

Management of Effective Vocational Education and Training

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Introduction

Vocational education and training (VET) plays a significant role to economic competitiveness and well being of people in every country. The successes of the VET were informed in the country reports. There were differences in the VET contexts from country to country and from place to place. The use of information technology and communication makes a difference in the VET context of each country. However, the major challenge for the VET is to meet the changing skills needed for individuals and the world of work in accordance with the principle of lifelong learning. Every country is facing these challenges. The effective VET management is underlined for this matter in order to cope with the changes. That is, is "effective VET management" comprised of a set of recommendations that can be transported from country to country, from place to place, and from context to context? It seems that this is a crucial question to answer when the effective VET management needed in times of such rapidly changing the VET contexts. Hopefully, this paper will provide the recommendations to fulfill one of the objectives of this training course, to use the VET as a mechanism to improve economics and well being of people in the participants' respective countries, and answer to the above question. This paper comprised of three main topics, philosophy and ideology of effective VET, model of quality management in the VET, and recommendations for management of effective VET.

Philosophy and Ideology of Effective VET

If educational processes are viewed in broad, then vocational studies are so old, since they are vital to survival and reproduction. It may older than any other form of education. This idea of the VET must date back to the very earliest times when humans first organized themselves into distinct communities. Both tacit and explicit knowledge were managed to educate people from one generation to the next with a specifically vocational function of inculcating knowledge, skills, and attitudes required for survival and reproduction. The use of knowledge management must be included in the process of passing on the key elements of hunting, fishing, making food and clothing, and caring for the youngsters to the next generation. Later, the key elements became the disciplines of vocational education.

Vocational education and training, including technical education and other disciplines, have been studied in many universities around the world. The ideology of Charles A. Prosser, Deputy Commissioner for Vocational Education of the USA., which later became the theorems and philosophy of vocational education, was written date back in the 1910s. There were 16 theorems used as guideline for effective VET management. Elaboration is needed in which they were written in old American English as follows.

1. Vocational education will be efficient in proportion as the environment in which the learner is trained is a replica of the environment in which he must subsequently work.

This theorem dictates that the type, kinds, amount, use and arrangement of space, materials, equipment and supplies for a preparatory program should be a replica of those in employment. It has a bearing upon the length of time devoted to skill development necessary to approach industrial practice. It has implications for quality and quantity production

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expected. It has direct implications for teacher-learner ratios. It relates directly to the efficiency with which a student transfers from school to employment.

2. Effective vocational training can only be given where the training jobs are carried on in the same way with the same operations, the same tools and the same machines as in the occupation itself.

The implications of this statement are that instructors must have recent employment experience in order to be skillful in the use of tools and equipment as would be currently found in employment; and, use live work or work identical to that provided in employment for instructional experience rather than pseudo or so-called project work. Emphasized here is that the skills taught should follow the same basic practices as industrial employers would expect, and learners should be able to move from the training situation to employment situation with little need for adjustment.

3. Vocational education will be effective in proportion as it trains the individual directly and specifically in the thinking habits and the manipulative habits required in the occupation itself.

Two important education factors are implied in this statement. First-thinking habits which implies that the scientific or problem solving approach is being developed in students; and second-that manipulative skills be performed with sufficient repetition that habit formation takes place. This, in turn, has implication for the length of class periods and for the total length of courses. There is also an implication here for a major aspect of the occupation, namely the technical related content where knowledge and facts are as essential for thinking, as tools are for productive work.

4. Vocational education will be effective in proportion as it enables each individual to capitalize his interest, aptitudes and intrinsic intelligence to the highest possible degree.

This theorem has direct implication to class size, to individualized instruction, to instructional methods, to effective guidance and selection of learners, and to the promotional plans for the program. Here also, is that each specific vocation may well have its own unique requirements for admittance. For example, the depth and ability in mathematics could vary considerably between various occupations as would the physical and other characteristics of individuals.

5. Effective vocational education for any profession, calling, trade, occupation or job can only be given to the selected group of individuals who need it, want it and are able to profit by it.

Vocational education is not for everyone and this statement implies that those admitted should be carefully selected potentially successful as future productive workers. Persons should be selected on the basis of their own interests and aptitudes, and on the basis of their being potentially a successful employee filling preparation.

6. Vocational training will be effective in proportion as the specific training experiences for forming right habits of doing and thinking are repeated to the point that the habits developed are those of the finished skills necessary for gainful employment.

This statement effects one of the most crucial requirements for successful vocational preparation. Few people could be prepared to perform skill fully some work without having spent sufficient time in performing the variety of skills required so that habit formation may take place to the end that they can practice these skills at a future date. The direct implication here is for adequate lengths of time during the day, and for an adequate period of

time in months to cover the skill and technical development essential for effective employment as a productive worker.

7. Vocational education will be effective in proportion as the instructor has had successful experience in the application of skills and knowledge to the operations and processes he undertakes to teach.

The implication in this case is that a teacher cannot teach that which they do not know; and, since the subject matter for a vocational teacher is composed of the skills and knowledge of the occupation, it would follow that teachers who are recognized as highly competent workers themselves through actual successful employment experience would be most desirable for a vocational program. The decency of any such experience is also of at most importance if learners are to be prepared for current expectations of employers; and thus, the decency of work experience of the potential vocational teacher is implied in this theorem.

8. For every occupation there is a minimum of productive ability which an individual must possess in order to secure or retain employment in that occupation. If vocational education is not carried to that point with that individual, it is neither personally nor socially effective.

We see in the above statement a direct bearing upon the proficiency expected of learners who wish to find their place in the world of work. Vocational education must prepare the individual to meet the employment requirements of employers. Again, to meet these employment requirements, requires considerable preparation which relates to the length of the period, day or year required for the particular offering.

9. Vocational education must recognize conditions as they are and must train individuals to meet the demands of the 'market' even though it may be true more efficient ways of conducting the occupation may be known and that better working conditions are highly desirable.

Vocational education programs can never exist as merely courses in a school system, but must be considered a community-wide project. Therefore, this statement implies the dire need for the use of craft committees; for instructors with recent employment experience; and for a program that is geared to existing opportunities in the community, the area or the state. Instruction beyond immediate needs is encouraged, but not at the cost of basic current needs of employers.

10. The effective establishment of process habits in any learner will be secured in proportion as the training is given on actual jobs and not on exercises or pseudo jobs.

This theorem emphasizes again the need for practical, live work on which learners may practice developing the skills essential to an occupation. Learners cannot obtain the feel for the kind of work that will be done in employment when working on projects. The work performed must be as identical and as up to date as possible with current practice in employment situations.

11. The only reliable source of specific training in an occupation is in the experiences of masters of that occupation.

This statement reaffirms the need for occupational analysis as the basic method for curriculum development. It also emphasizes the importance of effective involvement of representative occupational advisory committees in assisting in curriculum planning. The occupationally competent instructor must utilize both these resources in the construction of this detailed course content.

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12. For every occupation there is a body of content which is peculiar to that occupation and which practically has no functioning value in any other occupation.

This statement has direct implication to the close coordinated instructional program between the related technical construction and the skill development phase of the program. The application of mathematics and scientific principles to problems of the vocation should be the emphasis rather than teaching segregated subject matter courses which may or may not have direct relationship to the needs of the student. So-called broad or general areas of instruction in the subject matter unrelated to the problems at hand will have little benefit to the development of a competent worker.

13. Vocational education will render efficient social service in proportion as it meets the specific training needs of any group at the time that they need it and in such a way that they can most effectively profit by the instruction.

This statement emphasizes the desire on the part of an individual to learn, in that vocational education should provide what the learner wants at the time he wants it, and in relation to his own recognized needs. This theorem has particular emphasis to the extension programs for employed workers since they will not use their own time to attend courses unless they are reaping direct benefits of immediate use from such attendance.

14. Vocational education will be socially efficient in proportion as in the methods of instruction and these personal relations with learners it takes into consideration the particular characteristics of any particular group which it serves.

This theorem implies that there is on single set of general characteristics such as school grades, IQs or other such characteristics that should be used as a basis for projecting vocational success; but, rather by knowing the individual student's interests, aptitudes and abilities, he can usually be guided into successful vocational experiences of guided away from enrolling in occupations for which they are unsuited.

15. The administration of vocational education will be efficient in proportion as it is elastic and fluid rather rigid and standardized.

Here the implication is for flexibility within the frame-work of sound standards which support good vocational education rather than maintaining a rigid and inflexible plan. Vocational educators should be always alert to possible improvement and be willing to work toward continually adjusting the programs in light of changing employment requirements.

16. While every reasonable effort should be made to reduce per capita cost, there is a minimum below which effective vocational education cannot be given, and if the course does not permit of this minimum of per capita cost, vocational education should not be attempted.

Preparation for employment is generally more costly than general education, whether it be at the skilled, technical, or technological level. This additional cost is usually dependent upon the space, equipment, materials, and the necessity for smaller class size than would be true of normal academic programs of instruction. However, this statement directly implies that it is better not to attempt a vocational program than to operate it below the economic level that would lead to success. **Vocational education is not cheap education**, but it is economically sound to provide it. If every vocational provider responsible for program of instruction would only maintain this list of sixteen theorems in front of them and make a serious effort to meet these goals, the result would, in almost every instance, be sound, quality vocational education. The more nearly a vocational program can approach the full realization of these theorems in its operation, the higher the quality program will be. Any

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attempt to disregard any one of these basic and fundamental concepts, can only result in undermining and destroying the program of vocational education for the citizens of the community.

However, the contexts of the VET are also changed from time to time. Now, it is in the 21st century, in the age of information technology. The contexts are changed when the time goes by. The theorems of Prosser may not fit to every country at this time. The VET providers are required to keep up with the changed contexts in which they comprise of systems, structures, practices, processes, and institutions. The examples of contexts changed are as follows.

Systems e.g. economic system, production system, polity, social relations, sociocultural relationships and kinships, community, values, beliefs, social principles, management, systems of control; social rights and entitlements

Structures e.g. social policy including development policy, language policy, social, political, economic, cultural and communications infrastructure, resources, trade unions, discourse, power interests, self-identity, stocks of knowledge, technologies, trade agreements, race, gender, class subjectivities, collective, institutional and individual strategies, communities

Practices e.g. media, education, religion, culture; social group, race and gender relations, language and communication, forms of control including censorship, discourse

Processes e.g. legal, economic, political, technological, social networks, power networks, social relationships, communication within and between individuals/groups, interaction between individuals/groups and social practices, production and consumption of goods and services, individual/community/interest group action, distribution of resources, strategic actions

Institutions e.g. cultural, juridical, religious, industrial, political, economic, work organizations; financial; health and social welfare; military, telecommunications, mass communications industry – and the frameworks of power in which they are grounded.

Quality Management in the VET

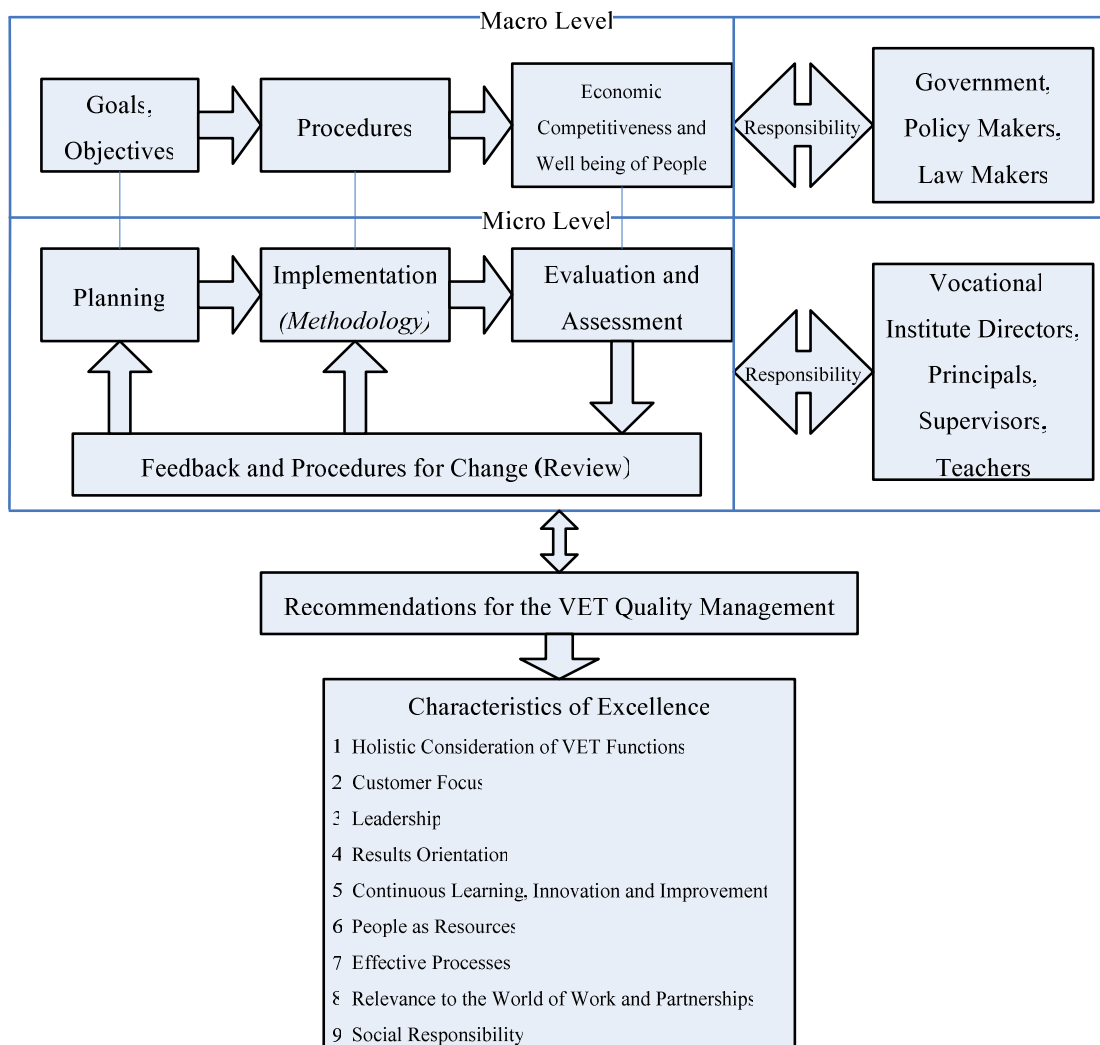
Perspectives on quality in vocational education and training are different from country to country, from place to place. Quality can be defined in different ways based on different contexts. Someone may point out the quality as “it fits to the needs” whereas the others may aim at “the excellence,” zero defects, uniform quality, satisfying customer needs or operational improvement. Instead of creating a pervasive and unequivocal definition of VET quality, it is more relevant to examine it as a relative and contextual concept. Quality is always bound to satisfying customer needs. Defining quality is ultimately a common task for VET providers and their key customer and stakeholder groups. In this paper, quality management means those procedures, processes or systems used to guarantee and improve the quality of a VET provider’s operations. The definition covers quality assurance and quality improvement. Quality management aims to facilitate continuous improvement and development of operations and results. Quality management is an integral part of a VET provider’s operational system and is thus linked to all functions and levels within the organization. In this paper, an operational system means the whole made up of various means and methods of quality management that is used to implement the quality policy specified by the VET provider within the organization. The system is provider-specific and consists of the policies and procedures to be observed within the organization. It may be

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documented in a quality manual, but more important than the form is that the system works in practical terms and encourages systematic action and development. The VET quality management framework (QMF) could be categorized into two levels, macro and micro levels. The macro level is at the national level involved with national policy and steering of the VET aims to set objectives of the VET provision and its quality, and to ensure achievement of these objectives. Government, policy makers, and law makers are responsible for this level. The micro level is at the VET providers or organization level involved with the procedures, strategies, requirements for teaching staff, internal and external evaluation along with the use of innovation and technology for the VET. Vocational institute directors or principals, supervisors, and teachers are responsible for this level.

The VETQMF model can be applied as a quality management framework for the national VET system and individual VET providers. Involvement of stakeholders is of the utmost importance when aiming to improve the quality of systems and operations. The components of quality management used in the model are shown as follows.



The Vocational Education and Training Quality Management Framework (VETQMF)

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The quality elements in the model are planning, implementation, evaluation and assessment, and feedback and procedures for change, each of which is assigned a set of quality criteria. The approach behind the model is the principle of Quality Control Cycle (QCC) or known as the Deming Quality Cycle (Plan, Do, Check, and Act). Different country can make different choices for dealing with quality management and improvement in vocational education and training. This is why the model presents the core quality criteria such that they can be applied to different operating environments, from country to country, from place to place in different contexts. The model uses the prior questions to draw attention to quality factors.

Planning refers to setting up clear, appropriate and measurable goals and objectives in terms of policies, procedures, tasks and human resources. In addition, the phase involves defining indicators to facilitate monitoring achievement of these goals and objectives.

The essential aspect of **implementation** is to establish procedures to ensure achievement of goals and objectives. Procedures may vary considerably at a provider level, such as in terms of development of the operational system and the organizational structure, resource allocation, involvement of stakeholders, or development of partnerships.

Evaluation and assessment cover evaluation of VET provision and assessment of the achievement of outcomes at system and individual levels. In general, the evaluation and assessment phase consists of two parts, i.e. collection and processing of data and discussions, evaluation and assessment based on this data. Evaluation requires designing the evaluation mechanism and defining its scope as well as providing information on the results of evaluation.

Feedback and procedure for change form part of a systematic and goal-oriented process used to change plans and develop operations in order to achieve the targeted outcomes and for setting new objectives. The aim is to learn from information acquired in different ways, such as results, by discussing and analyzing these together with key stakeholders. It is also possible to learn from good practices by benchmarking the user's own operations with these.

Methodologies may differ. The key is for VET providers to decide what type of methodology will best serve their needs. Quality management emphasizes self-evaluation combined with external evaluation. Other key aspects include how and in what roles customers and stakeholders (such as enterprises, workplaces, students, other authorities) participate in evaluation and how they are being motivated to take responsibility for evaluation. It is also important to determine the methods used to collect and analyze data and draw conclusions.

Recommendations for Management of Effective VET

The recommendations below are divided into sections on the basis of the characteristics of an excellent organization. Within each section, in turn, the recommendations are grouped in accordance with the different phases of the VETQMF model. Each section presents recommendations relating to different phases of the model: planning, implementation, evaluation and assessment, as well as feedback and procedures for change. The recommendations have been prepared such that they can be applied within different types of VET provider organizations in different country.

1. Holistic Consideration of VET functions

The operational system helps VET providers to consider, develop and steer their operations as a whole towards their own objectives. It allows providers to ensure that agreed goals and objectives are converted into practice in all areas (such as customers, finances, people, processes) and at all levels (such as operational units, VET fields, forms and services) of the organization and that their achievement is assessed and improved systematically. The operational system is characterized by the fact that it changes and develops as a result of changes occurring within the operating environment. The system itself is also a target of continuous evaluation and improvement. Evaluation forms an important part of a VET provider's operational system. Statutes (should) require VET providers to evaluate their provision and its effectiveness. (In some countries do not have the laws or regulations to require the VET providers to evaluate their operations.)

In addition, providers must participate in external evaluation of their operations. Each provider decides on the objectives, principles and implementation, such as procedures and schedules, of its own evaluations. Providers are also free to decide on how to utilize the results of self-evaluation in other evaluations and, correspondingly, on how to use the results of other evaluations in support of self-evaluation. Providers also determine how they will follow the results of evaluations of other organizations and make use of these when developing their own operations.

Planning:

Each VET provider has a documented operational system that is used to plan and steer operations as a whole and to communicate to customers, staff and key stakeholders information about the values, goals and objectives guiding operations. The operational system also covers descriptions of processes and the organizational structures and approaches that support their development.

- plan and steer different VET functions and forms and operations of their units as a whole, such that these support achievement of common goals;
- ensure that quality management forms part of their strategic planning and everyday activities;
- include a program for sustainable development as part of their operational system, in order to steer achievement of objectives and measures relating to environmental issues, social responsibility and health and safety at work and the well-being of staff and students;
- plan and steer operations by means of operational chains, i.e. processes, determined on the basis of their basic mission;
- document key procedures, processes and guidelines in an electronic system, maintenance of which has been ensured;
- inform key stakeholders within their operating area of their operational system and key policies and procedures in the system.

VET providers have determined and outlined a system and plan to evaluate operations and assess results, covering all key strategic objectives, policies and guidelines concerning evaluation and assessment as well as schedules and responsibilities involved.

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- create consistent principles for evaluation of their operations and different units;
- ensure that they have collected and documented information for various needs relating to operational evaluation (such as national evaluations, follow-up reviews, research, and skill demonstrations);
- have determined how to analyze, combine and make use of evaluation data acquired from different sources.

Implementation:

VET providers function in line with objectives specified within the framework of their operational system and improve their operations continuously from their own points of departure.

- implement their policies and strategy by means of key processes;
- steer their operations and their operational units according to consistent policies;
- develop their education and training provision, forms of operation and organizational structures such that these form a whole strong enough to meet the skills needs of different sectors of the world of work;
- communicate to their staff that quality management is part of the job of everyone working within the education and training organization;
- make sure that the principle of sustainable development is taken into account in all operations.

VET providers make diverse use of various evaluation methods and data in order to develop their operations.

- collect and analyze evaluation results and other feedback information;
- make use of results obtained in other evaluations, such as the results of national evaluations;
- have an external evaluation of their operations carried out at least once every three years;
- develop their operations by means of internal audits;
- co-operate with other education and training providers by carrying out benchmarking and peer reviews, for example.

Evaluation and assessment; feedback and procedures for change:

VET providers monitor and evaluate the effectiveness of their operational system regularly and make changes as required.

- regularly evaluate the effectiveness of their evaluation system and develop evaluation in line with the national evaluation strategy;
- decide on development actions on the basis of the analysis of evaluation results and prepare the necessary action plans, determining schedules and responsibilities for actions;
- co-operate with other education and training providers in order to develop their evaluation system.
- monitor that documents guiding their operations are kept up-to-date and review these as required.

2. Customer Focus

Customer focus and relevance to the world of work are visible throughout VET providers' operations. This requires identification of different customer groups and their current and future needs. Customers are the ultimate judges of the quality of education and training and other services. Customers may be a VET provider's external customers (such as students, enterprises and other workplaces, funding bodies and society) or internal customers. The latter refer to customers of the organization's internal processes, such as staff. By way of example, the student affairs office provides services for teaching staff. Excellent VET providers create partnerships and network relationships and co-operate in order to cater for their different customer groups in the best possible way. Customer focus calls for among other things monitoring and anticipation of satisfaction and dissatisfaction of different customer groups and development of operations based on results achieved. It is also important for providers to respond to and learn from negative customer feedback.

Planning:

VET providers identify key customers and their current and future needs and expectations. VET providers take customer needs and expectations into account when planning and developing services and products for different customer groups.

- identify external and internal customers, prioritize different customer groups and take each group's needs and expectations into account when planning education, training and other services in co-operation with key VET stakeholders (such as the world of work);
- identify the needs of prospective and potential students and co-operate with key stakeholders (such as comprehensive schools, general upper secondary schools and liberal adult education institutions as well as the labor administration);
- make systematic use of forecast data and anticipate the needs of the world of work together with key stakeholders, planning education, training and development services responsive to the world of work on the basis of anticipation;
- set clear and measurable objectives for each customer group in line with the chosen strategy and plan individual educational solutions for different students (such as special needs students, unemployed job-seekers, top professionals) based on their needs;
- involve different customer groups in development of education, training and other services.

Implementation:

VET providers take the needs and expectations of different customer groups into account as a whole when implementing education, training and development services.

- take the needs of different customer groups (such as young people, adults, apprentices, immigrants, special needs students, unemployed job-seekers, workplaces) into account when making decisions concerning teaching arrangements, learning environments and financial and human resources;
- create procedures that allow provision of education, training and development services on the basis of individual needs (such as recognition of prior learning and competence and systematic implementation of individualization on all programs);
- develop procedures that enable enterprises and other workplaces, students and other stakeholders to play an active role in operations and development of them;
- develop procedures to attend to students' well-being, thus strengthening a sense of community;

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- promote expression of students' views by creating opportunities for students to participate in planning and implementation of education and training and supporting their co-operation (such as student association activities);
- ensure that all staff members are aware of their own function in provision of education and training services and that they improve the quality of services in co-operation with other people working within the education and training organization.

Evaluation and assessment; feedback and procedures for change:

VET providers acquire performance data concerning different customers in a diverse manner, making use of it when developing services and operations.

- regularly monitor achievement of objectives concerning different customer groups using selected indicators;
- regularly collect feedback on different customer groups' perceptions (such as satisfaction among students and the world of work), making use of feedback collected for developing education, training and other services and operations;
- monitor and anticipate short- and long-term changes in demand for labor, employment rates among qualification-holders, demand for and supply of education and training, making use of this information in provision of education and training services;
- monitor the attractiveness of vocational education and training in their area and play an active role in improving it.

3. Leadership

Leadership plays a key role in provision of high-quality VET services and continuous improvement of operations. Systematic development of a VET provider's operations requires management to define a clear direction for the organization and create conditions for functioning in line with its vision. Management regularly exploits factual information collected on the operating environment and any changes to it in support of decision-making. Setting relevant objectives requires active co-operation with the world of business and work, other education and training providers, as well as other parties and stakeholders involved in vocational education and training. In addition, it also calls for benchmarking data.

Planning:

VET providers monitor and anticipate changes occurring in both internal and external operating environments on a continuous basis, making use of this information for operational planning.

- are familiar with key regional and national objectives concerning vocational education and training;
- anticipate changes occurring in the world of business and work, demographic trends and society and carry out anticipation work in co-operation with other education and training providers and institutions operating in the area, business and other working life organizations, as well as other stakeholders;
- systematically collect information on their own operations and make use of the field's research information in their operations;

- follow how changes to statutes, instructions and recommendations governing the operations of VET providers and the world of work in fields relevant to their provision change and influence their own operations.

VET providers define their mission, vision and the values and policies guiding their operations together with staff.

- develop sufficiently consistent quality management policies for their functions, different operational units and different VET forms;
- ensure that their organization focuses on operations in line with their basic mission;
- ensure that the annual operational plan is based on the mission, vision, values and strategic objectives;
- allocate material and human resources in keeping with objectives, operational changes and development priorities.

Implementation:

VET providers plan, steer and develop operations on the basis of information obtained through analysis of the operating environment.

- make use of information obtained through analysis of the operating environment when drawing up their strategy and annual operational and financial plan;
- set annual provider- and unit-level objectives based on their mission, vision, values and strategic objectives.

VET providers ensure achievement of specified goals and objectives through leadership and create conditions for continuous improvement of operations.

- ensure that leadership is supported by an up-to-date operational system;
- ensure that operational and unit-level management complies with jointly agreed policies;
- develop an organizational structure that supports achievement of objectives;
- ensure that leadership responsibilities have been defined clearly in terms of pedagogical leadership, for example;
- communicate values, specified objectives and results achieved to staff, customers and partners;
- support and encourage staff in achievement of objectives and personal development.

VET providers, their operational units and staff, function in line with the mission, vision, values and policies and commit to continuous improvement of them.

- communicate the values, vision and policies to staff effectively and sufficiently;
- ensure that people in leadership positions contribute through their own actions to a working environment and atmosphere that support achievement of objectives;
- ensure that different units, VET forms and functions (such as quality management) comply with jointly agreed policies;
- take the principles of sustainable development into account in all operations.

Evaluation and assessment; feedback and procedures for change:

Assessment of leadership, vision, values and achievement of strategic objectives is part of systematic self-evaluation. VET providers also acquire other feedback information in support of development.

- actively monitor performance and effectiveness by means such as national indicators for performance-based funding, using information obtained to revise performance targets and to develop operations;
- systematically monitor and assess implementation of quality management policies.

4. Results Orientation

Successful and effective education and training requires clear and realistic goals. VET providers define the results that they want to achieve and they set objectives for their operations. When setting objectives, VET providers take into account aspects such as national VET objectives, the requirements of the local operating environment (including enterprises, other workplaces and students) and the needs of other stakeholders. Based on these needs, providers then select appropriate procedures. The purpose of evaluation is to show the extent to which objectives set for operations have been achieved and the progress made towards them. Evaluation supports VET providers' continuous improvement and results-oriented performance. Through evaluation, providers obtain information about major strengths and development needs. VET providers monitor, assess and analyze results achieved systematically through means such as various surveys, quantitative indicators and self-evaluation. Providers and their units receive significant information on their success from customers and stakeholders. It is also important to take into account the opportunities for customers and stakeholders to provide continuous feedback on operations and results. Another key aspect is use of immediate feedback. VET providers also make use of benchmarking data obtained from other organizations. Providers ensure that performance data is comprehensive and that they receive appropriate information on achievement of strategic objectives. Providers use performance data when developing operations and setting new performance targets.

Planning:

VET providers set challenging, tangible and achievable objectives for their operations on the basis of customer needs and expectations. Results orientation requires balanced consideration of the needs of all key customers and other stakeholders.

- take national objectives for and European development trends in vocational education and training into account when defining objectives;
- take the needs of enterprises and other workplaces, different students, partners and other key stakeholders into account when defining objectives;
- take the principles of sustainable development into account when defining objectives;
- set both quantitative and qualitative objectives for the whole organization and its units on the basis of their strategy and possible sub-strategies.

Implementation:

VET providers work towards specified objectives at all levels of the organization and in all functions and units.

- ensure that the objectives and operations of units and forms of operation create an integrated whole that supports achievement of strategic objectives;
- ensure that staff are familiar with specified objectives and work in line with them;

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- support and encourage staff in achievement of specified objectives;
- ensure that students and participants in competence tests achieve the vocational competence specified in the occupational profiles and obtain capabilities for occupational development in keeping with the principle of lifelong learning;
- make sure that curricula are kept up-to-date, that agreements to organize competence tests are valid and that education and training is carried out to a high quality standard;
- take action to promote achievement of the objective of providing education and/or training for entire age groups, completion of qualifications, development of vocational skills among gainfully employed people, students' employment and transition to further studies, prevention of social exclusion and reduction in drop-out rates;
- take action to promote socially, ecologically, economically and culturally sustainable development;
- play an active role in developing their operating area and the local world of work.

VET providers prepare an information management strategy stemming from their own needs and the needs of their units.

- ensure that their own organization and units have information at their disposal about operations and performance that makes it possible to monitor achievement of strategic objectives;
- take the needs of national information systems, such as performance-based funding and electronic application systems, as well as their own needs into account when developing information systems;
- ensure that electronic information systems are up-to-date and that staff have sufficient skills to use them;
- ensure that information submitted to the authorities and other parties is accurate and up-to-date.

Evaluation and assessment; feedback and procedures for change:

VET providers monitor and assess achievement of objectives in a systematic and goal-oriented manner at all levels of the education and training organization and in its different functions.

- collect performance data facilitating steering and development of operations in a diverse and goal-oriented manner;
- monitor performance through a set of indicators that covers key areas of operations and that provides information on achievement of and trends in objectives;
- ensure that the indicators selected are aligned at different levels of operations and in different units;
- analyze results and compare these with objectives specified in their strategy and curricula, relevant reference data and best practices, for example;
- also make use of data obtained about other organizations' operations in analyzing results and evaluating their operations.

VET providers monitor and evaluate the effectiveness of education, training and learning processes on a regular basis.

- make use of information obtained from vocational skills demonstrations and competence tests, information produced by national evaluations as well as other reference data about learning outcomes in their operations and operational development;

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- monitor indicators describing VET performance, such as performance-based funding indicators;
- systematically collect feedback from enterprises and other workplaces, students and other customers and partners;
- make sure that staff and students participate in planning and implementation of evaluation and ensure that they are familiar with key evaluation methods and understand the significance of evaluation activities.

VET providers assess and improve their information management systems regularly in order to acquire up-to-date and relevant performance data.

- regularly monitor guidelines issued by authorities responsible for collection of information and make sure that their information systems produce reliable information as required for official information collection procedures.

VET providers develop their operations on the basis of performance data acquired from different sources.

- revise previously specified objectives and set new ones based on performance data;
- provide information on evaluation results and development plans.

5. Continuous Learning, Innovation and Improvement

In order to meet the changing skills and development needs of students and the world of work, VET providers need to identify skills needs comprehensively and base their operational strategy on continuous learning. VET providers create conditions for continuous learning and development of competence, innovation and dissemination of results achieved at all levels of their organization. Meeting customer needs also requires providers to continuously develop their core competence areas and operational processes. In pursuit of excellence, VET providers follow other organizations' operations on a continuous basis and develop their own operations making use of the experiences of others. The operational culture of a learning organization supports experimentation with new practices, while also helping to prepare for the possibility that these are not necessarily suitable for its own operations. VET providers can promote creativity and innovation by organizing various forms of co-operation, such as joint learning forums for different customer groups. An organization develops through individuals' learning. Creation and application of innovations require critical analysis and, where necessary, rejection of previous models and principles. The starting points for increasing creativity and innovation are an atmosphere and operational culture that promote learning, development and creativity. Learning also involves accepting and learning from mistakes. Providing and receiving feedback as well as evaluation and continuous improvement of operations form part of an excellent organization's procedures. Every organization is encouraged to take initiative, be innovative and use innovative working methods. VET providers ensure utilization of feedback and other performance data by creating effective procedures that bring about change. These should be determined in writing, in order for staff to be aware of how to move things forward. Providers appoint specific people to take responsibility for change processes and set schedules for their implementation. They reserve the necessary resources to bring about change and monitor its progress. This makes it possible to monitor implementation of changes and developments in results. By making use of feedback information and going through change processes, providers gain support as they learn how to improve their operations.

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Planning:

VET providers develop their forms of operation and organizational structures such that these enable and promote continuous learning, creativity and innovation.

- create procedures to actively identify development targets by means of performance data and analysis of operating environments, to evaluate these targets and to use them as a basis for preparing development plans;
- develop their approaches and organizational structures so as to allow flexible and diverse utilization of organizational expertise in various education, training and development duties;
- create conditions for making use of their staff's innovative potential by providing them with opportunities to follow developments in their own field and to participate in various development projects and other forms of operational improvement;
- enable monitoring and analysis of other organizations' operations in order to make use of the experiences of others when developing their own operations;
- take the best practices used both within their own organization and in other organizations into account when preparing development plans.

Implementation:

VET providers promote creation of an open operational culture that encourages creativity and exchange of information both within their own organization and with the world of work and other stakeholders.

- make sure that elected officials, unit management and staff commit to continuous improvement and management of operations in keeping with the principles of a customer-focused organization;
- promote making initiatives related to development of their operational processes and launching necessary development activities based on these;
- create conditions and procedures and reserve resources for development projects to promote implementation of their operational strategy and ensure opportunities for staff to participate in development projects and improvement of operations;
- engage in active and systematic co-operation with their customer and stakeholder groups by means such as establishing field-specific co-operation bodies to develop their operations;
- reserve sufficient resources for innovation activities.

VET providers make use of their staff's creativity and innovative capacity in their operations and services.

- create flexible study opportunities that take into account customer needs as well as the requirements of different VET fields and forms;
- participate in national and international networks and benchmarking activities aiming to promote vocational instruction and excellence;
- encourage staff to develop and make use of their own competence extensively, by means such as teachers' on-the-job-learning periods and development projects aiming to improve working life skills;
- encourage staff to participate in development of their own field and work;
- encourage staff to use information technology.

**Evaluation and assessment; feedback and procedures for change:
VET providers monitor and evaluate their development and innovation,
improving these on the basis of the results achieved.**

- learn from their own actions and encourage staff to continuously look for opportunities to improve organizational performance;
- identify and prioritize key areas for improvement and operationalize these into development projects;
- identify and plan development measures together with the world of business and work, staff and stakeholders such that all parties are aware of the direction of operational development and change processes involved;
- assess their feedback and change procedures and acquire benchmarking data on their partners' procedures.

6. People as Resources

Teaching and other staff play a key role in terms of how VET providers can meet the changing skills and development needs of students and the world of work. Providers need to make sure that they have staff who can, in terms of their number, structure and competence areas, support implementation of their basic mission in the best possible way. Staff must also be capable of meeting future challenges. Providers also satisfy staff demand by acquiring the necessary competencies from the world of work or from other education and training providers. Providers are aware of the current and future skills needs of their teaching and other staff and ensure continuous maintenance, development and acquisition of their staff's competence in line with their strategic objectives. In addition, providers encourage staff to develop and make extensive use of their own competence and create frameworks for transfer of knowledge and competence and for staff involvement and well-being.

Planning:

VET providers plan and develop their human resources based on changes occurring in the operating environment as part of their strategic development.

- draw up a human resources strategy or an equivalent plan, where they determine those objectives and measures targeting their teaching and other staff that aim to support achievement of objectives set for operations (such as the number, recruitment, quality and structure of staff, development of their competence, staff involvement and well-being at work, and human resources management);
- make sure that staff are consulted and that they can participate in drawing up the human resources strategy;
- ensure that the objectives related to human resources strategy are tangible and measurable.

VET providers chart their staff's current competence level and future skills needs on a regular basis and, based on these, draw up staff development plan.

- anticipate and chart the skills needs (core competence) of their teaching and other staff as part of their strategy process;
- chart their teaching and other staff's current competence level in relation to skills needs (competence mapping);

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- draw up annual development plan covering the entire staff, according to which teaching and other staff's competence will be developed in line with strategic objectives.

VET providers create opportunities for teaching and other staff to develop and maintain their professional competence, participate and look after their well-being at work.

- make sure that sufficient resources (such as time, money, substitute arrangements) have been reserved for all staff groups to achieve the objectives set out in the human resources strategy and plans based on it;
- determine responsibilities, organize work assignments and develop organizational structures such that these support all staff groups' skills development, involvement and well-being at work;
- make sure that plans relating to well-being at work and equal treatment of staff have been prepared and are kept up-to-date.

Implementation:

VET providers ensure operating conditions for teaching and other staff and development of these operating conditions in accordance with the human resources strategy or equivalent plan.

- ensure that staff is aware of the objectives defined in the human resources strategy and plans based on the strategy and that people commit to these in all units and at all levels;
- make sure that performance and development reviews are conducted regularly in all units and with all staff groups;
- encourage staff to develop, share and make use of their competence;
- support staff's involvement and well-being at work, using various means and incentives agreed together with staff.

VET providers offer staff diverse opportunities to maintain and develop their competence.

- make sure that teachers are provided with opportunities to participate in continuing training on a regular basis;
- create conditions for teachers on the-job-learning periods and enable continuous development of contacts with the world of work as well as job rotation;
- offer teaching staff opportunities to develop their competence by participating in projects and other such undertakings;
- encourage and support involvement in international co-operation, staff exchanges and vocational skills development networks.

Evaluation and assessment; feedback and procedures for change:

VET providers assess achievement of objectives set out in the human resources strategy and other staff-related plans on the basis of monitoring and feedback data, other performance data and good practices, using these as a basis to develop their operations.

- regularly collect monitoring and feedback data concerning the status of their teaching and other staff from all units and levels;
- draw up annual human resources balance sheets based on monitoring and feedback data concerning staff;

- make use of monitoring and feedback data concerning teaching and other staff to review their human resources strategy and plans based on this;
- improve procedures relating to staff development, involvement and well-being at work and their application on the basis of monitoring and feedback data and good practices.

7. Effective Processes

An excellent education and training organization is characterized by the fact that it structures its operations as processes (chains of operations). A typical process could be an education and training process, which may include phases linked to one another in chronological terms, such as student recruitment – planning of education and training – implementation of education and training – evaluation. Examining operations as processes helps VET providers to focus their attention on aspects that are essential in terms of customers, to streamline their operations to clarify responsibilities and to direct resources to what is relevant in terms of achieving objectives. In addition, a process based procedure helps providers to examine their operations as a whole and analyze connections between related functions (such as theoretical education and supervision of work-based learning, teaching and guidance counseling, student welfare services). VET providers' operations can be divided into different processes according to the type of added value that they generate for customers. By means of core processes, providers produce those services that external customers and stakeholders primarily expect (such as vocational skills and eligibility for further studies for students, or skilled labor for enterprises). Support processes are used by providers to create conditions for implementation of their core processes. These functions include guidance counseling, student welfare services, accommodation, office services, as well as management and human resources development. Correspondingly, providers have supplier and partner processes (such as co-operation with stakeholders) to plan, manage and develop external partnerships (such as acquisition of products and services and co-operation with workplaces, other education and training institutions and other partners). Processes are an important management tool, which enables VET providers to convert their strategic objectives into practice and to carry out their basic mission. Process management requires that objectives, responsibilities and control and monitoring mechanisms relating to processes are clear and that processes are developed on a continuous basis. It is essential in terms of decision-making and management of processes and other operations that VET providers have access to reliable information covering both current and anticipated performance.

Planning:

VET providers determine their key processes on the basis of their basic mission, specified strategic objectives and policies.

- identify their external and internal customers (such as various student groups, including young people, adults and special needs students, as well as employers and the labor administration) and education, training, development and other services provided for these customers on the basis of their basic mission;
- define key processes and their interconnections based on customer analysis;
- define core processes, which may include planning of education, training and other services, provision of education and training (teaching) and supply of commercial services and products;

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- define support processes, which may include functions relating to support for teaching, institutional administration, staff and management;
- define supplier and partner processes, which may include co-operation with materials and equipment suppliers as well as with the world of work and various stakeholders.

VET providers structure their processes in terms of subprocesses as required.

- identify and describe subprocesses included in core processes; the processes for planning of education, training and other services, cover among other things anticipation of skills needs, planning of education and training services, preparation of curricula, planning of teaching arrangements, organization of work-based learning and preparation of individual study plans and individual educational plans;
- identify and describe subprocesses included in support processes (such as guidance counseling, accommodation services, office services);
- identify and describe the subprocesses included in supplier and partner processes as a functional whole to fulfill the basic mission, such as cooperation processes with suppliers, the world of work, other education and training institutions and various stakeholders.

VET providers secure sufficient resources for achievement of process objectives.

- ensure that the core, support and supplier and partner processes form a continuum between provider and unit levels: in terms of pedagogical activities, for example, the common section of the curriculum, prepared at the provider level, steers different units and levels in their curricular development, preparation of individual study plans and individual educational plans, teaching and other pedagogical activities;
- make sure that principles to be complied with in co-operation with the world of work or other stakeholders are determined in support of processes;
- create conditions for compliance with processes by means such as sufficient material and human resources.

Implementation:

VET providers convert their strategic objectives, goals and policies into practical terms by means of processes. VET providers also use processes to manage and steer their operations.

- manage and steer different processes by means of specified objectives and related indicators and other monitoring tools;
- set objectives and indicators derived from the strategy for different processes and explain these to their staff;
- appoint people or parties (process owners) to be responsible for different processes and continuous development of them;
- ensure that staff are aware of their roles and responsibilities in implementation and development of processes;
- use processes to ensure that curricula are kept up-to-date, that agreements to organize competence tests are valid and that education and training is carried out to a high quality standard;
- take the needs of the world of work and individual students into account when planning and implementing VET provision;
- develop clear and effective procedures to recognize students' previously acquired skills and individualize studies;

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- make sure that co-operation with the world of work or other stakeholders complies with jointly agreed principles in different units and at different levels.

Evaluation and assessment; feedback and procedures for change:

VET providers evaluate and improve their processes regularly on the basis of monitoring and feedback data, good practices and changes occurring in their operating environments.

- make use of monitoring, feedback and evaluation data acquired from different processes when developing their operations;
- acquire information about processes and their performance through self-evaluation and internal and external auditing of operations;
- acquire up-to-date, reliable and comprehensive information about the status of their external and internal operating environments in support of process development;
- make use of good practices created in their own and other organizations when improving their pedagogical and other activities;
- develop the whole made up of core, support and supplier and partner processes such that it meets the constantly changing challenges of the operating environment.

8. Relevance to the World of Work and Partnerships

Relevance to the world of work and effective partnerships are the prerequisites of high quality vocational education and training. VET providers work together with their partners in order to achieve common goals. They support each other through their professional skills, resources and competencies, aiming to meet the needs and expectations of customers and various stakeholders as effectively as possible. VET providers need a diverse network of partners, in order for their education, training and competence services to be able to meet the changing needs of students and the world of work. Providers are also playing an increasing role as developers of the world of work. This calls for strong and multidisciplinary regional co-operation networks linking education, training, research and the world of work. In addition to workplaces, enterprises and other partners (such as the labor administration, regional and national unemployment centers, and the municipal social administration), a VET provider's partner network may include other education and training providers and units. From the perspective of the internationalization of vocational education and training and the world of work, it is also important to create and maintain partnerships with education and training institutions and labor markets abroad. These facilitate promotion of mobility among students and teaching staff and development of the provider's operations.

Planning:

VET providers have defined co-operation with business life, other sectors of the world of work and other partners and its objectives as part of their strategy or other strategic plans.

- set objectives relating to partnerships in their operational strategy and define policies and procedures for management and development of partnerships;
- identify and prioritize their key partners that support achievement of strategic objectives;

- actively seek new partners to help respond to change challenges in the operating environment;
- use strategic goals as a basis to set objectives concerning development and outcomes of partnerships as part of their operational and financial planning.

Implementation:

VET providers develop work-based learning, learning environments and different ways to demonstrate skills and competences in co-operation with the world of work and other stakeholders.

- develop pedagogical methods and approaches that make it possible to strengthen work-based learning and workplaces as learning environments;
- organize vocational skills demonstrations and competence tests in cooperation with enterprises and other workplaces in keeping with jointly agreed principles;
- ensure that workplace instructors have sufficient capabilities and opportunities to provide learners with instruction at the workplace;
- support workplace instructors' work in order to improve the quality of learning at the workplace and arrange training for workplace instructors in co-operation with the world of work;
- make extensive use of competence test assessors or bodies involved in vocational skills demonstrations in order to develop education and training services relevant to the world of work;
- support staff in consolidation and updating of their working life skills and continuous development of contacts with the world of work;
- co-operate in providing of apprenticeship training.

VET providers actively co-operate with other education and training institutions involved in the same sectors and within their own area.

- develop partnerships with a view to making it possible to support students' transition from one level of education to another or consolidation and specialization of competence;
- actively engage in co-operation with comprehensive schools within their own area, thus supporting pupils' transition to vocational studies and comprehensive school teachers' knowledge of the labor market;
- co-operate with general upper secondary schools and other education and training institutions in order to diversify study opportunities stemming from students' individual needs;
- actively engage in co-operation with those education and training providers that are potential providers of their students' further education;
- agree on the necessary field-specific specialization with other VET providers, such that their services can meet the needs of vocational competence specializing in a specific sector as a whole.

VET providers co-operate with partners operating in other sectors in order to provide services for students and the world of work.

- co-operate in order to offer support services to special needs students and to implement preparatory education and guidance;

- co-operate with parties such as the labor administration and the regional and national unemployment centers in providing training services for unemployed job-seekers and for people at risk of unemployment;
- co-operate in providing training and support services required by enterprises;
- co-operate with different authorities and other parties in areas such as anticipation of education and training needs, prevention of social exclusion and promotion of accessible study opportunities and students' well-being and sense of community.

VET providers participate in development of the local world of business and work together with other education and training providers and parties operating in the area.

- co-operate in anticipating education, training and skills needs;
- support workplace instructors' work in order to improve the quality of learning at the workplace;
- promote innovation activities in workplaces and develop of operations and working communities within SMEs in particular through their responsibility to support and develop the world of work.

Evaluation and assessment; feedback and procedures for change:

VET providers have in place an evaluation and feedback system, which includes plans to evaluate and develop performance of partnerships and relevance of education and training to the world of work.

- make sure that key stakeholders (such as the world of business and work, students, the labor administration) participate in planning and implementation of evaluation;
- develop partnerships continuously and review related strategic objectives based on performance and feedback data and on changes occurring in the operating environment;
- develop arrangements and support forms relating to implementation of work based learning, vocational skills demonstrations and competence tests in cooperation with the world of business and work on the basis of assessment results and feedback.

9. Social Responsibility

In addition to meeting the skills needs of individuals and the world of work, taking individual education and training needs into account and developing the world of work, the basic mission of vocational education and training also includes attending to equal opportunities for education and training, preventing social exclusion, supporting active citizenship and providing education and training for special needs students. It is typical of vocational education and training to bear social responsibility beyond its basic mission, which is broadly visible throughout all the operations of VET providers. Building a future on solutions that are simultaneously sustainable in economic, ecological, social and cultural terms calls for perception and understanding of integrated wholes. Creating an atmosphere that supports participation, sense of community and influence within a VET provider's organization and its individual units strengthen its capacity to bear social responsibility and promote sustainable development.

Planning:

VET providers define the priorities of social responsibility in strategies and operational plans. Staff is involved in defining priorities.

- take social responsibility into account in their values and strategies;
- draw up a plan or a program to promote sustainable development as part of their operational system, including aspects such as environmental responsibility, sense of community, tolerance, equality and prevention of social exclusion.

Implementation:

VET providers make sure that the principles of sustainable development are taken into account in all their operations.

- act in an ethically sustainable manner by ensuring aspects such as transparency of operations and openness of communication;
- actively seek opportunities to participate in projects that promote achievement of the objectives of sustainable development;
- promote socially sustainable development by attending to the well-being and equality of staff and students, strengthening a sense of community and preventing exclusion and discrimination as well as mental and physical violence;
- ensure realization of ecologically sustainable development throughout all functions of their organization.

VET providers comply with statutes in a responsible manner.

- make sure that all staff members and students are aware of key statutes and standards governing their sector and any changes made to these, while also ensuring that staff comply with these;
- attend to the health and safety of working and learning environments within their own premises and, during periods of work-based learning, in workplaces as well.

VET providers play an active role in national and regional development of education and training.

- offer staff and units opportunities to participate in activities such as development of occupational profiles, vocational qualifications (VQ), national core curricula and requirements of competency-based curricula and in other VET development projects;
- offer staff and students opportunities to prepare for and participate in vocational skills competitions and play an active role in promotion of competitive activities;
- co-operate with the labor administration in development of services to promote employment opportunities.

Evaluation and assessment; feedback and procedures for change:

The VET provider's evaluation and feedback system covers evaluation of fulfillments of its social responsibility. VET providers take social responsibility into account in all their development activities.

- make sure that key stakeholders (such as the world of business and work, students, the labor administration) co-operate with evaluation;
- develop measureable objectives based on social responsibility;
- make use of information technology (WWW) for diffusion of social responsibility performance to other VET providers and the public.

Conclusion

These recommendations for Vocational Education and Training (VET) are presented to serve as a strategic tool for management of effective vocational education and training among all types of VET providers' organizations, units, institutes, and forms of action. However, there are different contexts from country to country. Re-invention may be needed to fit with each country. This is the answer to the prior question in the first part of this paper. These recommendations can be used and applied to every country with the re-invention processes. Continuous improvement of the quality of vocational education and training is a key priority of the main objectives and the process in management of effective vocational education and training. Other key objectives include increasing the attractiveness of vocational education and training and promoting mobility among vocational students. Lastly, the imagination is more important than knowledge. The managers, administrators, and the likes, both in macro and micro levels, who responsible for vocational education and training need to make use of their imagination. If you, as a VET provider, do not have it, build it now.

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