

# **QUALITY MANAGEMENT OF APPRENTICESHIP TRAINING**

**Recommendation for use in apprenticeship training**

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# IMPROVING THE QUALITY OF APPRENTICESHIP TRAINING

The National Board of Education (NBE) in conjunction with close on 40 organisers of apprenticeship training<sup>1</sup> have developed, by order of the Ministry of Education, tools for developing total quality management (TQM). As a result of this work, the agency now publishes a recommendation for the quality management of apprenticeship training, placing it at the disposal of the organisers of training.

The recommendation is intended mainly as a strategic tool. The purpose of the recommendation is to assist organisers in developing, for their own use, a suitable quality system that works also in practice. The recommendation further seeks to broaden the knowledge of the factors, methods, and techniques pertaining to TQM. It is also hoped that it will spur all those involved in apprenticeship training to cooperate.

In addition to the recommendation, the NBE has prepared other materials to support the TQM of apprenticeship training. The material listed below constitutes a whole that may be used by the organisers to launch their own quality control and evaluation work and to continuously improve their activities:

- Application of Finnish Quality Prize Criteria to vocational training
- Application of European Quality Prize Criteria to vocational training
- Statistics on apprenticeship training in 1995–1999
- Methods for the TQM of vocational training
- Quality leaflet for apprenticeship trainers, students and providers of theoretical instruction.

At the start-out, a separate recommendation highlighting the particular characteristics of apprenticeship training was prepared. The aim is, later on, to collect and publish all recommendations regarding vocational and apprenticeship training in one volume.

The quality of apprenticeship training is best ensured by the seamless collaboration of the participants. I hope that the recommendation presented here for the quality management of apprenticeship training will prove of assistance in the further development of operations.



Anu Räisänen  
Counsellor of Education

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<sup>1</sup> Apprenticeship training centre or some other such unit or school that is in charge of the management of apprenticeship training and the supervision of apprenticeships



## INTRODUCTION

This recommendation for the quality management of apprenticeship training has been prepared by order of the Ministry of Education as part of the Apprenticeship training quality project. 17 organisers of training took part in the project that was supported by a six-week training programme in which another 19 organisers of education in addition to the aforementioned participated. A large number of education experts, interests groups and authorities on apprenticeship training were also heard. Experts from the Ministry of Education, the Ministry of Finance, headmasters, financial managers and teacher organisations, the universities and representatives of the apprenticeship trainers have made their own suggestions and proposals. The recommendation has taken account of the content of the report made by the steering group of relations between apprenticeship training and working life.

The aim of the project and of the training programme was to increase the preparedness of the organisers to develop quality and evaluation systems for themselves and to improve the quality of apprenticeship training on the national and local levels. In preparing the recommendation attention was paid to the effects of the school legislation reform, the heterogeneous array of organisers, and the special characteristics of apprenticeship training as a form of education involving hands-on practical work and firmly anchored in working life.

The first chapter of the recommendation describes the quality factors involved in apprenticeship training. The second chapter is a discussion of the strategic planning and the third of the prerequisites of TQM. The fourth chapter is a presentation of different TQM systems, methods and techniques. The last chapter is a discussion of quality evaluation and of how to put the results that have been obtained to good use. At the end of each chapter there are quality recommendations that aim to assist the organisers of apprenticeship training in better systemising their training. Recommendations are presented in the form of criteria.

Appended to the recommendation is a vocabulary, bringing together the various terms used in describing apprenticeship training and quality management. Appended is also a list of the central norms governing apprenticeship training and the material produced by the NBE to support quality management. At the end of the recommendation there is a bibliography, making possible the acquisition of a more in-depth knowledge of quality management.

# **1 THE BASES OF QUALITY MANAGEMENT**

## **1.1 The concept of quality in apprenticeship training**

By quality is meant all the traits and characteristics of the services produced by the organisers of training and by which the services involved are capable of fulfilling the goals that have been set them or meeting the needs of the clients. The quality of apprenticeship training is made up, mainly, of what knowledge and skills or employment the customer has acquired by using the services provided by the organiser and of how well cooperation works between the organiser of education, the customers and the interests groups. Quality is further affected by the image that the customer develops of the organiser of education as a producer of apprenticeship services.

It is the belief of the Quality project that the quality of the apprenticeship training is best judged by its degree of

- flexibility
- individuality
- practicality
- educational success and
- the degree of serviceability and effectiveness of its cooperation network

In practice, quality apprenticeship training presupposes a recognition of the needs and expectations of its current and future customers in a way that the services provided meet and even surpass these expectations.

## **1.2 The quality elements of apprenticeship training**

Quality in apprenticeship training is the result of cooperation between several participants, such as the organiser of training, the employer, those in charge of theoretical instruction, the students and the interest groups. It presupposes the commitment of all those concerned to the goals and principles that have been jointly agreed upon and the seamless cooperation between the participants in the various phases of training. It is further centrally influenced by the inner quality of the activities provided by the organiser, its student-orientedness and the steps taken by the organiser to support and encourage the participants in attaining the set goals.

## 2 THE TQM STRATEGY OF APPRENTICESHIP TRAINING

The strategy of quality management aims, among other things, to define the vision, mission, values and principles, and the purpose and goals involved in the task. It further involves the recognition of the needs of the customers (current and future) and the interest groups, the consideration of the internal and external milieus, the agreement on principles, the command of processes, and the evaluation and continuous improvement of activities based on the acquired results.

Figure 1 demonstrates the strategy of quality management as a process, the various phases of which will be discussed in more detail below.

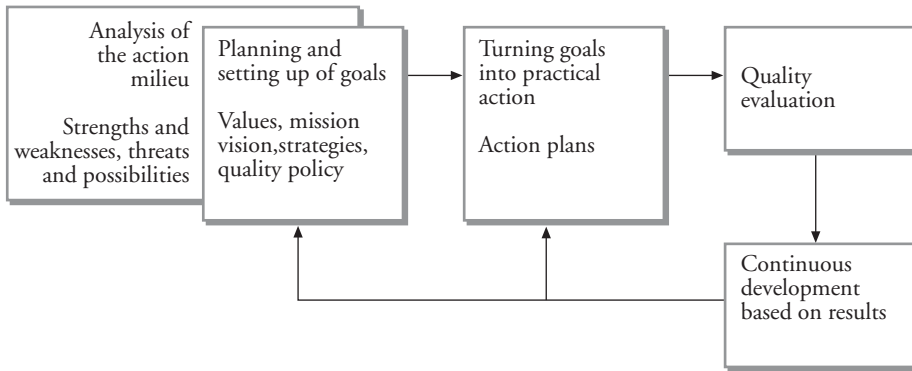
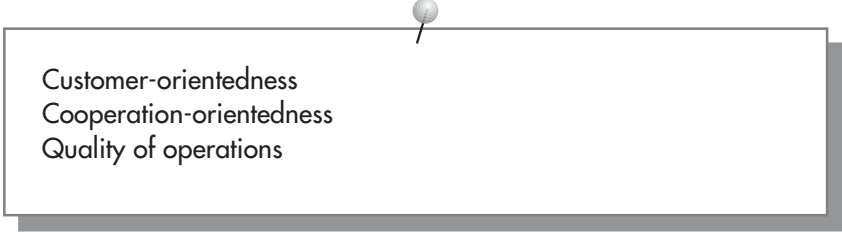


Fig. 1. TQM strategy

## 2.1 Values, mission, vision

Values describe the elements that are considered to be fundamental in apprenticeship training. It further involves a consideration of the values cherished by the customers. What is essential is that the values that are being defined also make part of the work in practice. This aim can be furthered by regular value talks with the personnel and the consequent improvement of activities. Conducting value talks is part of the strategic planning. The project views the makeup of values as tripartite, consisting of the following factors:



Customer-orientedness  
Cooperation-orientedness  
Quality of operations

### **Customer orientation**

Apprenticeship training is capable of meeting the changing needs of the students and of working life. The student and the people in his working environment have the opportunity to influence the development of activities and services by means of things like feedback, development proposals, and complaints.

### **Cooperation orientation**

Cooperation and the division of labour between the organiser of education and the participants in apprenticeship training is based on the reciprocal respect of the participants for each other, the definition of the goals and principles of cooperation, and the commitment of all the participants to the common goal.

### **Quality of operations**

The quality of apprenticeship training is the result of charting the needs of the customers, inferring the necessary goals from the adopted strategy, providing appropriate and methodical activities, and continually evaluating and improving operations based on the results and the feedback from the customers. Activities (processes) are analysed as service chains, describing the whole of the services produced for the customer and the role of the participants in producing these services. The key aim of the processes and of maintaining quality in apprenticeship training is that those who engage in it also finish it by getting a qualification.

The views of the Quality Project Group on the focal processes of apprenticeship training are incorporated in the terms of reference of the Finnish Quality Prize criteria (fig. 2).

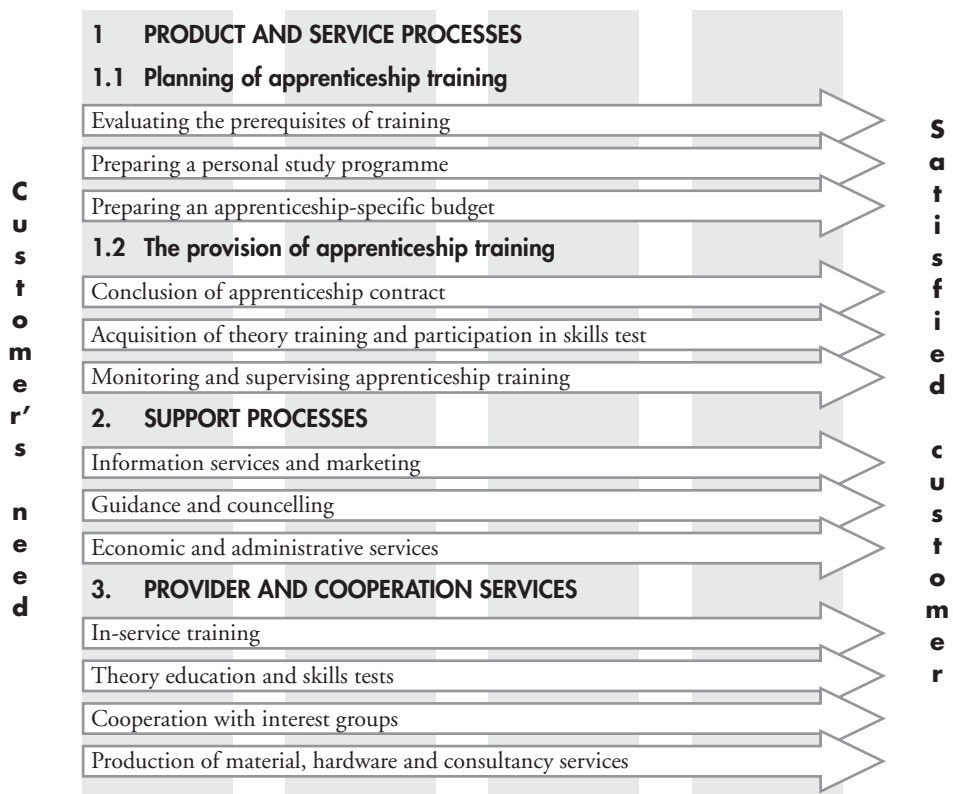
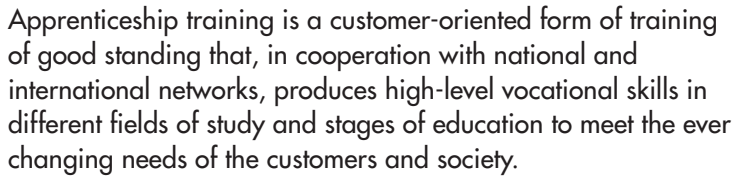


Fig. 2. Process chart of apprenticeship training.

**Mission** describes the task of the organiser of apprenticeship training and the purpose of the training. The mission is implemented by means of the strategy, and it is adjusted in connection with the process of strategic planning. The definition of the mission of apprenticeship training is influenced, among other things, by what manner and form of adolescent or adult training it is viewed as. The Quality Project Group has expressed the following view on the mission of apprenticeship training:

The task of apprenticeship training is to organise vocational initial and further training, answering to the needs of adolescents, adults, and working life, and to promote the development of the competence and competitive ability of the students, businesses, and corporations.

**Vision** mirrors the future image of apprenticeship training and assists the organisers in directing their resources accordingly. When defining the vision of apprenticeship training one has to consider, among other things, how, in future, to strengthen the standing and possibilities of apprenticeship training as an educational channel for adolescents and persons who are already actively employed. The Quality Project Group holds the following view of the vision of apprenticeship training:



Apprenticeship training is a customer-oriented form of training of good standing that, in cooperation with national and international networks, produces high-level vocational skills in different fields of study and stages of education to meet the ever changing needs of the customers and society.

## **2.2 Legal provisions and instructions underlying planning**

The planning of apprenticeship training and the setting of goals are pivotally influenced by the provisions regulating vocational education and training, the plan approved by the government for developing education and research done at universities and institutions of higher education in 1999-2004, the annual decision of the Ministry of Education on maximum allocations for supplementary apprenticeship training, and other similar provisions and instructions. Other provisions of central importance are the national core curricula of initial vocational training and the national guidelines for skills tests, the Vocational Education Act (630/1998) and Decree (811/1998), the Vocational Adult Education Act (631/1998) and Decree (812/1998), the Act (635/1998) and Decree (806/1998) on funding education and cultural activities, the Employment Contracts Act (55/2001), and the provisions pertaining to the legal status of the employee.

## **2.3 Analysis of the operating environment**

By an analysis of the operating environment is meant the analysis and regular forecasting of the internal and external factors affecting the operations of the organiser of education and of the changes that these operations undergo. The analysis encompasses, among other things, a critical examination of the current and future needs, expectations and values of the customers and key interest groups. On the basis of this analysis the future is forecast and the goals, purpose and position of the apprenticeship training on the education market are adjusted. By a systematic analysis is further understood,

that the organiser of training evaluates his own strengths and weaknesses in answering the challenges of the functional environment.

**The analysis of the external operating environment**, among other things, looks into the following matters, evaluating their effect on apprenticeship training:

- the provisions, regulations, instructions and recommendations governing activities
- the tasks of the training
- the prevailing view of society and working life, and the future of education
- the national definition of educational policies and of policies common to all the members of the European Community
- the structure of the labour force and of business and industry
- the current and future needs and expectations of the students and of working life
- the relations between the interest groups
- the market and competition.

**The analysis of the internal operating environment** examines the inner preparedness of apprenticeship training (its strengths and weaknesses), focusing on things like:

- effectiveness,
- efficiency, and
- the economic resources of apprenticeship training, and
- the structure, number, and competence of the personnel.

## **2.4 Strategies**

By strategies is meant the means by which the goals and purpose of education may be attained. The systematic development of apprenticeship training requires, that the activity has its own strategy, and that the needs of apprenticeship training have been taken into account in the sub-strategies of the organiser of training, e.g. in his personnel, information, cooperation, and internationalization strategies. The customer-orientedness of operations is improved, if strategies are developed in collaboration with the key customers and interest groups. Of pivotal importance is further, that the regional needs of working life and the national goals of apprenticeship training are taken into consideration when planning. The strategy of apprenticeship training is adjusted annually in connection with the strategic planning done by the organisers.

## **2.5 Quality policies**

By quality policy is meant a view that has been deduced from the basic values of those things that in the operations of the organiser spell quality. By means of the quality policy the key principles of high standards are transmitted to the personnel and the customers.

## **2.6 Preparing the plan of action**

By means of the plan of action the qualitative and quantitative goals are set. The plan of action shows the factual steps (tasks, responsibilities, time schedule, and parameters) by which the goals can be attained. From the viewpoint of apprenticeship training, it is essential that the organisers of training see to it that the number of personnel, the economic and other material resources of, and the investments in the training conform to the proposed plan of action. Monitoring the implementation of the action plan assumes, that the organiser of training has defined the central parameters, by which the attainment of the goals of apprenticeship training will be followed up and evaluated.

## **2.7 Quality evaluation**

A prerequisite for the quality management of apprenticeship training is that there is a fully operational data system and that evaluation is continuous. Evaluation is focused on the implementation of the strategies for apprenticeship training and the plans of action that have been deduced from them. Quality management presupposes monitoring the development of results and comparing them with the results obtained by others. The results that have been elicited form the basis of the adjustment of the existing goals, the definition of new ones, and the starting point for development. The evaluation of quality management focuses on the functionality of the quality system.

## **2.8 Continuous improvement based on results**

Apprenticeship training is improved by means of process development. The steps taken may focus on the principles steering the activities, on the processes themselves, or on the instructions that have been issued.

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## QUALITY CRITERIA

### THE ORGANISER OF TRAINING

- regularly makes an internal and external analysis of the functional environment of apprenticeship training
- continuously monitors the development of the provisions and instructions that govern apprenticeship training
- defines the values, the mission, the vision and quality policy of the organisation by taking into consideration the special needs of apprenticeship training
- prepares the strategy for apprenticeship training, taking into account the needs of this training in his strategies concerning personnel, investments, information management, and cooperation
- annually adjusts his strategies for the goals of apprenticeship training
- puts to good use, in his strategic planning, the results that have been obtained through evaluation
- makes sure that apprenticeship training has a position within the organisation that makes possible the implementation of the strategies concerning them
- defines and describes the service chains (processes) of apprenticeship training and keeps the necessary instructions up-to-date
- makes good use of comparative data and the best possible practices in developing apprenticeship training.

## 3 THE PREREQUISITES OF QUALITY MANAGEMENT

The TQM of apprenticeship training assumes, that there are sufficient material and intellectual resources and sufficient commitment by the management, staff and cooperation partners to quality management. It further assumes, that customers are viewed as a resource. Quality management is best furthered by a systematic use of the available tools and methods.

### 3.1 Management

The management of apprenticeship training defines the direction of the development of training and prepares the ground for the attainment of the set goals. The task of management is further to transmit matters of importance to the personnel, the customers and the interest groups. It also has the obligation to create the necessary conditions for the development of the competence and well-being of the personnel and the birth of a work culture that will support lifelong learning.

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#### QUALITY CRITERIA

##### THE ORGANISER OF TRAINING

- clearly defines who is responsible for the management of apprenticeship training
- makes sure that there are necessary resources for attaining the goals that have been set
- transmits the values, goals, parameters and results that have been obtained to the personnel, the customers, and the interest groups
- promotes the continuous learning, dissemination of information to others, and well-being of the apprenticeship training personnel
- makes sure that the structure of the organisation supports the attainment of the goals that have been set for apprenticeship training.

## 3.2 Personnel

Key positions are held by a knowledgeable, well motivated personnel, capable of cooperating and aware of the importance of what they are doing, and capable of developing their own activity in conformity with the principles that have been agreed upon. Awareness of the goals, the key customers and of the services that have to be produced for them, along with a knowledge of the results that have been obtained, will favourably affect personnel commitment.

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### QUALITY CRITERIA

#### THE ORGANISER OF TRAINING

- prepares the personnel strategy in which the special characteristics of apprenticeship training have been taken into consideration
- annually prepares a personnel audit, containing specified information relating to the teaching personnel
- prepares a system of encouragement and reward to support the personnel in attaining the goals that have been set and in enhancing their trainer competence.

### 3.3 Material resources

The material resources of apprenticeship training are factors relating to economy and the working environment, like facilities, equipment, apparatuses, and materials. From the viewpoint of quality management it is essential that material resources are used and that purchases are made in a way that is economic and suited to their purpose. A pleasant and safe working environment is also part of the material resources.

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#### QUALITY CRITERIA

##### THE ORGANISER OF TRAINING

- prepares an investment strategy in which the special characteristics of apprenticeship training have been taken into account
- sees to it that the management of the economy of apprenticeship training conforms to the national goals and principles and to those set out in his own plan of action
- allocates sufficient economic means to ensure the continuous development of apprenticeship training
- uses nationally prepared material for the promotion of the uniformity and comparability of operations in marketing, managing and supervising apprenticeship training.

## 3.4 Information and data systems

From the viewpoint of apprenticeship training it is essential that it is steered and managed based on facts. This presupposes that the organisers of training, the management and personnel have fresh, up-to-date, and reliable information at their disposal about the core issues that will support management and the command of processes. Another prerequisite for the continuous development of activities is that comparative data (e.g. benchmarking) is available.

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### QUALITY CRITERIA

#### THE ORGANISER OF TRAINING

- develops and maintains a data system and methods that are necessary for his data strategy and that take into consideration the special characteristics of apprenticeship training
- defines the parameters that are necessary to monitoring and regularly evaluating the attainment of the goals that have been set to apprenticeship training
- adopts methods that make possible the retrieval and acquisition of comparative data
- makes sure that the information that is relayed to the authorities is up-to-date and correct.

## 3.5 Cooperation network

The quality of apprenticeship training is largely dependent on the degree of competence displayed by the parties that are responsible for the training, such as the employers and the organisers of training and skills test. Quality is further influenced by how committed these parties are to the jointly agreed goals and principles. The organisers of training are responsible for the upkeep of an operational network and for selecting the correct cooperation partners.

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### QUALITY CRITERIA

#### THE ORGANISER OF EDUCATION

- makes sure that the cooperation strategy prepared takes into account the special characteristics of apprenticeship training
- prepares the goals of the collaboration between the organiser of training and the participants in apprenticeship training as well as the goals of the continuous development of training
- makes sure that the participating parties commit themselves to the common purpose, goals, and principles
- makes sure that the participating parties commit themselves to preparing a plan for skills testing and to encouraging students to take skills test by examination module at the workplace
- creates a system that encourages the participants in apprenticeship training to improve the quality of teaching at the workplace and in theoretical instruction at school.

## THE SYSTEMS FOR QUALITY MANAGEMENT, TQM AND THE TECHNIQUES FOR MANAGING QUALITY

By quality management system is meant a system that has been created to support quality management and that is made up of the structure, processes, resources, responsibilities and requisite managerial documentation of the organization. The quality system assists the organiser of training in methodically steering, managing, and developing the quality of apprenticeship training.

The quality project for public services (1998) proposed that the Finnish Quality Prize criteria be used and that a vocabulary in conformity with ISO Standards be applied in managing and evaluating public services. Alongside them, European Quality Prize criteria (The EFQM Excellence Model) have been developed. From the viewpoint of developing activities, the quality prize models are very much alike, and they may be applied in the quality management of apprenticeship training in the same way as would various combined models and the ISO standards.

By quality management and control techniques are meant the tools that are used in quality management and by means of which it is possible to identify and describe targets that are in need of development. In addition, these tools can be used to ensure that the product, service, or activity fulfils the requirements that have been set.

Various graphs, matrices, and analyses are generally used as quality management and control techniques. Further various comparisons and quality audits made by an outside party are employed. The quality of services may also be controlled by commitments to study, personnel audits, and benchmarking. In the following the most commonly used quality management and control techniques will be discussed.

### **Balanced scorecard**

Balanced scorecard (BSC) is a method used in strategic management and evaluation. It examines the organisation from four different viewpoints: economy, customers, processes, and learning. The point of departure is that the vision and strategy of the organisation are transformed into factual goals and indicators.

### **Benchmarking**

Benchmarking (learning from the best practices) is based on the exchange of knowledge and experiences and on learning from others. Benchmarking is characterized by the target to be compared being selected in full or in part from some other operational field and by the comparison involving only a given part or process of the activity to be juxtaposed or contrasted. The aim of the method is to assist the participating organizations in defining, by means of the comparison, the correct level of performance, in getting information about good practices, and in finding new ideas to develop operations. The method is suited also to the comparison of the individual

units and activities within the organisation with one another. Benchmarking may be applied also to evaluation (comparative evaluation).

### **Personnel audits**

By personnel audits is meant an annual report where the personnel are examined in the light of envisaged trends in development. The personnel audits are made conjointly by the management and the personnel in consultation with health care and labour welfare experts. The personnel audit may be used as a tool when evaluating.

### **Quality audits**

By quality audits is meant a methodical and independent interpretation to elicit whether the operations of the organisation and the obtained results conform to the agreed arrangements, whether the organization operates effectively, and whether, in fact, it is well adapted to the purpose of attaining the set goals. By using quality audits made by an outside party, it is possible to support the systematic development of quality and to motivate the personnel to continuously strive to improve it.

### **Quality manual**

By quality manual is meant a document describing the whole of the organisation's operations. The planning and management of quality operations within the organization generally presuppose jointly agreed-upon principles and a documentation of work instructions that may be conveniently transmitted to the personnel in the form of a manual. The quality manual may also be used to present the activities and principles of the organization to an outside party, its customers or new employees.

### **Skills tests**

The skills tests denote situations that are arranged in cooperation with working life to determine the student's level of practical vocational competence in the central skills areas of the training in hand. Working life and education experts are in charge of assessing the tests, whose main purpose it is to ascertain the effects of the training and learning that have been imparted at the workplace and in school.

### **Study commitments**

In the study commitment may be put down the obligations of the student in attaining the educational aims of his training. Its first and foremost task is to support the student in coping with his studies to meet the set objectives. Commitments have, of late, been used quite successfully in vocational training. The personal study programme of the student may be regarded as a form of study commitment too.

### **Service commitments**

By service commitment is meant the quality assurance made by the provider of training to the customer, and on the basis of which the customer knows well in advance what manner of services he may expect from the provider. The quality strategy for public services recommends that service commitments are used in public administration. In the evaluation of the implementation of service commitments customer feedback has a key position. The service commitments may be included in the description of the service chains.

### **Seven planning and management tools**

The seven planning and management tools are troubleshooting models that are well adapted to use in team work. Resolving a problem starts with charting the causes and then proceeds to classify, compress and prioritize them. The tools used in this are grouping, effect diagram, tree diagram, prioritization matrix, matrix diagram, deduction diagram, and work progression diagram. Part of the models are logical, while others are creative. The tools can be used whenever the compass of the problem has not been identified or when numerical data is not available.

### **SWOT-four-field analysis (may involve as many as eight fields)**

SWOT is an abbreviation of the words *strength*, *weakness*, *opportunity*, and *threat*. SWOT is, first and foremost, an aid for strategic planning, where the source of the analysis may consist of, for example, the results obtained through questionnaires or self-evaluation. Through the analysis it is possible, among other things, to determine how to make use of the organisation's strengths to convert outside threats into advantages. By means of a SWOT analysis it is further possible to chart, in advance, the risks hailing from threats and functional weaknesses and to scout for means to avoid them before they occur.

The method of cause-and-effect analysis or fishbone analysis, as it is also termed, is well suited to resolving problems. According to this method, the problem is first defined and its causes grouped together (e.g. methods, materials, people, line of action, and equipment). Then the problems connected with the causes are analysed, terminating with all the factors contributing to the problem being mapped out.

When choosing the most suited system of quality management and of quality management and control techniques, a criterion is, how well adapted to use by the organization they are, how well they support the attainment of the organisation's goals, and how motivated the personnel are to participate in the work of managing quality. The most critical juncture in the quality management of apprenticeship training is probably the service chain, or, put differently, how flexibly the students in apprenticeship training are able to move along as customers, in the course of training, from one organiser to the next.

The systems for quality management and the quality management and control techniques most commonly used have been included in the recommendation document on quality management in vocational training.

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## **QUALITY CRITERIA**

### THE ORGANISER OF TRAINING

- makes sure that the quality systems and quality management methods used take into consideration the special characteristics of apprenticeship training
- makes use of different quality management and control techniques in developing operations.

By quality evaluation is meant an interpretative analysis of how well the products correspond to a set of predetermined goals. The target of evaluation may be the goals set for operations and services. In practice evaluation focuses on the customers, the personnel, the processes, the obtained results, and economy. The purpose of quality management based on results is further to set new goals to improve results and to make possible the factual improvement of them by developing processes. A condition for obtaining up-to-date evaluation data is that there is an operational and efficacious system for measuring and monitoring.

### **Self-evaluation of the organiser of training and external evaluation**

The Vocational Education Act obliges the organiser to evaluate the training provided by him and its effects and to take part in an external evaluation. In practice, this means that the organiser has to create his own system of evaluation. The norms do not specify what this system should look like; consequently, everyone is at liberty to choose and prepare it in accordance with his circumstances and the prevailing requirements. External auditing may be used to support self-evaluation.

The National Board of Education and the organisers of training, in conjunction, have prepared self-evaluation applications for the use of the organisers of apprenticeship training, based on the Finnish and the European Quality Prize criteria. Appendix 1 (Quality evaluation targets of apprenticeship training) lists the evaluation targets of the Finnish Quality Prize criteria-based self-evaluations applications.

### **Recognition**

Long-range development work and the preservation of the motivation of the personnel requires the recognition and unbiased evaluation by an outside party. For this purpose there are several quality awards that are either organisation-specific, national, or international. Certification based on ISO standards is also a general practice.

The organisers of vocational training have the possibility of applying for various quality awards like the Quality Prize for Vocational Training or the Quality Prize to Apprenticeship trainers of the Ministry of Education, the Provincial Governor's Quality Prize, and the Finnish Quality Prize. The granting of the Quality Prize for Vocational Training is based on specific evaluation criteria and an external evaluation. The competition for this prize is open also to those responsible for organizing apprenticeship training, and the Quality Prize for apprenticeship trainers (3 categories) to all employer organizations that take on apprenticeship trainees. The aim of the prizes is to encourage the organisers of vocational training and the apprenticeship

trainers to continually evaluate and develop their activities and to disseminate their best practices.

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## QUALITY CRITERIA

### THE ORGANISER OF TRAINING

- prepares an evaluation strategy or plan that takes into account the special characteristics of apprenticeship training
- using parameters, regularly evaluates the implementation of the strategies of apprenticeship training and the attainment of the set goals
- defines those targets of evaluation and parameters that are parallel in the different units and on the different levels of the organisation, apprenticeship training included, and develops indicators suited for evaluating the results
- makes use, when comparing results, of the statistics on apprenticeship training and of the follow-up data that has been obtained
- analyses the results of apprenticeship training in relation to the goals, pertinent comparative data and best practices
- performs an overall evaluation of the organisation and has an external audit made once every three years.

## **Appendix 1.**

### **Targets in evaluating the quality of apprenticeship training**

The targets of apprenticeship training presented below originate from the self-evaluation application evolved through the project for quality management of apprenticeship training and are ultimately based on the Finnish Quality Prize evaluation criteria.

#### **1 MANAGEMENT**

This evaluation area explores the manner in which managers promote and maintain the values of apprenticeship training, keep up a top level of performance, good customer and other interest group orientation, and a high level of self-steerability, innovation, and learning.

##### **1.1 Management practices**

The aim is that managers personally promote and maintain the values of apprenticeship training, define the direction of their organisation, and work to improve an already excellent level of performance and customer orientation, self-steerability, motivation, and learning. The directors themselves should be examples to their personnel and manage apprenticeship training in a way that is both economical and efficient to ensure its continuous improvement.

#### **2 STRATEGIC PLANNING**

This evaluation area examines the organisers' strategic planning skill and how strategic goals, action and staff-related plans are being developed in apprenticeship training. It also deals with how these plans are transmuted into practical activity and how the results are being measured.

##### **2.1 The process of strategic planning**

The aim is that the organisers of training, assisted by the personnel, draw up a strategy for apprenticeship training. The planning of the strategy is based on an annual evaluation of the functional environment.

##### **2.2 From strategy to real action**

The aim is that the focal strategies of apprenticeship training are transformed into practical activity by means of action and economy plans and plans for developing the personnel. The parameters of these plans are transposed to the different levels of apprenticeship training and the implementation of the plans is regularly monitored by means of the parameters.

#### **3 CUSTOMER- AND MARKET-ORIENTEDNESS**

This evaluation area monitors how the organisers of training define the needs, expectations and demands of their customers and the prevailing market. It also monitors how customer relations are being promoted and customer satisfaction is being appraised.

### **3.1 Customer and market familiarity**

The aim is that the organisers of training canvass the needs, expectations, and demands of their current and future customers, such as the students and the employers. Forecasts are made of the future development of the customers' needs. The forecasts lay the foundation for creating and steering new channels of activity.

### **3.2 Customer satisfaction and customer relations**

The aim is that cooperation with the different groups of customers is made to function in a reliable, customer-oriented and effective way. The organiser of training regularly checks up on customer satisfaction, making use of the acquired results in developing operations further.

## **4 DATA AND HOW IT IS BEING ANALYSED**

This evaluation area examines the choice, command and effective exploitation by the organiser of training of the data at his disposal. The data should support the build-up of the central processes and the preparation of the action plan and help analyse the performance of the organisation.

### **4.1 Measuring performance**

The aim is that the organiser of education singles out and assembles data that is suited to developing operations, preparing the action plan, and adapted to the needs of the users. The comparative data is used in planning successful operations.

### **4.2 Analysing performance**

The aim is that the organiser of training analyses his performance by means of the acquired data and that progress is evaluated in relation to the goals.

## **5 PERSONNEL**

This evaluation area looks into by what means it is possible to enhance the competence of the personnel and to make use of the available resources in concordance with the set goals. In addition, an estimate is made of how the organiser creates and maintains a high level of performance and a working environment and climate that promote his own participation and learning as well as that of the organisation as a whole.

### **5.1 Work methods for top performance**

The aim is that the work methods and tasks, and the procedure for rewarding and encouraging apprenticeship training support the attainment of a high level of personnel performance.

### **5.2 Enhancing staff competence**

The aim is that enhancing the competence of the personnel helps attain the goals set for apprenticeship training and to the growth of the knowledge, skill, and capabilities of the personnel.

### **5.3 Personnel welfare and satisfaction**

The aim is that apprenticeship training maintains a working environment and climate that promote the well-being, satisfaction, and motivation of the personnel.

## **6 PROCESS MANAGEMENT**

This evaluation area involves a study of the central postures of the organiser of training regarding his command of the processes, including his planning and organisation of customer-oriented apprenticeship training, the support processes, and the provider and cooperation processes involved.

### **6.1 Product and service processes**

The aim of the product and service processes is to produce customer and working life oriented services that make possible the attainment of the goals set for apprenticeship training.

### **6.2 Support processes**

The aim of the support processes is to back up the planning and organisation of apprenticeship training.

### **6.3 Provider and cooperation processes**

The aim of the provider and cooperation processes is to make possible the implementation of apprenticeship training in accordance with the set goals.

## **7 ACQUIRED RESULTS**

This evaluation area analyses the results obtained in the domains of customer satisfaction, economy, market position, personnel, cooperation partners, providers of apprenticeship training, and the training itself. Also looked into is how results have evolved in relation to the goals, earlier developments, and relevant comparative data.

### **7.1 Customer-related results**

Are customer-related results good, and have they evolved positively over the past years<sup>3</sup> in relation to the goals and other relevant comparative data.

### **7.2 Economy and market position related results**

Are the results describing the economy and market position of the organiser of training good and have they evolved over the past few years in a positive way relative to the goals and the competitors? Has the organiser of training established himself as an organiser of apprenticeship training and been able to conform to the societal changes that have taken place? Is the image of the organiser of education good?

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<sup>3</sup> Results are looked into every 3 to 5 years.

### **7.3 Personnel-related results**

Are the personnel-related results good, and have they evolved over the past few years in a positive manner relative to the goals and relevant comparative data?

### **7.4 Cooperation partner and provider-related results**

Are the results describing the central providers and cooperation partners good, and have they evolved over the past few years in a positive fashion in relation to the goals and relevant comparative data?

### **7.5 Results describing the effectiveness of operations**

Have the results describing the performance of the central processes of apprenticeship training and the implementation of strategies been good, and have they improved in a positive manner over the past few years in relation to the goals and relevant comparative data?

## **8 SOCIETAL EFFECTS**

### **8.1 Societal responsibility and command of the effects imposed by the environment**

The aim is that apprenticeship training makes possible the training, at the right time, of skilled manpower to meet the needs of working life and society. Apprenticeship training should further create the necessary conditions for the emergence of synergy and appropriate networks between working life and the organisers of theoretical education.

### **8.2 Societal and environmental results**

Are the results describing societal responsibility and the environmental effects good, and have they evolved, over the past few years, in a positive fashion relative to the goals and relevant comparative data?

## **Appendix 2.**

### **Vocabulary and quality concepts of apprenticeship training**

This appendix contains the concepts that are most commonly used in quality management with added viewpoints on the quality management of apprenticeship training. In listing the concepts, publication ISO9000:2000 of the Finnish Standards Association (SFS) and other literature on TQM has been exploited. Direct quotes from the ISO-vocabulary have been marked with an asterisk (\* sign).

#### **Accreditation**

Approval and accreditation of the target to be evaluated as serving a given purpose, provided that it meets certain preset criteria. In education accreditation may target the possibilities of the organiser to provide training or the competence of the teacher/trainer.

#### **Action plan**

A document enabling the transmutation of the strategy of the organisation into practical action.

#### **Apprenticeship contract**

A written temporary work contract between the student and the employer with an attached personal study programme.

#### **Apprenticeship training**

By apprenticeship training is meant studies organised in conjunction with the practical work tasks at the workplace and supplemented with theoretical studies.

#### **Basic education (grounding)**

Apprenticeship training leading up to a vocational qualification.

#### **Certification**

The procedure is associated with the ISO-standard system, where by monitoring practical activities it is ensured that procedures, conforming to the quality system, are being used and that the personnel are familiar with the system and acts in accordance with instructions. A certified classification agency issues the certificate, thereby obliging the organisation to maintain its quality system in accordance with standard.

#### **Core curricula of initial vocational training and national guidelines for skills tests**

Provisions issued by the National Board of Education (NBE) to be observed in all education and training leading up to a qualification.

#### **Core process**

A process aimed to serve the external customers of the organisation and whose purpose it is to help raise the customer's competence.

**Customer**

The user of the products or services of an organisation. The external customers using the services of apprenticeship training, such as students and employers, also participate in producing these services. In a broader sense, the sponsors of education are external customers as well. An internal customer is a person active within the organisation who makes use of the services of the organisation.

**Customer-orientedness**

A principle of the organisation, demanding, among other things, that the needs of the customers are continuously being forecast and that the products and services of the organisation are being continuously improved upon with regard to the needs and expectations of the customers and the feedback and proposals for development that they deliver.

**Degree-preparatory education**

The degree-preparatory training consists of theoretical education and learning through work in accordance with a personal study programme.

**Evaluation**

Interpretative analysis of target or activity under investigation.

**Evaluation of educational outcomes**

An interpretative analysis of how well the goals of training have been attained. Educational outcome is assessed by means of an evaluation of the effectiveness, efficiency, and economy of the training.

**Educational organisation**

A body responsible for the theoretical side of vocational training.

**Evaluation of educational prerequisites**

The evaluation by the organiser of apprenticeship training of how well the workplace meets the requirements of an appropriate implementation of the training.

**Educational process**

A whole made up of the phases of the practical implementation of training.

**External auditing**

The systematic and objective interpretative analysis by an outside party to ascertain, whether the activities of the organisation are effective, suited to their purpose and observe the set goals.

**External evaluation**

Interpretive analysis done by an external party of the situation and activities of the organisation. The evaluation may focus on only part or the whole of an activity.

**Functional environment**

The external factors of the organisation affecting operations and the analysis of which forms the basis of the further development of activities.

**Further training**

Apprenticeship training that may be either non-degree-oriented or prepare the student for a vocational or a specialist qualification.

**Improving quality**

An activity designed to improve the results of the organisation and the quality of the products that it produces.

**Job rotation**

Learning vocational skills through work in the various functional units of one's own or an outside employer.

**Learning environment**

Facility or situation, where knowledge and skills are produced, tested, applied, practiced, and learnt. The facility or situation may be a workplace, a class room, a data network, a hobby etc.

**Learning through work**

The attainment of practical vocational skills in accordance with a personal study programme.

**Mission**

Describes the basic task of the organisation, in other word, the purpose for which it exists.

**Organiser of apprenticeship training**

A unit, subordinated to the organiser of training, that steers, organises, implement and supervises apprenticeship training.

**Organiser of training**

A municipality, federation of municipalities, registered association, foundation, or other body granted permission by the Ministry of Education to organise vocational education and training, including apprenticeship training.

**Performance**

The ability to bring about desired results. It may be associated with the customers, the processes, the products and services, the economy and market position, the personnel, the existing provider or cooperation relations, society and the environment.

**Personal study programme**

By a personal study programme is meant a plan prepared conjointly by the student, the employer, and the organiser of training, fitting earlier work experience and training into the apprenticeship training at the workplace and accredited towards a qualification. A plan for implementing the personal study programme is prepared, containing the factual steps and particulars of the training at the workplace and the theoretical education at school.

**Preparatory theoretical teaching**

The knowledge content of a vocational qualification or part thereof imparted by the provider of theoretical education in accordance with a student-specific (personal) study programme.

**Procedure**

A jointly agreed-upon method of action. The procedure is often described as a process, a principle, a work method, or work instructions. From the viewpoint of quality management it is essential that the procedure is documented, that it is known by everyone concerned, and that it is observed and adhered to in practice.

**Process**

A number of interrelated functions or tasks, designed to enhance the customer's competence.

**Process description**

A graphic or verbal description, where the work phases of the process are presented in their order of appearance. The description also lists the responsibilities in connection with the different work phases and the results that emerge.

**Process-orientation**

A procedure where services are produced and quality developed on the basis of processes.

**Product**

The result of an activity or a process.

**Provider and cooperation process**

Chain of functions, through which parties outside the organisation provide the organisation with products and services.

**Quality**

The ability of the organisation to meet the needs and expectations of the customer. By educational quality is meant the ability to fulfill the goals of education and the requirements of the customer.

**Quality evaluation**

An interpretative analysis of how well the target to be evaluated meets quality requirements. The evaluation of the quality of apprenticeship training may involve the quality and the compatibility of the training provided at the workplace and the training imparted at school.

**Quality assurance**

A group of planned and systematic activities of the quality system, by means of which it is possible to reach a sufficient level of assurance that the service or product produced meets quality requirements and that, if needed, can also be demonstrated.\* The skills tests are the key means of quality assurance in apprenticeship training.

**Quality criterion**

A principle by means of which the assessment of the target to be evaluated is made.

**Quality determination tools**

Aids or techniques adopted to promote quality development.

**Quality leadership**

A form of leadership that focuses on quality and is based on the participation of all members of the organisation and whose long-range goals constitute the success brought by customer satisfaction and the benefit of all members of the organisation and society.\*

**Quality management**

An area of management that defines quality policy and quality aims and responsibilities (and that is implemented by means of planning, managing, steering, assuring, guiding, and developing quality).\*

**Quality management methods and techniques**

A means used as a tool in quality management and in developing quality. Examples of this are benchmarking, service commitments, personnel audits, balanced scorecards, and SWOT-analyses.

**Quality manual**

A document, stating the quality policy of the organisation and describing its quality system.\* The quality manual normally contains a brief presentation of the organization, its key values and its strategies for quality.

**Quality policy**

The goals and action policy defined by chief management.

**Quality prize**

A recognition by external evaluator to the effect that the operations and services of the organisation are exemplary with regard to the preset quality requirements.

**Quality requirements**

Required properties of a product or service set in advance.

**Quality strategy**

Means by which the mission, vision, values, and goals of the organisation are transformed into practical action and through which the goals set for quality development are reached.

**Quality system**

A structure by means of which the quality policy and goals of the management are systematically disseminated to the various levels of the organisation. The system is organisation-specific and it is made up of the rules governing practical work, the observance of which is instrumental in attaining the goals.

**Quality work**

Steps and measures by which the quality of operations are continuously improved or the predefined quality level is assured.

**Quota**

Maximum number by region of apprenticeship training places in vocational further education determined annually by the Ministry of Education.

**Self-evaluation**

The phase of continuously improving the operations of the organisation and involving interpretive analyses of the activities and obtained results of the organisation.

**Service**

A function or chain of functions based on the needs and expectations of the customer, designed to enhance his competence. The clients may be external or internal customers.

**Skills test**

A qualification-oriented test (vocational, further, or specialist qualification), independent of the manner in which the examinee's skills have been acquired, where the participant has to demonstrate, in practice, his skill in and knowledge of the target trade or profession.

**Standard**

A normative document for repeated use approved by a recognized body, listing generally approved rules, instructions or characteristics concerning a function or the results that it produces. In apprenticeship training, the national core curricula or the guidelines governing skills tests may be regarded as a kind of standard.

**Strategy**

The strategy defines the long-range purpose and goals of the organisation and the steps, measures and resources needed to attain them. It is a means of realising the vision of the organisation.

**Support process**

An organisation-internal process supporting the core processes and creating the conditions for their success. The support processes, very often, are managerial.

**System of ISO 9000 standards**

The whole of the standards on quality management, published by the International Organisation for Standardization, ISO, that the organisation may adapt for use in building its own quality system to meet the needs of its customers.

**Values**

Values indicate what is considered to be important in the work of the organisation.

**Vision**

The idea of what activities should be like in the future.

**Workplace trainer**

The person responsible for the student's vocational training at the workplace.

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