
3. Three quality standards in perspective

This last section is included with an illustrative aim. It seeks to contribute to clarify the kinds of standards related to vocational training and those that can be applied in the institutional quality management and processes related to vocational training. In the first place, the standard on institutional management (ISO 9000:2000) is analysed, as well as the synthesis of two proposals adapted to educational institutions. In the second place, the standard related to personnel training processes within an organization (ISO 10015) is presented. Finally, the standard on certification of persons (ISO 17024) is analysed.

3.1 Standard on quality management

Among the standards published by ISO, the more internationally known is the group of ISO 9000 standards. This group of standards describes the way of carrying out Quality Management and the set up of the quality systems and continual improvement of an institution. Along these lines, the ISO 9000:1994 has been used and the ISO 9000:2000 is actually in use. These standards are centred in the processes, independently of the product or specific service of the institution.

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The group of ISO 9000 standards describes the requirements for the implantation of a model of quality management in a given organization (See Annex 1). The 2000 version of this series of standards has been published emphasising its application to service organizations. In this way, it seeks to decrease the need for creating specific standards for each industrial level, as would be the case of educational and training institutions.

The quality management model of the ISO 9000 standards has the objective of achieving a greater efficiency in its processes and provides products and services that satisfy the customer, improving the quality and competitiveness of the organization.

According to Baeza and Mertens¹², the difference between the 1994 version of the quality management system and the 2000 version is that the first one standardises and assures quality through a static vision while the other is supported by an integral and dynamic conceptualisation of continual improvement directed towards the customer satisfaction.

The ISO 9000:2000 has the objective of promoting an organization which provides a product or service according to the customers requirements and regulations achieving customers satisfaction as well as the prevention of disagreements and a process of continual improvement.

ISO 9000:2000 and the human resource management based on labour competency

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A key aspect of the last version of the ISO 9000 standard is its connection to the human resources management systems. In effect, within the requirements of the standard in terms of personnel the provision of competent personnel is stipulated. The organization must determine the required personnel competence profiles and evaluate the effectiveness of the training provided for those functions that directly affect quality. The enunciation of the standard represents

a transcendental change because of the inclusion and treatment of the human resource in the quality management system.

The inclusion of labour competencies in the ISO 9001:2000 standard is an important step towards the creation of an integral concept of quality and fundamentally towards the practice of human resource development.

ISO standards and training:

The 2000 version of the ISO 9000 was more specific than the 1994 version in terms of the characteristics of the personnel of a certified enterprise. The 1994 version requested “documented procedures in order to identify the needs of training and to train all the personnel who works in activities that affect quality. The personnel assigned to specific tasks must be qualified through education, training and/or adequate experience according to requirements.”

Regarding resource management the 2000 version states: “the personnel who works in activities that affect the quality of the product must have competency based on education, training, and appropriated abilities and experiences.”

¹² Baeza and Mertens: 2000.

This process implies a new complexity introduced in the ISO quality standards. It is not the same to treat and evaluate processes than individuals. The challenge will consist of not losing the strategic approach, for what and whom is the competence model, and to maintain a flexible model which understands the human resource as a group of individuals with different needs of development and objectives which must agree with those of the enterprise.

As INTECAP¹³ states, “the 2000 version includes fundamental aspects of the human resource management as the involvement of the personnel and the physical and human conditions of the working environment. It places labour competency in coordination with the other sub systems of human resource management.

The new version of the standard includes:

1. Identification of the competency profiles.
2. Evaluation of the training effectiveness.
3. Coordination with other subsystems of human resource management.
4. Selection and assignation of personnel according to shown competencies.
5. Training oriented towards competencies development.
6. Assurance of personnel consciousness regarding the importance and relevance of their activities and contribution to quality objectives.
7. To maintain the actualisation of personnel educational, training, qualification and experience records”.

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A specific standard for the vocational training process?

Even if, as noted before, the 2000 version of the ISO 9000 was designed with the intention of facilitating its application to organizations of other sectors of the industry, the training institutions which have applied the standard have to seek for equivalencies for the different terms used in the organizational environment such as customer and supplier. Within training institutions, an interesting discussion has been centred on the problem of who is the customer: is it the participant or the enterprise? And around what is the product: is it the training programme or the trained and certified worker?

¹³ INTECAP 2001

Towards a ISO 9000 in educational institutions:

In October 2001 in Birmingham, England, during the meeting of the Technical Committee 176, a group of Mexican organizations took the initiative of proposing a project guideline for voluntary use in order to facilitate the application of the ISO 9001 in the organizations of the educational sector at all levels and modalities.

The later adhesion of other countries provoked the approbation by the ISO Technical Council of the IWA-2 project “ISO 9001:2000 application in education” co-ordinated by Mexico. The mechanism to achieve an international agreement was a workshop established by ISO (International Workshop Agreement – IWA).

The IWA 2 guideline seeks to support Mexico and other countries in their programmes of quality educational improvement.

Programme of Modernisation of Technical Education and Training of the Public Education Secretary. PMETyC Mexico 2003.

Obviously, the answer has been discussed in the documents on quality system of the certified institutions and in the definition of processes and quality manuals. Nevertheless, two examples have been chosen to show the adaptation efforts. The first one is an adaptation conducted in New Zealand on the ISO 9000:1994¹⁴. Its main features are described in the Annex 2 at the end of this document. The second one is more recent. It was elaborated by the ISO International Workshop IWA-2 created by the initiative of the PMETyC of Mexico. It was based on the ISO 9004:2000 and its purpose is “to provide directions to the voluntary application of the ISO 9001:2000 on educational organizations that provide educational services at all levels.

These directions do not add, change or modify the requirements of the ISO 9001:2000 and are not thought for contracts, conformity assessments or certification purposes” (See Annex 3). The project is now in its international stage and is co-ordinated by the administrative unit of the PMETyC.

Also, in Latin American countries, adaptations of the ISO 900:2000 standard have been conducted. In Chile, the **Chilean Standard NCh 2728:2002** directed to the Technical Training Agencies that conduct training activities for enterprises and workers in general. The standard is oriented to promote the orientation of training towards the coverage of needs and expectations of customers. Since these needs are permanently changing, OTECs are asked to update their offer permanently.

¹⁴ *Guidelines for the quality standard systems AS/NZS ISO 9001:1994 for education and training. Australia Standards. New Zealand Standards.1995.*

Definitions of the NCh 2728:2002

Customer: Worker, enterprise, employer, internal customer (within the training programmes), organization or group of enterprises that asked for a training service. The competent authority can also be seen as a customer

Participant: Person or worker who assists to a training activity.

On the section on human resource management it is emphasised the fact that the high management of the training agencies has to ensure the availability of the necessary competences to enable the effective operation of the organization. The model of human resource management implies the analysis of the future needs of competences and compares them with the available

ones so as to elaborate the plans for personnel development.

When this document was written, the complete text of the NCh 2728:2002 was available at: www.sence.cl/normacalidad

Other adaptations of the ISO 9000:2000 for educational institutions known during the elaboration of this document are: the Argentinean Standardization Institute IRAM “Guide for the interpretation of the IRAM-ISO 9001 for education”, the Commission of Technical and Commercial Regulations INDECOPI of Peru “Guide for the application of the NTP-ISO 9001:2001 in the Education Sector”, and the Spanish Association of Standardization and Certification - AENOR. The Peruvian Standard does a complete enumeration of the different processes to be controlled in the development of the educational service, such as the processes of student admission, curriculum design, evaluation system, graduate follow up, budget management, equipment, student services and educational supervision as well as continuous monitoring systems.

The Spanish adaptation developed an approach in which the quality standard has the purpose of offering reliability to customers, including students, parents, tutors, internal customers, enterprises and society in general, ensuring that services satisfy customers. It clarifies that satisfaction includes complying with current legislation and regulations and with internal regulations of the organization.

3.2 The standard for the processes of training and development of human resources

This standard (ISO 10015:1999) refers to the process of human resources management of the organization, particularly, to the training and development stage. It is not used to certify. Its purpose is to establish directives on training. The constant evolution and changes of the market, technology, innovation and customers requirements and expectations which can impose to the organization the necessity for an analysis of needs regarding competences is the starting point of the standard.

Personnel training is an effective option to overcome the changing context mentioned above, allowing for the closure of the gap generated between required and existent competences in an organization. It defines training as a process that produces and develops knowledge, know-how and necessary behaviours to fulfil requirements. It understands competences as putting into practice the knowledge, know-how and behaviours during the execution.

Therefore, the training process would make it possible to improve the organization's capabilities and to achieve the organization's objectives regarding quality, producing and developing competences. If training is understood as a continual progress factor, it emerges as an effective and productive inversion (see annex 4: Document: Quality Management. Guidelines for training. ISO/DIS 10015:1999 standard).

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3.3 The certification of bodies operating certification of persons

This year was established the ISO 17024:2003 standard "General requirements for bodies operating certification of persons" based on EN 45013¹⁵ which is applied in Europe since 1989. Even if the ISO 9000 standards do not apply to individual competence recognition, the application of the quality certification logic has been widening its ratio towards the agencies in charge of the competence certification. In fact, the certification of persons has been a field of specialised work in Europe. It was extended together with the national standard model in England, Scotland, Wales and Ireland.

¹⁵ This is a voluntary standard issued by the European Standard Institution. Its members are national organizations in charge of accreditation in 18 European countries: Germany, Austria, Belgium, Denmark, Spain, Finland, France, Greece, Holland, Ireland, Iceland, Italy, Luxembourg, Norway, Portugal, United Kingdom, Switzerland and Sweden.

The 45013 standard is used in Europe specially for the recognition of acquired competences as a result of experience or informal training actions. It applies to third part agencies that certify those competences independently on how they were acquired.

The ISO 17024 standard specifies the requirements to assure that the certification agencies that conduct the processes of certification of persons conduct their operations in a consistent, comparable and reliable way¹⁶. This standard does not deal with the quality management system applied by the agency. In other words, this standard does not substitute the eventual ISO 9000 certification.

The standard seeks to maximise the reliability that the certification agencies have among the interested parties in the certification through their independence and impartiality regarding candidates and certified persons. It also asks for the necessary measures to ensure an ethical operation.

An aspect to highlight regarding the usual discussion generated in the institutional certification model is the expressed mention on the standard regarding the certification

agency: “it cannot offer or provide support to others in the provision of training services unless it demonstrates that training is independent of evaluation

Some terms of the ISO 17024:2003 standard:

Certification process: All the activities conducted by a body in order to assess a person’s competency. It includes evaluation, decision over certification and re-certification, use of certificates and logotypes/trade marks.

Certification arrangements: Certification requirements for a particular category of people who will go through the same certification procedure and standard application.

Certification system: Set of procedures and resources needed to carry on the certification process that leads to a competency certification, including maintenance.

Competency: Proved ability to apply knowledge and/or abilities and capability of proving relevant personal attributes according to the certification arrangement.

Evaluation: Examination process to assess a person’s fulfilment of certification requirements. It leads to the certification decision.

Exam: Mechanism that is part of the evaluation. It measures the competency of a candidate using one or more, oral or practical, means.

Qualification: Proof of the attributes based on education, training or labour experience.

¹⁶ Certification for persons –ISO/IEC DIS 17024. General Requirements for bodies operating certification of persons, ISO Bulletin, October 2002.

and certification of persons and assures impartiality, objectivity and confidentiality.” In the European experiences of certification of persons, the remarks regarding the independence of the training and certification processes (not the complete separation of the institutions) is growing in order to guarantee the transparency of the process.

A 1998 research of the European Union concluded: “This standard is not widely used, but it could be a useful tool to achieve later processes in terms of quality guarantee of the competence certification process. It can also contribute to the construction of an European accreditation system.”

There is another interesting aspect related to this standard which underlines the use of occupational standards or the so called “labour competence standards.” The quality scheme in the application standards is centred in the competence certification. A competence certification based on an approved standard is a performance quality guarantee. The mechanisms of competence certification and the ways in which standards are created and put into practice are issues to discuss and document.

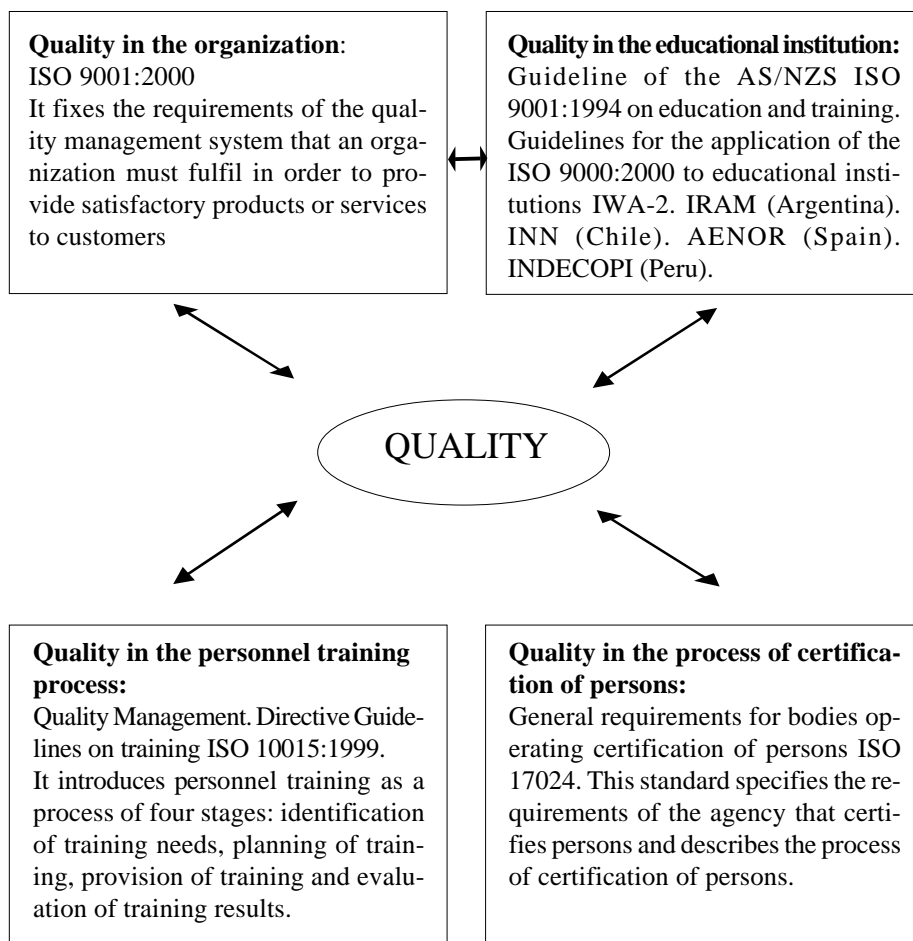
A general description of the content of the standard can be consulted in the Annex 5 “General requirements for bodies operating certification of persons”, included in the ISO/IEC DIS 17024 standard.

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3.4 Concluding Remarks

A panoramic view of the standards referred in the above sections shows a repertoire of options regarding quality management in different aspects of training. In the effort of implementation it is important to consider the use quality management represents for the institution and the applicability of the standard, as well as, its insertion in the organizational environment and culture.

The quality model proposed by the ISO 9000:2000 is based on a process management and concedes importance to customers’ satisfaction and to the enterprise-customer relationship. It makes clear the necessity of personnel training in the organization where the standard is implanted. This standard does not specify the required training neither the guideline to identify training needs. Nevertheless, the ISO 10015 standard “Quality Management. Directive Guidelines for training” offers a series of guidelines regarding personnel training. This standard proposes a four-stage process: definition of training needs, training design, training promotion and training results evaluation.



Personnel training in an organization is an option to improve the organization's capabilities and achievement of quality objectives. At the same time, the project of the General requirements for bodies operating certification of persons ISO 17024 indicates the requirements which certification agencies should fulfil on the processes of certification of persons. It can be a good complement for the institutions that provide education and are interested in the application of the quality model ISO 9000 because it gives guidelines directly related to the competence certification to the customers of these organizations. This is true specially in institutional models, which have services of evaluation and certification of persons, or even in the centres of the institution, which can provide certification services maintaining adequately documented processes in order to ensure the transparency of the evaluation.

The standard can also be useful for the certification of the personnel trained according to the project of the standard “Quality management. Directive guidelines on training” (ISO 10015), as well as for persons who have not received a training course and have acquired training on experience. The certification of competences usually implies the formal, public and temporal recognition of the labour capabilities of the person. It is important to underline that the certification of persons approach is more close to the idea of previous knowledge recognition because it includes the evaluation of competences of the candidate without considering how they have been acquired.

The concept of quality management implies creating a set of policies and actions with the support of the direction which facilitate the mobilisation of the VTIs towards a quality culture that goes beyond the lone certification process in itself. This is a crucial issue in the adoption of quality management; the task goes beyond the documentation of processes. It implies a commitment to a new way of doing things in order to achieve objectives from the beginning. This commitment involves the whole organization.

Training is part of the needs of organizations that adopt quality management. This reinforces the role of the VTIs as providers of training services and reveals the necessity of a provision of quality services. At first sight, it can be believed that the certification process implies a large set of process creation and documentation. This was one of the strongest critiques to the ISO 9000:1994 standards. As a consequence, the 2000 version is focused on the creation of the concept of continual improvement centred in the optimisation of processes without forgetting the personnel training needs, the personnel participation and the orientation towards customers’ satisfaction. The certification process is an opportunity of institutional learning and of knowledge management applied to training.

The adaptation of the ISO 9000 standard to educational institutions is requiring more work lately. In this document two related experiences have been presented. Nevertheless, the experiences of certified institutions regarding the elaboration of their quality handbooks have to be considered. These handbooks represent, undoubtedly, an extensive accumulation of knowledge on training. Much of the institutional knowledge and the definition of processes, interactions, inputs and products were deposited in the handbooks. This effort is offered to all collaborators of the institution to facilitate interaction and work. The use and creation of the documented handbooks and procedures, as well as the continual improvement, are essential parts of quality management.