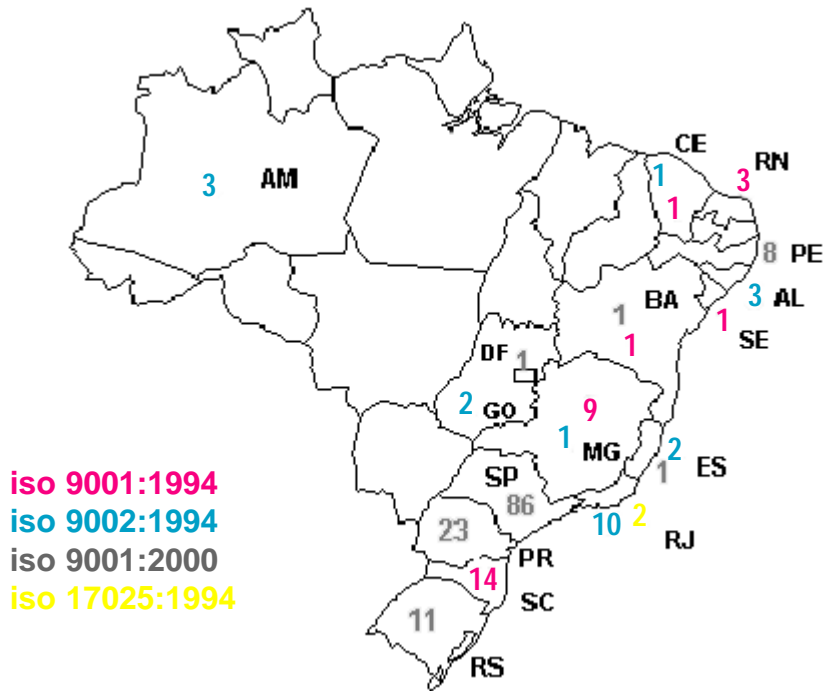
The SENAITECs are poles of generation, adaptation and transference of technology. They develop vocational training activities and provide services to the industrial sector such as assistance in the productive process, laboratory services and technological development and information. All this is developed according to the strict criteria of the National Quality Premium and the ISO standards.

Since the mid nineties, the clear orientation towards quality management of the institution made it possible for several Regional Departments to start the process of quality certification of the ISO 9000 standard. This was caused not only by the idea of promoting schools managed with a quality policy but also by the needs of competitiveness originated in the

entrepreneurial sector. Nowadays, the quality management is part of the conception of institutional management and has the feedback of the trends generated in the Brazilian industry.

In the following map the different Regional Departments with ISO 9000 certification are shown, as well as the laboratories which have achieved the ISO 17025 certification:

### SENAI – ISO CERTIFICATION DISTRIBUTION BY REGIONAL DEPARTMENTS



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Among the Regional Direction which have achieved the quality certification are: Alagoas (AL), Amazonas (AM), Bahia (BA), Ceará (CE), Distrito Federal (DF), Espírito Santo (ES), Minas Gerais (MG), Paraná (PR), Pernambuco (PR), Rio Grande do Sul (RS), Rio Grande do Norte (RN), Santa Catarina (SC), São Paulo (SP) and Sergipe (SE). Totally, SENAI has more than 180 quality certifications and some more for the national departments' headquarters. Also, there are 35 certifications still in process.

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The participation of the different Regional Directions in the definition and establishment of a quality policy co-ordinated with economic actors in each state is remarkable.

In this way, SENAI uses different management tools oriented towards the creation of a learning organization that is capable of day to day improvement in its training process and, therefore, fosters the competitiveness and productivity of the Brazilian economy.

The **National Commercial Training Service (SENAC)**<sup>10</sup> in the Regional Administration of Minas Gerais developed a quality certification process under the ISO 9000 standard. The Certification was achieved in July 2000 and

The **SENAC** was created in January 1946. It is a Vocational Training Institution open to the whole society. Its mission is to develop persons and organization for the working world through educational activities and the dissemination of knowledge in the trade of goods and services.

[www.senac.br](http://www.senac.br)

was validated through the first auditing of maintenance in February 2001. The coverage of the certification is wide and it was provided on the educational projects of more than 300 vocational training courses: from planning and provision of resources for the creation of a course and attention during enrolment, to analysis, validation and standardization of pedagogical and management courses which

guarantee the quality of courses and the evaluation of results, orientation and follow up of the student since he/she finishes the course and faces the labour market.

The starting point for the implementation of a Quality Management system in SENAC was the action of sensitising the managing group, the creation of Quality Coordination and the assignation of Quality Managers for each unit. Afterwards, training activities and specific events for the staff of SENAC were developed. A total of 750 employees participated in those activities. As a result of all these work, SENAC achieved:

- Standardization of the processes, which facilitate the preservation of the know-how of the institution.
- Standardization of the vocational training courses which are adequate to the changes of the world of work.

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<sup>10</sup> Based on an article from SENAC's Digala Publication (Giane Rita de Souza Ferreira, Manager of process management, SENAC, Minas Gerais.)

- Better commitment and participation of everybody in the processes and results.
- Analysis of the pedagogical process to guarantee the viability of the vocational training processes
- Establishment of goals, results indicators and controls to monitor effects and results of training activities
- More effective relation to the customer through a better attention that starts right at enrolment, quality courses monitored and validated by the pedagogical supervisor and mainly the relation teacher/student which has the basic premise of respect, transparency and aims at better results.

“A decisive factor was the participation of all the workers who saw in this process the opportunity of optimisation of actions, standardization and reliability of procedures and results, reducing repetitions and subsequent stress at work, as well as the commitment of the high direction who accompanied, supported and provided the necessary resources for the implementation, maintenance, continual improvement of the Quality Management System.”

SENAC Minas Gerais

The **National Rural Training Service (SENAR)** in its administration of Minas Gerais, which was established in 1993, has as one of its main foundations the quality of the services. It established the SENAR Total Quality Programme where various methodologies were applied such as: TeamWork, Strategic Analysis, 5 “S”, “quality coffees”, quality panels and the quality newspaper, among others.

The processes were registered and made available to all, so that there was transparency in the working of the institution. In 1999, SENAR- MG achieved the ISO 9002:1994 certification. Currently, the institution is preparing the technical auditing for the ISO 9001:2000 certification.

The **National Training and Employment Service (SENCE)** from Chile was the first public service in that country to obtain a quality certification of the ISO 9000 family. In January 2000 received the certification that states that the process of Constitution of Training Technical Agencies in the Metropolitan Region “fulfils the requirements ISO 9002:1994 quality standards.”

But also in Chile a quality standard has been developed for the executionary technical training agencies (OTEC). It is the Chilean Standard 2728:2002. The OTEC can execute training under contracts financed with public funds, which

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The **National Training and Employment Service (SENCE)** is a technical decentralised state agency, which is related to the state through the Ministry of Labour.

Its mission is to contribute to increase the national productivity promoting vocational training among enterprises and among low-income people.

This work is supported through an incentive that the state offers to enterprises to train personnel and by a subsidy to a training programme financed through public resources.

are assigned through competing procedures and the access depends on solid and generalised quality criteria. The SENCE is promoting the use of this standard for the OTECs as a mean to generate a quality management system and a continual improvement in the provided training.

Currently, in Internet there is a guide of self-evaluation for the OTECs. More than 400 agencies have registered their names stating their interest in the process and more than 130 have started the process of self-evaluation. The process has had the support

of SENCE, which has organized dissemination seminars along the country and meetings between the OTECs and the certification bodies. Support instruments for the implementation of the processes are being designed.

The stages to develop and to implement a Quality Management System in the OTECs according to the Chilean Technical Standard 2728:2002 are:

- To assess needs and expectations of customers and other interested parties.
- To establish the quality objectives and policy of the agency
- To define the process and necessary responsibilities to fulfil the quality objectives
- To determine and provide the necessary resources to achieve the quality objectives
- To apply this measures to establish efficacy and efficiency of the process
- To determine the means to prevent disagreements and to eliminate its causes
- To establish and apply a process to continuously improve the system of quality management

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The **National Training Service (SENA)** from Colombia achieved in April 2003 the ISO 9001:2000 certification of three of its training centres in the Antioquia Region. The certificates were National Construction Centre, National Wood Centre and National Leather and Shoe Centre. Previously, the Planning Sub Direction of that regional office had achieved the ISO certification. The institution has started, in the framework of its strategic plan, the process that allows for the certification of its 114 training centres. Its goal is to achieve it before the year 2006. The SENA also provides technical assistance to the enterprises that apply to the ISO certification.

The **National Training Institute (INA)** from Costa Rica is one of the first institutions that began the process of quality assurance. It achieved the ISO 9000:1994 in its Accreditation Unit in June 1998. Follow up auditing was developed in December 1998 and June 1999. This unit is in charge of verifying the suitability of the training offer of other institutions and compares them to the offer of the Institute. An institutional policy of the INA stated: “To design and execute programmes and projects, which allow for quality assurance of internal and external management of the services provided to employees and users.”

As an antecedent of the certification of its Accreditation Unit, the INA had obtained the best qualification in an evaluation among 29 public institutions in Costa Rica. The evaluation was conducted by the National Evaluation System (SINE).

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The **Technical Institute for Training and Productivity (INTECAP)** from Guatemala successfully developed the process towards the obtaining of the quality certification under the ISO 9000:2000 standard. The process ended

**INTECAP** is the vocational training institution, which promotes with state and private contribution the development of human resources and national productivity. It started its activities on May 19 1972 and its main goal is to train workers and new manpower in different economic activities through vocational training events. INTECAP trains three typical occupational levels: Executive, Medium and Operational, in the three economic sectors: Rural, Industrial and Commerce and Services.

with the recommendation for certification in November 2002. The scope of the quality management system of INTECAP included in the certification is “the study of labour markets, the design and development of training services oriented by labour competence and of training services with traditional certification developed in the INTECAP centres and in enterprises, as well as the provision of technical assistance services.”

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In the current context of technological innovation, growing competitiveness and productive economic globalization, and the flexibilization of the labour market, INTECAP had to modernise in order to adequately attend the productive sector in terms of human resources development.

A remarkable feature of the INTECAP experience is the fact that the quality certification is part of the wide and successful process

of institutional modernisation initiated at the end of 1998. The plan of modernisation included:

- To define a document for the modernisation of INTECAP
- To establish the basis for an organic restructuration: organigrams at the level of Unit, Division and Department
- To define a schedule to start the process

The modernisation project included the following orientation elements:

- Changes in the process, both in value and in support
- Redefinition of the concepts of mission, vision and values
- Redesign of the technical and administrative process
- Acknowledgement of the importance of the orientation towards total quality
- Design and implementation of a horizontal organizational structure

Furthermore, the modernisation management was organized around seven sub processes:

1. Appointment of the Heads of Division, Unit and Department, as well as employees that according to the Constitution must be appointed by the Directive Board
2. Preparation for the establishment of a total quality culture
3. Redesign of the main institutional processes.
4. Definition of an organizational structure and a pilot plan of implementation.
5. Administration of human resources.
6. Regionalization
7. Consolidation of an institutional image.

**INTECAP vision:**

“We are the leader institution in vocational training of workers and of human resources that will enter into the labour market.

We see the institution’s future related to the design and development of training plans and the promotion of productivity in order to contribute significantly to the country’s development.

These actions are developed expediently, with quality and excellence, going beyond our customers’ expectations.”

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The **Council for Standardization and Certification of Labour Competence (CONOCER)** from Mexico was certified in February 2000, with the ISO 9001:1994 in acknowledgement of the adoption of efficient systems which show their capability of assuring quality in the process of design, development, production and distribution of their products, as well as in the offer of associated services.

CONOCER is conceived today as the coordinator of a schema through which people can access continuing training, which is based on standards that represent the consensus of the productive, labour and educational sector. It is a quality entity in itself, oriented towards the improvement of quality of enterprises, workers and training institutions ([www.conocer.org.mx](http://www.conocer.org.mx)).

In Peru, the **National Service of Occupational Training in Industry (SENATI)** received the ISO 9001:1994 quality certification<sup>11</sup>. After a strong national effort, the institution obtained the Certification for its Vocational Training Programmes: Dual Learning, Workers in service qualification, Industrial Technicians, Industrial Managers, Industrial Qualified Workers, Engineering Technicians, Continuing Training, Multimedia Training, Informatics; and, the Job List.

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The Technical Services of Tests and Non Destructive Manufacturing, Assistance and Consultancy for Small and Medium-sized Enterprises were also certified in the forty-one regional offices. In March 2003 SENATI obtained the ISO 9001:2000 quality certification and the ISO 14001:1996 environmental management system standard. It was the first institution of the region that obtained this certification on environmental management policy.

**SENATI** was created in 1961, at the initiative of the National Society of Industries, when it was evident that traditional vocational training and technical education did not offer the qualifications required by modern productive activity. After an intense transformation process initiated in 1993, SENATI decided to implant a clear quality policy and it applied the ISO certification. The process of certification started in 1998 and its first achievement was the quality certification of conformity to the ISO 9001:1994 in the year 2000. This certification was followed by the joint certification ISO 9000:2000 and ISO 14000 in March 2003.

The philosophy of quality management of SENATI can be resumed in the following big steps:

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<sup>11</sup> Bureau Veritas Quality (BVQI)

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- Institutional Reestructuration between 1993 and 1998.
  - Certification Process ISO 9001:1994 between July 1998 and December 1999.
  - ISO 9001:1994 certification in the year 2000.
  - ISO 9000:2000 and ISO 14001:1996 certification in 2003.

The steps followed by SENATI to obtain the certification are:

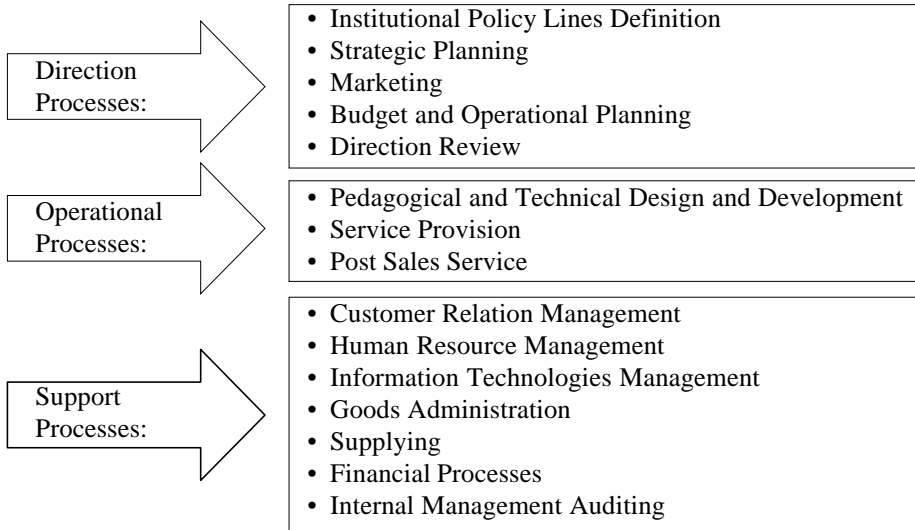
- National Council agreement to implement the quality system.
- Initial training to Directors and Chiefs on the ISO 9000 standard.
- General training to all personnel using a modular courses design and a clear evaluation system.
- Quality policy approving by the National Council.
- Definition of SENATI's products and customers by the National Direction.
- Creation of working groups to write and review the documents of the system.
- Internal auditors training.
- Approval of the Quality Manual, Organizational Manual and General Functions and Directives by the National Council.
- Approval of the Control Directive of the System, Quality Plans and Specific Directives by the National Director.
- Internal Auditors in regional offices.
- Pre certification Auditing.
- Certification auditing.

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SENATI defined the following institutional processes for the stages of documentation and certification:

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## **INSTITUTIONAL PROCESSES IN THE QUALITY CERTIFICATION OF SENATI:**



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One of the most demanding features of the quality assurance process is the definition and specification of the processes, particularly if the institution provides a training service. Therefore, an interesting institutional discussion took place in order to make an adequate definition of customers and products.



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## **Certification of the FORCEM quality system in Spain**

Since the late nineties, FORCEM, the institution in charge of the Sub-system of Continuing Training in Spain, promoted a process of definition of its quality system. With that objective, training activities of co-ordinators in areas related to the ISO 9002:1994 standard were developed. After the elaboration of the working timetable and the definition of the necessary documents, the process, which included 155 procedures, started. The Procedures and Quality Department - Organization and System Direction - conducted the coordination and criteria unification as well as the project control.

In September 1998, given the scope and responsibility of FORCEM in the national context, FORCEM decided to present to AENOR the petition of certification.

It was considered an ambitious project in which almost all the personnel participated. At the end, this participation was one of the key factors of success of the initiative, which achieved the quality certification according to international standard UNE-EN-ISO-9002 in July 1999.

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### **2.2 Brief Survey on quality management: motivations, benefits, learned lessons**

A short survey was applied to the institutions that obtained the quality certification and to some experts in the subjects in order to identify the main features, the relevant variables and the lessons learned throughout the process of quality certification.

The perspectives that emerged from the survey have been classified in seven categories: motivations, suggestions for the initial stages, changes in the organizational environment and culture, direction role, captured benefits, recommendations and challenges.

#### **2.2.1 *Main motivations***

Among the factors which promote the beginning of the process of quality assurance, it is often mentioned the competitiveness factor. Usually, as SENAI of Rio Grande do Sul pointed out, the enterprises turn to the ISO certification in order to improve their competitiveness. In the case of the VTIs, it seems to exist a mixture of factors. Among these factors, the need to improve processes

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and the consequent benefits in the functioning of the institution must be highlighted. Image reasons are also mentioned. The following list is a synthesis of the mentioned motivations:

- To make available a course design quality pattern.
- To improve the institutional image, to achieve national and international recognition.
- To accompany the evolution of quality management according to the enterprise dynamics.
- To have a good quality institution with a philosophy of continual improvement.
- To reveal to society the capability of the institution to carry out a quality management.
- To make available tools for management.
- To face the pressure of the growing number of certified enterprises among their provision chain.
- To offer a better service to customers and workers who participate in the programme.
- To seek efficiency which derives from the application of the eight principles of quality management.
- To have clear and documented processes which saves time and money.
- To generate more credibility and reliability regarding institutional services.
- To guarantee the attention to customers' needs.
- To improve possibilities of personnel development.
- To rescue the technical unity through the standardization of the processes.
- To put in practice the institutional legislation.

It is clear that the institutions that worked in the processes of certification maintained an open relation with their customers. They are also conscious of the need of a competitive and quality oriented image. The institutions have usually developed a wide base of standards, regulations and procedures. The answer of the Regional office of Antioquia of SENA underlines the applicability achieved when processes are standardized and the unit is reconfigured in its technical procedures.

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### **2.2.2 *Suggestions for the initial stages***

The varied experiences allow for the collection of suggestions which range from the strict observation of the formal steps defined in order to achieve certification to issues such as the adequate commitment of involved parties and the perception of the process as a medium time effort, as the person in charge of SENATI pointed out. Here are some of the suggestions:

- To look for the participation of all the personnel.
- To have a direction with a clear perception of the process, the available resources and the required time.
- To know that it is a long-term process.
- To communicate how the process is being conducted at all levels of the institution.
- To involve the personnel in the process.
- To facilitate the standardization of institutional processes.
- To take into account the incompatibility between the educational and entrepreneurial approach of the standard.
- To establish quality objectives and policy.

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Agustín Ibarra, one of the surveyed consultants, resumed the suggestions in three groups: systematic vision and process management approach, personnel active participation and responsibility, and finally the existence of good information systems and registration that allows for a better knowledge of the customers.

### **2.2.3 *Changes regarding the organizational environment and culture***

The true dimension of the change will be measured by the organizational environment and culture. Quality management, according to an interviewee produces a paradigmatic break and change in the traditional way of thinking and acting. It is significant that the interviewees sees the process as a sustainable change towards the creation of a quality culture and not as an isolated effort towards the obtaining of certification. SENAR from Minas Gerais mentioned the need to break barriers and to create working groups of different departments and functional areas of the institution. Some considerations on the changes regarding environment and culture quoted in the survey are:

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- To develop a participation-oriented, creative and innovative leadership to affect positively organizational environment and culture.
  - To review traditional practices and patterns in order to promote better working practices.
  - To develop a culture of consultancy of processes documentation.
  - To manage human resources in connection to the organizational objectives.
  - To develop working groups in different areas.
  - To develop a better attitude towards customers demands.
  - To develop a whole vision of the institution which overcomes the isolated vision of each one in their own working area.

The experience of SENAI of San Pablo is very illustrative of this point. The interviewee answer insists on the development of a vision of the macro processes. The probability of success in the implantation increases if the relation and interaction between different departments increases. SENAI also mentions the joint work of teachers and personnel. Finally, the need to guarantee that all personnel has access to information on the status and evolution of the project, which fosters a culture of open and transparent information.

#### **2.2.4 *Role of management in the process***

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“Actions are more eloquent than words” wrote the responsible of INTECAP. This seems to be the message, which resumes the role of direction in the process. Leadership is the word more used among the interviewees. According to Agustín Ibarra, the role of direction is crucial, specially if we consider that the direction is one of the responsible parties regarding the adoption or not of a quality model.

The following list resumes the main answers:

- To establish the quality policy and objectives of the institution.
- To exercise a leadership which promotes personnel participation.
- To create and maintain a good internal environment.
- To explain clearly the motivations of the institution.
- To persuade personnel.
- To move the resources to maintain the quality management system.
- To make clear the importance of attending customers needs.

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### 2.2.5 *Captured Benefits*

According to an interviewee, the ISO 9000:2000 standard concedes more importance to the resource management and the measurement of results, which leads to better managerial practices and improvement of efficiency. The answer of SENATI is concluding: certification has improved the quality of training. The benefits more frequently mentioned are:

- Improvement of the institutional image and credibility.
- Planning, organization and control of vocational training activities.
- Increase in the number of customers (students and enterprises).
- Customers satisfaction. Measurement of the customers satisfaction.
- Better perception of responsibilities.
- Quality of the training services.
- Cost reduction.
- Trust in the institution's products.
- Less internal conflicts and more interaction between different areas.
- Improvement of the organizational environment.

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The SENAR from Minas Gerais highlighted the following benefits for society:

- Better guarantee of the fulfilment of objectives fixed by law.
- Better possibility of result evaluation and guarantee of correct application of resources.
- Better guarantee of the use of concepts such as ethics, citizenship, sustainable production and reduction of environmental risks.

The SENAI from San Pablo captured the following benefits that deserve to be quoted:

- Clearly defined goals and objectives.
- Adequate environment of teaching/learning.
- Offer of educational products adequate to real needs of customers.
- Systematic monitoring of customers satisfaction.
- Permanent up date of training services.
- Coherence of all training process stages from planning and development to follow up of graduates.

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- Shared vision at all levels of the institution.
  - Resource optimisation.
  - Better communication between departments.

### ***2.2.6 Recommendations on the process of quality certification***

“To train, to train and to train.” This seems to be the most important recommendation of those who have transited the road of quality certification. The indispensable actions of the process are to train de coordination group, to train the area co-ordinators, to train the employees. The responsible of SENAI Minas Gerais stated that all the processes required a high level of maturation. This maturation will have a lot to do with the training culture and opportunities and with the teamwork.

- To have a good definition of mission, vision, values and to achieve the total commitment of the personnel.
- To create a management team where members know the training business.
- To plan the process as a project.
- To choose on advance the certifying agency in order to create a good communication and work dynamics.
- To train the working groups.
- To facilitate the process standardization.
- To choose a responsible for the quality management with prestige, credibility, knowledge and easy access to workers.
- To insert the process as part of the improvement of the institution.

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The SENA Regional Office of Antioquia suggests to manage the implementation process with assigned resources, goals, achievement indicators, administrative and management structure. It also suggests to co-ordinate the quality project with the institutional policies.

In addition, the SENAI from San Pablo, probably conscious of the great effort implementation implies, included in one of its recommendations “to celebrate certification.”

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### 2.2.7 *Challenges posed by the quality management process*

This section can resume in a certain way the lessons learned along the process. Most of the challenges have to do with the institution's internal level. To achieve commitment and to involve everybody seems to be one of the challenges to work on. But in our understanding, other challenges related to the maintenance of the system and, more over, to achieve a real change in the culture and practices of the institution emerged. The answers of the survey are quoted in the following list:

- To achieve the commitment of employees.
- To accept the paradigmatic break and the standard adaptation to an educational institution.
- To define the concept of customer in education.
- To interpret the ISO standard requirements on educational terms.
- To obtain consensus on the standardization of operational procedures.
- To achieve the personnel participation out of genuine interest.
- To make the entrepreneurial approach compatible with the educational approach on the standard interpretation.
- To assimilate the derived changes of the implantation.
- To overcome the uncertainty produced by changes.
- To understand standards as important management tools.
- To develop a true "Quality Culture" and to change the traditional references and patterns.

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But the answer of SENATI resumed a key aspect of the processes of changes "we have to have a quality system where the most important thing is the people." This statement goes together with the idea of a more flexible institution which detects needs and is adaptable.

### **Basic lessons from the European experiences**

They are resumed in three big areas. In the first place, the standardization processes in these experiences have created a tension between the typical de-segregation of standardised description and the need of a practical and functional process. This is well resumed in the idea of balancing a certain level of pragmatism against the fundamentalism that represents standardization in its

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extreme way. In order to carry out processes, the redaction cannot be done looking constantly for perfection.

In the second place, national institutions are required to give signals to enterprises and workers regarding the reliability of the processes and the quality of results. In many cases, governments are looking for signals of certainty on the institutional mechanisms of resource assignation and execution of public policies on training.

In the third place, quality management and the consequent quality certification of training institutions offers a good tool to maximise the institutional capability of capturing and disseminating knowledge on work. One thing is the quality management and another is the quality of the performance of the graduate, which is measured in terms of labour competency.

