



Ethiopian TVET-System



Water Supply and Sanitation Operation Level III

Module Title: Applying Quality Control

TTLM Code: EIS WSO3 TTLM 0820

Sep. 2020



This module includes the following Learning Guides

LG14: Implement quality standards.

LG Code: EIS WSO3 M04LO1-LG-14

LG15: Assess quality of service delivered

LG Code: EIS WSO3 M04 LO2-LG-15

LG16: Record informational Code:

LG Code: EIS WSO3 M04 LO3-LG-16

LG17: Study causes of quality deviations

LG Code: EIS WSO3 M04 LO4-LG-17

LG18: Complete documentation

LG Code: EIS WSO3 M04 LO5-LG-18

Instruction Sheet	Learning Guide#14: Implement quality standards
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This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –

- Acquiring and confirming agreed quality standard and procedures.
- Introducing standard procedures.
- Providing quality standard and procedures documents.
- Revising / updating standard procedures.

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- Acquire and confirm agreed quality standard and procedures.
- Introduce standard procedures.
- Provide quality standard and procedures documents.
- Revise / update standard procedures.

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below
3. Read the information written in the “Information Sheets 1- 4”.on pages 3, 9, 13, &17 and Try to understand what are being discussed.
4. Accomplish the “Self-checks 1, 2, 3 & 4” in each information sheets on pages 7, 11, 16 &, 19
5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-checks).
6. If you earned a satisfactory evaluation proceed to “Operation sheets 1 on pages 21.and do the LAP Test on page 22”. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Activity.
7. After you accomplish Operation sheets and LAP Tests, ensure you have a formative assessment and get a satisfactory result;
8. then proceed to the next LG

**Information
sheet-1**

Acquiring and confirming agreed quality standard and procedures

1.1. Definition to quality

Different scholars give different interpretations to the term quality

- For engineers it is conformance to specification
- For users it is fitness for use
- For marketing it is the degree of excellence at an acceptable price that will influence the market share.
- For customer service quality product is that with less customer complaint

1.2. The importance of quality

- Primary focus is on process improvement
- Focus on prevention of errors, not detection
- Identify and correct sources of variation
- Higher quality costs less which means:
 - ✓ Increased productivity
 - ✓ increased sales
 - ✓ higher profit

1.3. What is a standard?

Standardization: It is the process of establishing standards or units of measure by which extent, quality, quantity, value; performance etc. may be compared and measured.

Standards are mostly used in two rough senses:

- It is an agreement developed by several parties with the intent that all parties comply.
- It is a product or service with a significant market share

Standards are everywhere! For examples

- Units of measurement
 - ✓ Length – meter (m)
 - ✓ Mass – kilogram (kg)
 - ✓ Time – second (s)
 - ✓ Electrical current – ampère (A)
- Layout of QWERTY computer keyboard
- Size of light bulb fitting

- Paper format (A0, A1.....; height-to-width ratio 1.4142 : 1)
- GSM protocol for mobile phones
- Vehicle safety test procedures

1.3.1. Why standards are important?

Because Standards contain Information. They (Standards)

- indicate product safety
- Clarify health risks, environmental risks
- Increase transparency in the market (consumer and producer expectations)
- Reduce information search costs
- Reduce production costs
- Necessary for diffusion of new technologies

Standards create compatibility (the suitability of products, processes or services for use)

1.3.2. Causes for the increasing importance of standards

- Expansion of global markets
- Increasing concern for safety, health and environmental issues
- Use of standards to protect against mistakes (legal accountability)
- Regulation which encourages the use of standards

1.3.3. Elements of the standards

- Management responsibility
- Resource management
- Quality System
- Contract Review
- Design Control
- Document Control
- Purchasing
- Purchaser-Supplied Product
- Product Identification and Traceability
- Process Control
- Inspection and Testing
- Inspection, Measuring and Test Equipment
- Inspection and Test Status

- Control of Non-conforming product
- Corrective Action
- Quality Records
- Internal Quality Audit
- Training
- Servicing
- Statistical Techniques

1.3.4. Advantages of standardization

All the sections of company will be benefited from standardization as mentioned below.

- Benefits to Design Department
 - ✓ Fewer specifications, drawings and part list have to prepared and issued.
 - ✓ More time is available to develop new design or to improve established design.
 - ✓ Better resource allocation.
 - ✓ Less qualified personnel can handle routine design work.

1.3.5. Disadvantages of standardization

Following are the disadvantages of standardization:

- Reduction in choice because of reduced variety and consequently loss of business or customer.
- Standard once set, resist change and thus standardization may become an obstacle to progress.
- It tends to favour only large companies.
- It becomes very difficult to introduce new models because of less flexible production facilities and due to high cost of specialized production equipment.

1.4. What is quality standard?

- It is an established agreement/standards or units of measure by which the extent of quality or performance of a product etc. may be compared and measured.
- Are sets of rules that outline specification of dimensions, design of operation, materials and performance, or describe quality of materials, products or systems?

1.4.1. Goals of quality Standard:

- Improved uniformity of the product.
- Decrease in rejection rate.

- Higher productivity.
- Lower production cost.
- Higher sales of the products.
- Increase in the morale of the employees.
- Improve the credibility of the company.

1.4.2. Benefits of quality standards

- Documenting quality standards forces you to review all aspects of your process.
- Providing a way to assure that an item complies with contract specifications.
- Attracting buyers, including the government, because of its repeatable quality.
- Saving money by providing the necessary indicators and tools to identify problem areas and ways to correct those areas.

Self-check 1	Written test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

I choose the best answer contains 2 pts. Each

1. Which one of them is benefits of quality standards
 - A. Review all aspects of your process
 - B. Providing a way to assure that an item complies with contract specifications.
 - C. Attracting buyers, including the government, because of its repeatable quality
 - D. All of the above
2. One of them is not Goals of quality Standard?
 - A. Increase in rejection rate.
 - B. Higher productivity.
 - C. Lower production cost.
 - D. None of the above

II short answer

1. Define the meaning of quality and Quality standard?(3pt)
2. Write at least three importance of Quality?(3pt)
3. Why standards are important?(2pt)
4. Write at least five elements of standards?(4pt)
5. Write the advantages and disadvantage of standardization?(4pt)

Note: Satisfactory rating - 10 points Unsatisfactory - below 10 points

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____
Rating: _____

Name: _____

Date: _____

- 1.
- 2.

Short Answer Questions

1. _____

2. _____

3. _____

4. _____

5. _____

Information sheet-2

Introducing standard procedures.

2.1. Techniques of developing and agreeing up on quality standard procedures

2.1.1. Definition of Standard Operating Procedures (SOPs):-

Standard operating procedures (SOP) are a detailed explanation of how a policy is to be implemented. The SOP may appear on the same form as a policy or it may appear in a separate document. The main difference between a SOP and a policy are details. An effective SOP communicates who will perform the task, what materials are necessary, where the task will take place, when the task shall be performed, and how the person will execute the task.

2.1.2. Benefits of SOP

The details in an SOP standardize the process and provide step-by-step how-to instructions that enable anyone within your operation to perform the task in a consistent manner. The SOP document serves as an instructional resource that allows employees to act without asking for directions, reassurance, or guidance. The step-by-step written procedure can also help hold employees accountable because employee expectations are documented and their actions can be measured against the SOP.

Communicating procedures that anyone in the operation can follow with consistent results will ensure your operation continually provides high quality products and services.

Generally purposes of SOP include:

- Serve as framework for organizational policy
- Written documentation of best practice
- Tells what, how, when, why, and who
- Provide foundation for:
 - ✓ Job descriptions,
 - ✓ Employee training
 - ✓ Corrective action and discipline, and
 - ✓ Performance review.

2.1.3. Developing SOP for your operation:-

Operation specific SOP can be created by

- writing down the steps taken when performing specific tasks in your operation
- Assessing areas in your operation in which standard procedures are necessary, start with those in which you are currently communicating most often.
- Reviewing available resources, or start fresh using these elements.

2.1.4. Elements of an SOP:

- Rationale for SOP
- Detailed description of procedure – based on best practice/standards
- Monitoring actions
- Accountability
- Corrective Actions
- Date of last review or revision date

2.1.5. SOP Implementation

- Give it for employees reviews;
- Conduct an employee in-service to present the information;
- Use to train new employees;
- Use them for corrective action/refresher training for all employees;
- Incorporate into written job descriptions and performance reviews ;
- Review and update as needed (i.e new equipment item or employee job changes).

2.1.6. Example of SOP:- Sample SOP (Hand washing)

- **Policy:** All food production and service personnel will follow proper hand washing practices to ensure the safety of food served to customers.

Self-check 2	Written test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

I. Choose the best answer (2pts each)

1. ----- are a detailed explanation of how a policy is to be implemented?
 - A. Standard operating procedures (SOP)
 - B. Quality of work
 - C. Implementation of work
 - D. None of the above
2. One of them is not SOP Implementation purpose
 - A. Give it for employees reviews;
 - B. Conduct an employee in-service to present the information;
 - C. Use to train new employees;
 - D. None of the above

II. Short answer

3. Define the meaning of Standard Operating Procedures (SOPs)?(2pt)
4. Write at least five purposes of SOP?(5pt)
5. Write at least five elements of an SOP?(5pt)
6. Write at least four technique of SOP Implementation?(4pt)

Note: Satisfactory rating - 10 points Unsatisfactory - below 10 points

You can ask you teacher for the copy of the correct answers.

Answer Sheet 2

Score = _____

Rating: _____

Name: _____

Date: _____

Short Answer Questions

1.

2.

Short answers

1. _____

2. _____

3. _____

Information sheet-3

Providing quality standard and procedures documents.

3.1. Documentation of quality standard procedures

3.1.1. Working procedures

The quality procedures are the heart and source of any quality management system. The purpose of the working instructions or procedures is to explain, very simply, what is required to do be done by employees in their everyday tasks.

The instructions are highly important because when you define a working procedure you define a frame. This frame defines what has to be done and leave much less possibilities for nonconformities and faults. Your employees need guidance. Naturally people would try to break the frame they are living and working in, in order to maintain more comfort for themselves or to promote interests that are no conformed to the organization's objectives. This comes on behalf of efficiency and effectiveness. And when efficiency and effectiveness are declining, you can be pretty much sure that, in the not so long term, profitability and quality would decline as well.

Procedures give you the ability to examine where your employee tries short cuts. Straying from the procedures will create nonconformities. Nonconformities harm your profitability, even if you cannot realize it in the short term. In this case when you define a procedure, it is highly important to define the appropriate control over it as well.

A procedure must include:

- What is the purpose of the process? The objective or goal of the process.
- Who is responsible for maintaining and performing the process? In order for you to know exactly who is responsible for what had been done.
- What is the method? You must specify the steps, phases, or actions required to perform the process. We recommend being generous with details, specify within the most specific level and to explain with the simplest language what is to be done.
- What are the tools one needs to perform the process? Forms, software, working tools, etc. This is actually the documentation and control over the procedure. By examining this tools we can decide whether the procedure was maintained and how well.

- What are the process outputs? The outputs expected at the end of the process (a price quote documented, a certificate of calibration, records of any kind, any form, etc).

3.1.2. Quality procedures

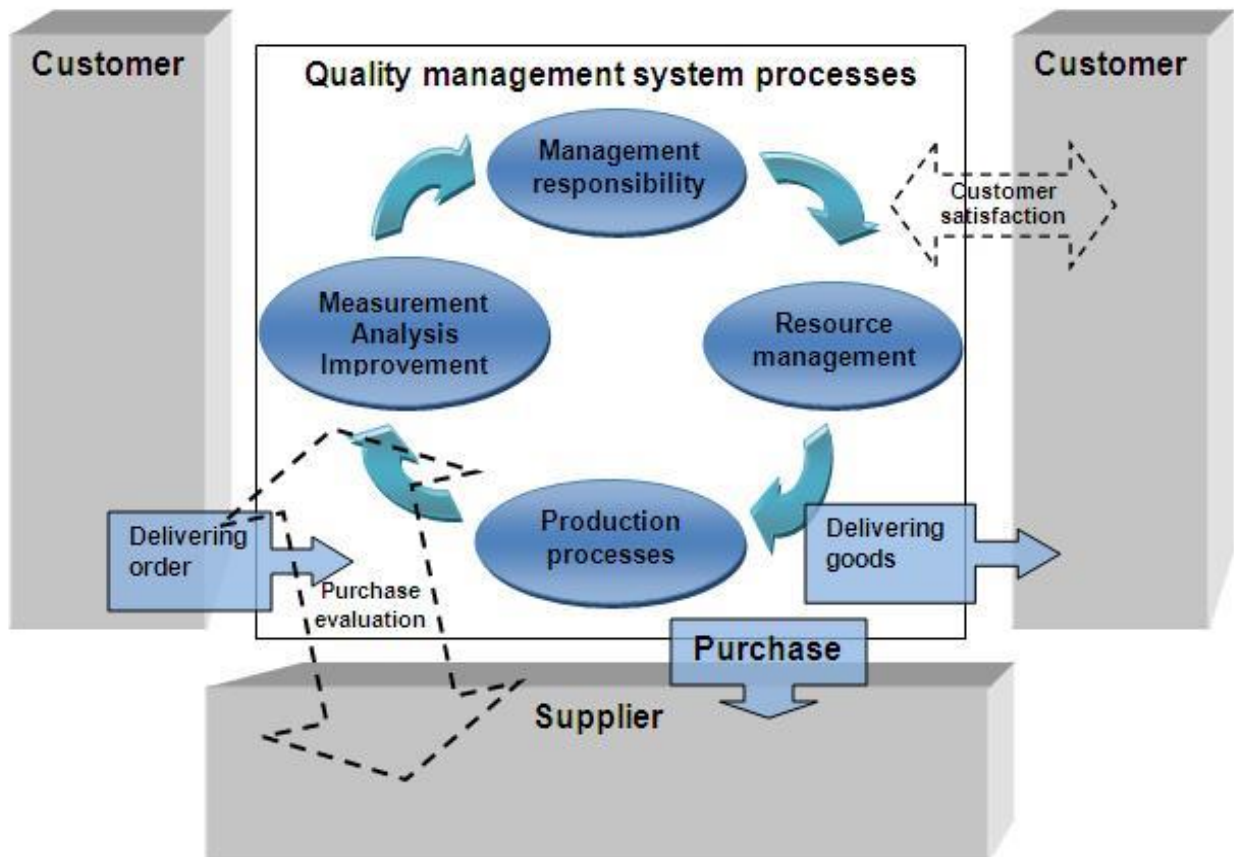


Fig3.1. Quality Procedures

After reviewing the meaning and importance of a procedure and understanding the link between a procedure and a process we are going to discuss the quality procedures. The procedures include the following components:

- **A quality manual:-**A document defining the scope of the quality management system, a general presentation of the organization activities, its organizational structure, a general description of the main process, a description of the relation between the working process and the quality management system (as shown below), a list of all procedures in the organization Control of documents. Specification of the

process of controlling documents that is included under the quality management system. The requirements are specified in this article. In the procedure you must define how to achieve the requirements.

- **Control of records:**-Specification of the process of controlling your records that are included under the quality management system. The requirements are specified in this article. In the procedure you must define how to achieve the requirements. This procedure will include or refer to a list of all documentation included in the quality management.
- **Internal audits:**-A procedure specifying how the internal audit should be performed within the organization.
- **Control of nonconformity:**-Procedure specifying how one should handle nonconformity when he detects it.
- **Corrective action:**-A procedure specifying how one implements a corrective action.
- **Preventive action** :-a procedure specifying how one implements a preventive action

Note:-These procedures are based on ISO 9001 Standard requirements.

Self-check 3	Written test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. Draw the diagram of Quality Procedures and discuss each component?(6pt)
2. Write at least five component of Quality Procedures?(5pt)
3. Write at list three continent to include Working procedures?(3pt)

Note: Satisfactory rating - 7 points

Unsatisfactory - below 7 points

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____

Date: _____

Short Answer Questions

1. _____

2. _____

3. _____

4.1. Revision /updating standard procedures

A Standard Operating Procedure (SOP) is a set of written instructions that document a routine or repetitive activity followed by an organization. The development and use of SOPs are an integral part of a successful quality system as it provides individuals with the information to perform a job properly, and facilitates consistency in the quality and integrity of a product or end-result.

The implemented quality standard will be checked or revised to know whether it acquires quality or not. After checking it should review in order to improve the quality of our service or product from the previous one. These processes are continuing up to the level of standard and our work quality.

Updating standard procedures is routine work on standard basis to improve the quality of service delivered or the product of the organization.

4.2. SOP Review and Approval

SOPs should be reviewed (that is, validated) by one or more individuals with appropriate training and experience with the process. It is especially helpful if draft SOPs are actually tested by individuals other than the original writer before the SOPs are finalized. The finalized SOPs should be approved as described in the organization's Quality Management Plan or its own SOP for preparation of SOPs. Generally the immediate supervisor, such as a section or branch chief, and the organization's quality assurance officer review and approve each SOP. Signature approval indicates that an SOP has been both reviewed and approved by management.

4.3. Frequency of Revisions and Reviews

SOPs need to remain current to be useful. Therefore, whenever procedures are changed, SOPs should be updated and re-approved. If desired, modify only the pertinent section of an SOP and indicate the change date/revision number for that section in the Table of Contents and the document control notation.

If an SOP describes a process that is no longer followed, it should be withdrawn from the current file and archived. The review process should not be overly cumbersome to



encourage timely review. The frequency of review should be indicated by management in the organization's Quality Management Plan.

Self-Check 4	Written Test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. Why SOP will update and re-approved?(3pts)
2. What are the content when modify the pertinent section of an SOP? (4pts)
3. How much amount when an SOP updating/revising? (3pts)
4. Why revision /updating standard procedures are needed?(4pts)

Note: Satisfactory rating - 7 points Unsatisfactory - below 7 points
You can ask you teacher for the copy of the correct answers.

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Answer Sheet 4

Score = _____

Rating: _____

Name: _____

Date: _____

Short Answer Questions

1. _____

2. _____

3. _____

4. _____

Operation Sheet 1	Interpreting work instruction, specification and standardization
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Procedures for SOP of hand washing

Step1: select necessary hand washing tools and equipment

Step2: Wash hands (including under the fingernails) and forearms vigorously and thoroughly with soap and warm water (water temperature should be at least 100°F) for a period of 20 seconds.

Step3: Wash hands using soap from a soap dispenser. Lather at least 10 seconds.

Step4: Use a sanitary nail brush to remove dirt from under fingernails.

Step5: Wash between fingers thoroughly.

Step6: Use only hand sinks designated for that purpose. Do not wash hands in sinks in the production area.

Step7: Dry hands with single use towels or a mechanical hot dryer. (Retractable cloth towel dispenser

Step8: Systems are not recommended.) Turn off faucets using a paper towel in order to prevent. In this case, let us say, the trainer will:

- Monitor all trainees to ensure that they are following proper procedures.
- Ensure adequate supplies are available for proper hand washing.
- Follow up as necessary.

LAP Test

Practical Demonstration

Name: _____ Date: _____

Time started: _____ Time finished: _____

Instructions: Giving the necessary equipment's and PPEs you are required to perform the following tasks within 3 hours.

Task1. Assess proper hand washing procedures

Instruction Sheet	Learning Guide #15: Assess quality of service delivered
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This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –

- Checking quality services delivered.
- Quality standards and specification.
- Evaluating service delivered using quality parameters.
- Identifying causes of any faults.
- Taking corrective actions.

This guide will also assist you to attain the learning outcome stated in the cover page.

Specifically, upon completion of this Learning Guide, you will be able to –

- Check quality services delivered.
- Quality standards and specification.
- Evaluate service delivered using quality parameters.
- Identify causes of any faults.
- Take corrective actions.

LEARNING INSTRUCTIONS:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below
3. Read the information written in the “Information Sheets 1, 2, 3, 4. & 5 on page 24, 29, 34, 38 & 45 and Try to understand what are being discussed.
4. Accomplish the “Self-checks 1, 2, 3, 4 & 5” in each information sheets on pages 27, 32, 36, 44 & 51.
5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-checks).
6. If you earned a satisfactory evaluation proceed to “Operation sheets 1 on pages 51.and do the LAP Test on page 52”. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Activity.

7. After you accomplish Operation sheets and LAP Tests, ensure you have a formative assessment and get a satisfactory result;
8. then proceed to the next LG

1.1. Techniques of checking services delivered against organizational quality standards and specifications.

The effective delivery of clean and potable water delivery services is crucial for poverty reduction and in meeting development goals. Public services can either be provided by the state directly, or through sub-contracted private service providers.

There is a growing recognition that to improve public service delivery, such as water does not suffice to concentrate merely on ‘supply side’ mechanisms. There is also a need to capacitate the ‘demand side’ of service delivery by ensuring that the users of public services are informed of their rights and entitlements and are enabled to exercise their rights by monitoring the quality of public services and holding the government and service providers accountable.

Experiences around the world has demonstrated that generating and using information on the performance of service providers by both government and non-governmental actors can lead to substantial enhancement of public transparency and accountability which in turn fosters adherence to higher quality standards in service delivery.

The service provided could be checked by proper monitoring and evaluation of the service. Based on the result from monitoring and evaluation of the system, the services could be improved. This can be one through effective quality management system.

1.2. Methods of evaluating services delivered using the appropriate evaluation parameters in accordance with organization standards.

Service Delivery Evaluation is a process of monitoring whether the policing service is operating in terms of the Constitution, and provincial policy and guidelines. It’s a way to determine whether there are changes that need to be made to ensure efficiency and effectiveness of irrigation water distribution systems.

The role of the Service Delivery Evaluation is to implement the following:

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- Assess the service delivery irrigation water distribution systems and evaluate whether they are accessible or not.
- Evaluate the planning and execution of major irrigation water operations in the province.
- Conduct research to determine provincial irrigation water needs and priorities.
- Provide information on identified needs
- Conduct reviews on the extent of water distribution in the rural areas.
- Station Evaluation through announced site visits and unannounced site visits.
- Targeting and attending major events during the year to evaluate water delivery services
- Produce reports to responsible stake holders.

The following are guidelines how the service delivery of staffs in an organization could be assessed.

1. **Staff:** What is the qualification of staff that provides the service? Have the service providers received periodic continuing education on relevant topics, and how recently has training occurred? Have the service providers received a minimal level of supervision?
2. **Process:** Do protocols and standards of practice for each service meet generally accepted quality standards for basic as well as advanced level services at referral facilities? Do providers adhere to the standards of practice for service delivery? The process assessed includes procedures followed, components of physical examinations, as well as the information exchanged between the provider and client (history, symptoms, advice). The SPA assesses if the process during service delivery meets the standards; it does not assess if providers correctly diagnose the problems.
3. **Facility resources, equipment, and supplies:** What specific equipment and supplies are available for meeting various levels of service delivery? What are the basic systems and infrastructure that may impact utilization and capacity to provide standard level services? Are the elements required to provide the services meeting the minimum standard, present, functioning, and in the appropriate location for use during service provision? Are there systems for

maintaining adequate availability of supplies (inventories; appropriate storage, equipment maintenance and repair/ replacement systems), and is there evidence of their effectiveness?

4. **Systems for evaluating and monitoring services:** Are routine information systems up-to-date and able to provide basic client and service provision data? Are there systems for monitoring community coverage if community coverage is expected of the facility?
5. **Facility management:** Does the facility have basic management systems in place, and do they include community representation? Does the facility participate in any financing mechanism that impacts the cost to the community or client?
6. **Client understanding:** What information regarding the consultation, instructions, or follow up can the client recall?
7. **Service provision environment:** Does the facility collect very basic information about the problems staff thinks should be addressed to improve their working situation and services? Does the facility collect data revealing the opinion of clients regarding issues related to satisfaction with their consultation and the service delivery environment?

Self-Check 1	Written Test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

I. Choose the best answer

1. ----What information regarding the consultation, instructions, or follow up can the client recall?

2. Write at least five the implement role of the Service Delivery Evaluation?(5 pt)
3. Write and discuss at least five guidelines how the service delivery of staffs in an organization could be assessed?(5 pt)
4. What are the major roles of the Service Delivery Evaluation Directorate (quality manager) in an organization?(5 pt)
5. What are the techniques of checking services delivered against organizational quality standards and specifications?(5 pt)
6. What is the purpose of checking service delivery systems of an organization?(4 pt)

Note: Satisfactory rating - 12 points Unsatisfactory - below 12 points

You can ask you teacher for the copy of the correct answers.

Answer Sheet 1

Score = _____

Rating: _____

Name: _____

Date: _____

Short Answer Questions

1. _____

2. _____

3. _____

4. _____

5. _____

2.1. Introduction Quality standards and specification

Quality standards are defined as documents that provide requirements, specifications, guidelines, or characteristics that can be used consistently to ensure that materials, products, processes, and services are fit for their purpose.

Standards provide organizations with the shared vision, understanding, procedures, and vocabulary needed to meet the expectations of their stakeholders. Because standards present precise descriptions and terminology, they offer an objective and authoritative basis for organizations and consumers around the world to communicate and conduct business.



Figure 2.1. components of Quality Standards

2.2. Who uses quality standards

Organizations turn to standards for guidelines, definitions, and procedures that help them achieve objectives such as:

- Satisfying their customers' quality requirements
- Ensuring their products and services are safe
- Complying with regulations
- Meeting environmental objectives
- Protecting products against climatic or other adverse conditions
- Ensuring that internal processes are defined and controlled

Use of quality standards is voluntary, but may be expected by certain groups of stakeholders. Additionally, some organizations or government agencies may require suppliers and partners to use a specific standard as a condition of doing business.

2.3. Why are standards important

- **For businesses:**

Standards are important to the bottom line of every organization. Successful companies recognize standards as business tools that should be managed alongside quality, safety, intellectual property, and environmental policies. Standardization leads to lower costs by reducing redundancy, minimizing errors or recalls, and reducing time to market.

- **For the global economy:**

Businesses and organizations complying to quality standards helps products, services, and personnel cross borders and also ensures that products manufactured in one country can be sold and used in another.

- **For consumers:**

Many quality management standards provide safeguards for users of products and services, but standardization can also make consumers' lives simpler. A product or service based on an international standard will be compatible with more products or services worldwide, which increases the number of choices available across the globe.

2.4. Specification

A specification often refers to a set of documented requirements to be satisfied by a material, design, product, or service. A specification is often a type of technical standard.

There are different types of technical or engineering specifications (specs), and the term is used differently in different technical contexts. They often refer to particular documents, and/or particular information within them. The word specification is broadly defined as "to state explicitly or in detail" or "to be specific".

A requirement specification is a documented requirement, or set of documented requirements, to be satisfied by a given material, design, product, service, etc. It is a common early part of engineering design and product development processes, in many fields.

A functional specification is a kind of requirement specification, and may show functional block diagrams.

A design or product specification describes the features of the solutions for the Requirement Specification, referring to either a designed solution or final produced solution. It is often used to guide fabrication/production. Sometimes the term specification is here used in connection with a data sheet (or spec sheet), which may be confusing. A data sheet describes the technical characteristics of an item or product, often published by a manufacturer to help people choose or use the products. A data sheet is not a technical specification in the sense of informing how to produce.

Self-Check 2	Written Test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

I. Choose the best answer contains 2pts each

1. ---- defined as documents that provide requirements, specifications, guidelines, or characteristics that can be used consistently to ensure that materials, products, processes, and services are fit for their purpose?
 - A. Quality standards
 - B. Specification
 - C. Quality control
 - D. documentation
2. Who uses quality standards?
 - A. Organization
 - B. Enterprise sector
 - C. Private industry
 - D. All of the above
3. One of them is component of quality standards?
 - A. Process approach
 - B. Customer focus
 - C. Evidence based decision making
 - D. All of the above

II. Short answer

1. Why are standards are important?(2pts)
2. List and discuss three types of specification?(4pts)

Note: Satisfactory rating - 12 points

Unsatisfactory - below 12 points

You can ask you teacher for the copy of the correct answers.

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Answer Sheet 2

Score = _____

Rating: _____

Name: _____

Date: _____

Multiple choose answer

1.

2.

3.

Short answer

1. _____

2. _____

3.1. Introduction quality parameters

Service quality and customer satisfaction are very important concepts that companies must understand in order to remain competitive in business and hence grow. It is very important for companies to know how to measure these constructs from the consumers' perspective in order to better understand their needs and hence satisfy them. Service quality is considered very important because it leads to higher customer satisfaction, profitability, reduced cost, customer loyalty and retention.

This is the most common method for measuring the subjective elements of service quality. Through a survey, you ask your customers to rate the delivered service compared to their expectations.

3.2. The Core Principles of Good Customer Service

- **Tangibles**:-Appearance of physical facilities, equipment, personnel, and communication materials.
- **Reliability**:-Ability to perform the promised service dependably and accurately.
- **Responsiveness**:-Willingness to help customers and provide prompt service.
- **ASSURANCE**:-Knowledge and courtesy of employees and their ability to convey trust and confidence.
- **Empathy**:-Caring, individualized attention the firm provides its customers.

These five SERVQUAL dimensions are used to measure the gap between customers' expectations for excellence and their perception of the actual service delivered. The SERVQUAL instrument, when applied over time, can help you understand both customer expectations, perceptions of specific services, and areas of needed quality improvements.

SERVQUAL has been used in many ways, such as identifying specific service elements that need improvement, and targeting training opportunities for service staff.

Proper development of items used in the SERVQUAL instrument provides rich item-level information that leads to practical implications for a service manager.

The service quality dimensions evaluated by SERVQUAL should be adjusted for optimal performance in different industries, including public and private sector applications.

SERVQUAL scores are highly reliable, but when used in different industries may fail to produce a clear delineation of the five basic dimensions. Other measures, such as the Six Sigma model should be considered for applicability in quantifying the gap between service expectations and perceptions.

3.3. Service quality questions

There are many types of questions that can be asked in a service quality questionnaire. They should focus on the customer's interaction with the customer service rep (positive and negative), the service and experience overall, and if the customer would use your service again. It's also good to have a couple open text questions so your customers can write in their own feedback.

Sample questions include:

- The service rep was helpful (strongly agree to strongly disagree)
- Which of the qualities about the service did you like (include a list patient, friendly, attentive, willing to help, empathetic, etc.)
- Was there anything about our service that stood out to you? (open-text response)
- Over the next 12 months, how likely are you to use our product or service again (strongly agree to strongly disagree)

Self-Check 3	Written Test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

III. Choose the best answer contains 2pts each

1. One of them are **not** the importance of Service quality?, , , .?
 - A. it leads to higher customer satisfaction
 - B. profitability
 - C. increased cost
 - D. customer loyalty and retention

2. one of them is not the Core Principles of good Customer Service
 - E. Tangibles
 - F. Reliability
 - G. Responsiveness
 - H. All of the above

3. One of them has Service quality questions include points :
 - A. The service rep was helpful
 - B. Which of the qualities about the service did you like
 - C. Was there anything about our service that stood out to you?
 - D. All of the above

IV. Short answer

3. Why are service quality are important?(2pts)
4. How to improve service quality in your organization?(2pts)

Note: Satisfactory rating - 12 points Unsatisfactory - below 12 points

You can ask you teacher for the copy of the correct answers.

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Answer Sheet 3

Score = _____

Rating: _____

Name: _____

Date: _____

Multiple choose answer

1.

2.

3.

Short answer

1. _____

2. _____

Information sheet-4	Identifying causes of any faults.
----------------------------	--

4.1. procedures of the causes of any fault and taking corrective actions

As quality practitioners, we're accustomed to measuring the physical attributes of a product: dimensions, angles, power, hardness, tensile strength, color, and many other characteristics. Getting a handle on services can be more difficult. Often there are no physical attributes to measure, or they don't clearly affect the essential nature of the service. We have to think about what really matters to the customer about the service. Although this is the case with both goods and services, it takes on special significance with a service. Let's examine the nature of services and discuss the most effective ways of gauging their effectiveness.

The first thing to keep in mind about the service sector is that it is completely different from manufacturing. The things that you take for granted in manufacturing simply don't exist in many service situations.

Think about these traditional measures of examples of output:

- Number of customers processed per hour
- Minutes spent on each call
- Reports generated per day
- Average time per repair
- Rooms cleaned per shift

Customer perceptions are critical in any product context. In the world of service delivery, they're especially important due to the personal and interactive nature of services. You may satisfy every stated requirement and still fail to satisfy the customer in a profound way. The ground is shifting as the service is performed, and what you think was perfect may be far from satisfactory. That's why you must specifically ask your customer what he or she thinks about your services. Don't provide a long survey that probes every aspect of the service experience; just start with two simple questions: "How satisfied are you with the quality of our services?" and "How likely are you to recommend our services to a colleague?"

These two questions apply to nearly any service situation and industry. The first question addresses basic satisfaction, essentially asking if the services met all requirements. The second question takes this a step further and addresses true commitment: Do you feel strongly enough to recommend our services to somebody else? These represent two different places on the same continuum (as seen in figure 1), and both are necessary for long-term success.

It's worth noting that satisfaction falls only in the middle range of the continuum. The blunt reality of business is that basic customer satisfaction is no longer adequate for businesses to remain successful. Basic satisfaction simply means that they might use your services in the future--unless a better offer comes up. Satisfaction is little more than the absence of dissatisfaction, and there's no glory in just squeaking by. Satisfaction is a reasonable starting point, but the ultimate goal is the kind of commitment that results in customers telling their friends and colleagues about your organization and recommending your services. That's what you should be striving for.

The two survey questions include a four-point response scale. Some data gurus might question whether this provides much constructive information. Keep in mind, however, that people aren't reliable measuring instruments. With subjective judgments, four or five degrees of resolution are about as precise as you can expect.

Combine the preceding questions with the following two open-ended questions and you'll have a very useful tool for measuring your services:

- i. How can we improve our existing services?**
- ii. What services would you like to see us offer in the future?**

In the case of the open-ended questions, the results can be sorted into similar categories. These can then be plotted on a Pareto diagram to provide guidance on the actions that should be taken. Many quality practitioners bristle at open-ended questions because they don't produce data in a traditional sense. The responses can be converted to data, however, without much difficulty. Even more important, the results point the way to exactly the improvements and innovations that your customers desire.

You now have a dynamic tool that will take less than a minute of somebody’s time. The scaled questions probe two timeless issues--satisfaction and commitment--and produce solid data that can be tracked, while the open-ended questions provide direction for your improvement efforts. Together you have one of the most streamlined and effective service surveys imaginable.

Ask customers for their feedback as soon as the effects of the service are felt. This might be immediately after performing the service or six months later; it all depends on the type of product you’re addressing and the sorts of contractual obligations that were made with the customer.

Consider these service scenarios:

- **Restaurant.** Feedback could be provided immediately following the experience, or certainly within a day or two of it.
- **Appliance repair.** Feedback could be provided immediately on certain aspects of the service, but it would probably take weeks to know how effective the repair was. Most appliance-repair companies warranty their repairs for a certain length of time, so the feedback horizon could follow a similar time frame.
- **Management consulting.** Complex consulting projects that aim to increase a company’s profitability and competitiveness might take up to a year to evaluate. Asking for feedback any sooner would be premature.

These three examples illustrate a range of time frames for feedback, from immediately after the service to a year later. Each organization must decide for itself when the effects of its services can be determined and, thus, when it’s appropriate to solicit feedback.

Once you’ve determined when to capture feedback, the next logical question is how to do it. Yes, you already have the tool, but how exactly will it be administered? Your choices are many: in person or by telephone, e-mail, web site, fax, postal mail, or text message. The chosen method should reflect the most convenient process for your customers. In general, try not to add another communication burden to your customers. If you have frequent face-to-face contact with them, use these interactions for getting

their feedback. This also goes for existing communications via telephone and e-mail. If it's already happening, use it. Providing feedback will only add a minute of extra time, and that's an investment that most customers are glad to make.

4.1.1. Objective measures

Everything we've discussed so far is related to subjective measures of service quality. In other words, we're asking someone's opinion of how we performed. They probably don't have data to back up their opinions, and they may not even be able to provide specific examples.

Besides subjective performance measures, there are also many objective measures that can be applied to your services. You need only look as far as your service guarantees and contracts to find some effective metrics. Nearly every service provider commits to performing its service within a certain time frame.

This naturally gives rise to the question: Was the service performed on time? No opinions are necessary here; you either met your commitments or you didn't. The data can easily be gathered, charted, and analyzed by your own organization. Hard data provide an excellent counterpoint to customer feedback, and they usually substantiate the themes revealed through customer feedback. When data don't support these themes, it's useful to explore the reason for the gaps; e.g., "Our customers think we're always late, yet our data show this isn't the case. What's causing this difference in perceptions?" When there's a difference of this sort, one of two things typically must happen:

1. The data-collection method must be changed to better match what the customer experiences.
2. The customer must be educated at the performance level. Sometimes providing objective data can shape people's perceptions, and there's nothing wrong with doing this.

Here are some of the most common sorts of measures in managing service quality:

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- On-time delivery.
- Responsiveness.
- Effectiveness.
- Availability.
- Audit results.
- Cost control.

4.2. Fault:

- An unpermitted deviation of at least one characteristic property or parameter of the system from the acceptable/usual/standard condition.
- Failure: a permanent interruption of a system's ability to perform a required function under specific operating conditions.
- Disturbance: an unknown (and uncontrolled) input acting on the system which results in a departure from the current state.

4.3. Causes of faults

Malfunction caused by:

- Design errors
- Implementation errors
- Human operator errors
- wear
- Aging
- Environmental aggressions
- part misapplication

The most common causes of service failures or faults:

- Incorrect operation
- Poorly performed or inadequate maintenance
- Incorrect installation and bad workmanship
- Incorrect repair introducing new defects
- Poor quality manufacture leading to substandard components Poor design

Factors that affect quality of work are:

- Inaccuracies, errors

- Failure to meet expectations for product quality, cost or service
- Customer/client dissatisfaction
- Spoilage and/or waste of materials
- Inappropriate or poor work methods

Self-Check 4	Written Test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. List at least five most common sorts of measures in managing service quality? (5pts)
2. List and discuss at least three Causes of faults? (3pts)
3. Write four most factors that affect quality of work? (4pts)

Note: Satisfactory rating - 6 points

Unsatisfactory - below 6 points

You can ask you teacher for the copy of the correct answers.

Answer Sheet 4

Score = _____

Rating: _____

Name: _____

Date: _____

Short Answer Questions

1. _____

2. _____

3. _____

Information sheet-5	Taking corrective actions.
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8.1. Method of Preventing Faults and corrective actions

Faults in any systems may be prevented by one of the following methods:

- Fault diagnosis:
- Fault identification: to estimate the size and type or nature of the fault.
- Fault detection: Detect malfunctions in real time, as soon and as surely as possible
- Fault isolation: Find the root cause, by isolating the system component(s) whose operation mode is not nominal

8.2. Quality of material

8.2.1. Measuring materials and products

Characteristic of the materials to be used for specific project must be:

- Good quality:- Products with good quality are long-lasting and safe to use.
- Reliable:- It means that you can be sure that it will perform its function well, will operate safely and will give the best it could give.
- Suitable for the application/purposes:-Materials which are very necessary to make the project possible.
- Low cost:-It doesn't mean that you will choose for the less expensive one and exclude the quality.
- Materials, articles or productions are measured using the appropriate measuring instruments in accordance with workplace procedures
- Upon checking of material to be receive: Use appropriate measuring instrument/devise match with the materials to be check
 - ✓ For precision measurement – use micrometers and Vernier caliper
 - ✓ For longer length - Use Tape measure
 - ✓ For sheets, wires – use Gage measurement tools etc..

8.2.2. Isolating faulty material

- Faulty material or parts related to the work are identified and isolated
- Upon checking of material to be receive:
 - ✓ Identified faulty material should be isolated and never be receive

✓ Only material that meet the specified requisition should be receive officially

8.2.3. Recording and reporting faulty material and causes

- Materials to be requested should be conformance with the final appearance of the product to be fabricated.
- Request material should show:
 - ✓ Material type/classification
 - ✓ Dimensions
 - ✓ Technical specification
 - ✓ Color (where required)
- Upon arrival of the materials requested:
 - ✓ The receiver of the material should check the material to be receiving before receiving the item officially.
 - ✓ Checking the materials will be based upon the purchase request.
 - ✓ Checking of materials should also be based on the condition of the material: Checking visually.
 - ✓ If the materials to be receive is technically critical, there should be a document proving the material conformity with the specs.

Table 5.1. logreport example

Date Received	O.R. #	Item Name	Quantity	Signature	Quality Checker

Table 5.1. assesment of material received example(to be completed by the quality cheker

Quality Checker:			Date:
Item Name	Total no. in Good Condition	Total no. of Errors	Comments

Table 5.2 purchased requisite format

No.	Quantity	Item description (material type etc)	Dimensions (specification)	Cost

8.2.4. correcting the cause of faulty material

- Causes of any faults are identified and corrective actions are taken in accordance with workplace procedures
- Failures/faults can be eliminated by:
 - ✓ Changing the Manufacturing procedures
 - ✓ Changing the Manufacturing operation
 - ✓ Training of staffs
 - ✓ Design modifications

Self-check 5	Written test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. What are the major methods of Faults prevented in any systems? (3pts)
2. Write and discuss the Characteristic of the materials to be used for specific project? (2pts)
3. Write the most elements In Recording and reporting faulty material request? (3pts)
4. How to eliminated failures/faults?(2pts)

Note: Satisfactory rating - 5points Unsatisfactory - below 5 points
You can ask you teacher for the copy of the correct answers.

Answer Sheet 5

Score = _____

Rating: _____

Name: _____

Date: _____

Short Answer Questions

1. _____

2. _____

3. _____

4. _____

Instruction Sheet	Learning Guide #16: Record informational Code
--------------------------	--

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –

- Recording basic information on the quality performance.
- Maintaining records of work quality.

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- Record basic information on the quality performance.
- Maintain records of work quality.

LEARNING INSTRUCTIONS:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below
3. Read the information written in the “Information Sheets 1 & 2”. On page 53 & 57 and Try to understand what are being discussed.
4. Accomplish the “Self-checks 1&2” in each information sheets on pages 55 & 56.
5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-checks).
6. If you earned a satisfactory evaluation proceed to “Operation sheets 1 on pages 64. And do the LAP Test on page 65”. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Activity.
7. After you accomplish Operation sheets and LAP Tests, ensure you have a formative assessment and get a satisfactory result; then proceed to the next LG.

Information Sheet-1	Recording basic information on the quality performance.
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1.1. Record keeping of procedures of basic information on the quality performance.

Recording is the process of capturing data or translating information to a recording format stored on some storage medium, which is often referred to as a record or, if an auditory medium, a recording.

The following table shows some instruction and guidelines which will help you while you are recording basic information on the quality performance of the tasks.

Table 1.1. Basic information on the quality performance of the tasks

<p>Record information accurately:-check the quality of records.</p>	<p>Review your methods for recording and storing information: - re-evaluate your methods, systems and procedures on a regular basis to check that they are as effective and efficient as possible.</p>
<p>Record information in appropriate detail: - you will need to keep a different level of detail on information, depending on how significant it is and how you anticipate using it.</p>	<p>Introduce new methods of recording and storing information as needed: - regularly review whether the supply of information continues to meet requirements.</p>
<p>Record and store information using accepted formats, systems and procedures: - your organization may have developed formal procedures and systems for storing different types of information, both paper-based and on computer.</p>	<p>Analyze and correct any breakdowns in the methods of recording and storing information: - when systems do breakdown, analyze the cause, and take action</p>
<p>Make sure you can retrieve information promptly when required:-consider how urgently the information may be needed.</p>	

1.2. DOCUMENTS AND RECORDS

It is important to understand the difference between a document and a record.

Documents	Records
<ul style="list-style-type: none"> • <i>Permanent</i> • <i>Describe facility policies and work instructions (Level 1, 2, and 3)</i> • <i>Define systems, processes and procedures</i> 	<ul style="list-style-type: none"> • <i>Filled in as activity occurs (Level 4)</i> • <i>Provide proof that policies were followed or activities performed</i> • <i>Demonstrate processes and procedures are being conducted as required</i>

Document and record all processes and activities. These documents and records should be stored in official files and remain accessible to staff who need them. Base the documents on the prerequisite programs and on the product protection or HACCP plan. If documents are already being kept, review them to make sure they are complete and that they follow the necessary standards.

Follow these three general principles to develop records and documents:

- . Keep it short and simple. Use bullet points and flow diagrams instead of long sentences and lengthy paragraphs.
- Clarity is important. Step-by-step instructions are easily understood.
- Use a standardized, consistent format. Although different programs may need different documents and records, using a similar approach will help staff learn quickly.

At the very least, it is important that records include:

- Who is responsible for a specific duty;
- How they are to perform the duty;
- When they are to perform the duty;

- Spaces for the date and initials of the person who is responsible for the record(s); and
- Spaces for stating deviation findings (unusual situations or results outside of acceptable limits), and the actions taken to that fix that issue.

1.3. Document and Record Control

A controlled document or record must contain the following:

- Title
- Creation/revision date
- Page number
- Prepared by/issued by
- Approved date
- Approval signature

By including this information on each page a facility will be able to maintain control of the document or record. Include this information either in the header (top of the page), footer (bottom of the page) or in a combination of the two. Controlled documentation also ensures that when the system is revised or updated, processors will use only the most up-to-date documents or records. This also helps processors make sure that changes are not made to the system without proper knowledge and approval.

Self-check 1	Written test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. ----- is the process of capturing data or translating information to a recording format stored on some storage medium?(2pts)
2. Write and discuss at least five Basic information on the quality performance of the tasks?(5pts)
3. Write at list three differences between documents and records? (3pts)
4. Write three general principles to develop records and documents(3pts)
5. Write at least four contents when A controlled document or record must contain?(4pts)

Note: Satisfactory rating - 12 points Unsatisfactory - below 12 points
You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____
Rating: _____

Name: _____

Date: _____

Short Answer Questions

1. _____

2. _____
3. _____

4. _____

2.1. Record keeping Systems:-

Active records are those used to conduct current Agency business, and that are generally maintained in office space and equipment. Events in this phase of the lifecycle include creating or receiving records and capturing them in a recordkeeping system.

2.1.1. Creating and Receiving Records:-

Federal agencies need records that document

- ✓ how the agency is organized,
- ✓ what functions it performs,
- ✓ how it carries out those functions,
- ✓ how it relates to other agencies and the public, or
- ✓ Information of value to the agency.

2.1.2. Capturing Records: -

After creating or receiving a record, staffs must capture it by filing, storing, or otherwise systematically maintaining it in a recordkeeping system. Capturing records ensures that the information is accessible to all authorized staff. It also assists offices in dispositioning records in accordance with the applicable records schedules.

An office's records program must capture records to:-

- ✓ maintain adequate and proper documentation and evidence of Agency activities for the time required to meet all program, audit and historical needs;
- ✓ maximize the usefulness of the records while active and allow for interoperability and sharing of records across programs and information systems;
- ✓ allow for timely access and retrieval;
- ✓ safeguard records from loss, misuse, unauthorized access to or modification of information;
- ✓ Facilitate the identification and preservation of permanent records.

Staff should ensure that they capture metadata along with related records, including:

- ✓ the creator or originating organization,
- ✓ the title and subject of the record,
- ✓ the date of the activity,
- ✓ the names of involved parties, and
- ✓ The type of record it is (e.g., report, memorandum).

Agency offices must capture records in a record keeping system that facilitates maintenance and use of the records in an efficient and cost-effective manner.

A recordkeeping system has several components:

- People
- Processes
- Tools

A recordkeeping system must allow records to be:

- ✓ organized for ready access and retrieval,
- ✓ linked to the records schedules,
- ✓ maintained for the time period required by the records schedules, and
- ✓ Cross-referenced to related records stored on special media or in different locations.

Once records are organized within a recordkeeping system, the office must regularly review the system to determine when records are ready to be closed, retired, and destroyed or transferred.

2.2. Performance:

- Is the action or process of performing a task or function?
- Are the capabilities of a machine or product?
- Is the extent to which an investment is profitable?

2.2.1. A Performance Measure:

Is a quantitative tool that provides an indication of an organization's performance in relation to a specified process or outcome?

2.2.2. Performance improvement:

Is defined as a series of administrative and programmatic processes designed for the achievement of organizational and individual results.

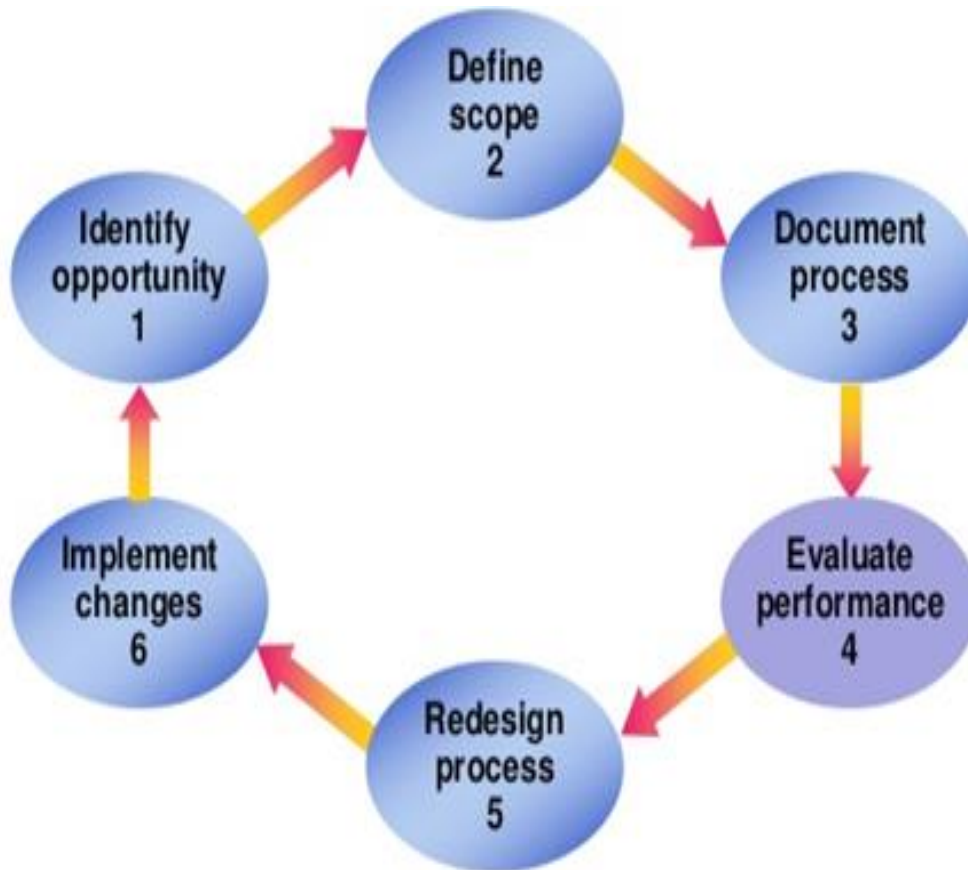


Figure 2.1. procedures for evaluating process performance

2.2.3. The scope of performance measurement

There are various categories of Performance measurements.

- Financial
- Customer and market
- Safety
- Quality
- . Time
- Flexibility
- Innovation and learning
- Productivity

2.3. Measuring Performance in Operations .

2.3.1. Service quality Dimensions: are

- ✓ Tangibles: physical facilities, uniforms, equipment, vehicles, and appearance of employees (i.e., the physical evidence).
- ✓ Reliability: ability to perform the promised service dependably and accurately.
- ✓ Responsiveness: willingness to help customers and provide prompt recovery to service upsets.
- ✓ Assurance: knowledge and courtesy of the service- providers, and their ability to inspire trust and confidence in customers.
- ✓ Empathy: caring attitude and individualized attention provided to its customers. Service quality

2.3.2. Costs of Quality

- ✓ Prevention costs - reducing the potential for defects
- ✓ Appraisal costs - evaluating products, parts, and services
- ✓ Internal failure - producing defective parts or service before delivery
- ✓ External costs - defects discovered after delivery



Fig 2.2. cost and quality improvement relation

2.3.3. time of Quality

- Time relates to two types of performance measures:

- ✓ the speed of doing something (average) and
- ✓ the reliability of doing something (variance).
- Processing time is the time it takes to perform some task.
- Queue time is a fancy word for wait time—the time spent waiting.
- Cycle time refers to the time it takes to accomplish one cycle of a process that performs work.
- Measuring Performance in Operations
- Manufacturing lead time represents the time between the release of an order to production and shipment to the customer.
- Purchasing lead time is the time required to obtain the purchased item, including order preparation, supplier lead time, transportation, and receiving and storage.
- Sometimes processing, cycle, and lead time are used interchangeably making things confusing in the real world.

2.3.4. Flexibility

- Flexibility is the ability to adapt quickly and effectively to changing requirements.
- Goods and service design flexibility is the ability to develop a wide range of customized goods and services to meet different or changing customer needs.
- Volume flexibility is the ability to respond quickly to changes in the volume and type of demand.

2.3.5. Innovation and Learning

- Innovation:
 - ✓ refers to the ability to create new and unique goods and services that delight customers and create competitive advantage.
- Learning:
 - ✓ refers to creating, acquiring, and transferring knowledge and modifying the behavior of employees in response to internal and external change.

2.3.6. Productivity

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- $\text{Productivity} = \frac{\text{Quantity of Output}}{\text{Quantity of Input}}$
- Productivity is expressed in one of three forms:
 - 1. Total Productivity**
= Total Output/Total Input
 - 2. Multifactor Productivity**
= Total Output/Subset of Inputs
 - 3. Partial Factor Productivity**
= Total Output/Single Input

2.4. Factors that affecting performance

- Inappropriate behavior
 - ✓ Negativism, lack of cooperation, hostility
 - ✓ Failure or refusal to follow instruction
 - ✓ Insabordnation
 - ✓ Unwillingness to take responsibility
- Resistance to change
 - ✓ Unwillingness, refusal or inability to update skills
 - ✓ Resistance to policy, procedure, work method changes
 - ✓ Lack of flexibility in response to problems
- Inappropriate interpersonal relations
 - ✓ Inappropriate communication style: over- aggressive, passive
 - ✓ Impatient, inconsiderate, argumentative
 - ✓ Destructive humor, sarcasm, horseplay, fighting
 - ✓ Inappropriate conflict with others, customers, co- workers, supervisors
 - ✓ Inappropriate physical behavior
 - ✓ Smoking, eating, drinking in inappropriate places
 - ✓ Sleeping on the job
 - ✓ Alcohol or drug use
 - ✓ Problems with personal hygiene
 - ✓ Threatening, hostile, or intimidating behavior

2.5. Goals of quality standard

- Improve uniformity of the product
- Decrease in rejection rate
- Higher productivity
- Lower production cost
- Increase in the moral of employees

Self-check 2	Written test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. Define the meaning of Performance and Performance Measure? (2 pts)
2. Write at least four component of recordkeeping system? (4 pts)
3. What is recording and how it is made? Discuss briefly? (2 pts)
4. Discuss how agencies create and Receive Records? (2 pts)
5. Describe how a recordkeeping system must allow records. ? (2 pts)

Note: Satisfactory rating - 6 points

Unsatisfactory - below 6 points

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____

Date: _____

Short Answer Questions

1. _____

2. _____

Operation Sheet 1	Maintain accurate work records
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Techniques of work records

Step1: wear appropriate personal protective equipment's

Step2: select necessary tools and equipment

Step3: list major recording tasks and activities.

Step4: collect all important information list on step2.

Step5: records the task in paper sheet and excel sheet.

Step6: clean all used necessary tools and equipment's and restore on proper place

LAP Test	Practical Demonstration
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Name: _____ Date: _____

Time started: _____ Time finished: _____

Instructions: Giving the necessary equipment's and PPEs you are required to perform the following tasks within 3 hours.

Task1. Apply techniques of proper work records

Instruction Sheet**Learning Guide #17: Study causes of quality deviations**

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –

- Investigating and reporting causes of deviations from final outputs or services.
- Recommending suitable preventive action.
- Identifying causes of deviation

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- Investigate and report causes of deviations from final outputs or services.
- Recommend suitable preventive action.
- Identify causes of deviation

LEARNING INSTRUCTIONS:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below
3. Read the information written in the “Information Sheets 1, 2, & 3”.on pages 67, 72 & 76 try to understand what are being discussed.
4. Accomplish the “Self-checks 1, 2 & 3” in each information sheets on pages 71, 80& 84.
5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-checks).
6. After you accomplish Self-checks 1, 2 and 3” ensure you have a formative assessment and get a satisfactory result; then proceed to the next LG.

1.1. Investigating and reporting cause of deviation

- Investigation: - Is a formal and documented review of an issue, deviation, incident or problem, to identify its root cause and determine the actions required to address it.
- Carry out a systematic or formal inquiry into an incident or allegation so as to establish the truth.

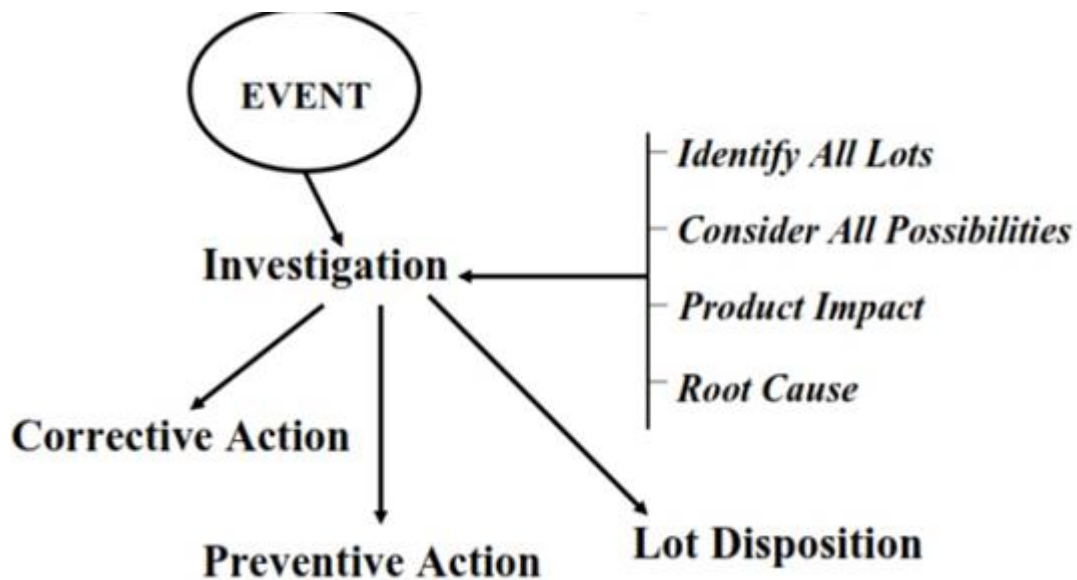


Figure .1.1. Graphical representation of investigation process

1.1.1. Purpose of Investigations

- Identify, Correct and Evaluate Product Impact / Disposition
- Prevent Similar Events from Happening in the Future

1.1.2. Content of Investigation Report

- Reason for the Investigation
- ✓ What Event or Finding Prompted Investigation
- ✓ How and When Identified
- Describe What Happened
 - When, Where, What Immediate Actions Were Taken
- Identify Other Batches Potentially Affected
- Identify Root Cause, Where Possible

- Identify Corrective Actions
- Identify Preventive Actions
- Evaluate Product Impact / Disposition
- ✓ Additional Testing / Results
- ✓ Justify Accept / Reject Criteria
 - Provide Follow-up to Assure Effectiveness

1.2. Definition of deviation

- It is a departure from standard procedures or specifications.
- or Departure from a process/Written procedures or unexpected result or Unexpected Event,

1.2.1. Types of Deviations:

Examples of deviations raised from different functional areas of business:

- Production Deviation.
- Quality Improvement Deviation
- Audit Deviation
- Customer Service Deviation
- Technical Deviation
- Material Complaint /Deviation
- System Routing Deviation

1.2.2. Deviation Categorization

The deviation is classified into one of the following categories:

- Incident: - The event may be considered as Incident when it is irrelevant event or not impacting product's quality.

The following are possible examples of incidents.

- ✓ Temporary power failure in a warehouse where no temperature sensitive materials are stored, with no temperature excursion from the established range.
- ✓ Production process parameters or environmental monitoring data reach alert levels but are still within acceptable range.
- Minor Deviations: - When the deviation does not affect any quality attribute, a critical process parameter, or an equipment or instrument critical for process or control, it would be categorized as Minor deviation.

Possible examples of minor deviations are given below:

- ✓ Skip of FEFO principle (first expired-first out) in raw material handling.
- ✓ Pressure differential out of established limits in class D washing area.
- ✓ Inadequately trained personnel to perform warehouse cleaning activities.

- Major Deviations: - When the deviation affects a quality attribute, a critical process parameter, an equipment or instrument critical for process or control, the deviation is categorized as Major requiring immediate action, investigation, and documented. Possible examples of major deviations are given below:

- ✓ Production started without line clearance.
- ✓ Operational parameter out of range for a parameter defined as non-critical.
- ✓ Untrained personnel responsible for segregating the approved and rejected raw material in the warehouse

- Critical deviation:-. When the deviation affects a quality attribute, a critical process parameter, an equipment or instrument critical for process or control, of which the impact to patients (or personnel or environment) is highly probable, including life threatening situation, the deviation is categorized as Critical requiring immediate action, investigated, and documented. Possible examples of critical deviations are given below:

- ✓ Expired or rejected of component used.
- ✓ Sterilization record of product-contact material used in aseptic filling process not available or unacceptable.
- ✓ Incomplete inactivation stage of fermentation.
- ✓ Temperature out of control limit during detoxification stage.

1.2.3. Considerations for Deviation Management

- Develop policy on deviation
- Determine approach i.e. differentiation among various deviations
- Tracking of deviation
- Trending of deviation
- Create database to assist in tracking and trending of deviations.

1.3. Procedures of investigating and reporting causes of deviations from final outputs or services

While identifying ways to effectively implement irrigation water distribution organizations often search for causes of nonconformance in water distribution operations to obtain deviations. Deviations are trends investigated for corrective action and preventive action. Quality impact of deviations is usually identified upon reviewing the scope of nonconformance and trends of nonconformance in processes, material, suppliers, events etc. A full closed loop process would be necessary to minimize deviations. The following are sources for identifying deviations:

- Internal, external, supplier audits
- Customer complaint
- Process controls e.g.: statistical analysis
- Root cause analysis
- Quality risk assessments
- Product or materials deviation
- Deviation of manufacturing facility, equipment, operations, distribution.

Self-check 1	Written test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. Define the meaning of Investigation?(2 pts)
2. Define the meaning of deviation?(2 pts)
3. Write at least 3 Purpose of Investigations? (3 pts)
4. Write at least 4 Content of Investigation Report? (4 pts)
5. Write at least 3 types of deviations? (3 pts)
6. Write at least four most consideration point for Deviation Management? (4 pts)

Note: Satisfactory rating - 9 points

Unsatisfactory - below 9 points

You can ask you teacher for the copy of the correct answers.

Answer Sheet 1

Score = _____

Rating: _____

Name: _____

Date: _____

Short Answer Questions

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

Information Sheet-2

Recommending suitable preventive action.

2.1. introduction to suitable preventive action

- Preventive action is an action taken to reduce or eliminate the probability of specific undesirable events from happening in the future. Risk analysis and assessment techniques are used to calculate the probability of specific negative events, in order to determine the cost-effectiveness of potential preventative actions.
- **A preventive action** is a change implemented to address a weakness in a management system that is not yet responsible for causing nonconforming product or service.

Candidates for preventive action generally result from suggestions from customers or participants in the process but preventive action is a proactive process to identify opportunities for improvement rather than a simple reaction to identified problems or complaints. Apart from the review of the operational procedures, the preventive action might involve analysis of data, including trend and risk analyses and proficiency-testing results.

The focus for preventive actions is to avoid creating non conformances, but also commonly includes improvements in efficiency. Preventive actions can address technical requirements related to the product or service supplied or to the internal management system.

2.2. The differences between corrective action and preventive actions

I. Corrective Action Process

- Locate and document the root cause of the nonconformity.
- Scan the entire system to ensure no other similar nonconformity could occur.
- Analyze the effect such nonconformity may have had on a product or service produced before the nonconformity was discovered, and take action appropriate to the severity of the situation by either recalling the product, notifying the customer, downgrading or scrapping product.
- Establish thorough follow-up to ensure the correction is effective and recurrence has been prevented.

II. Preventive Action Process

- Take proactive steps to ensure a potential nonconformity does not occur.
- Employ process and system analysis to determine how to build in safeguards and process changes to prevent nonconformance. For example, use a failure mode and effects analysis to identify risks and potential deficiencies and to set priorities for improvement.

III. Developmental Action Process (Treated as Preventive Actions)

- Initiate an improvement project, with project plans, justification for planned expenditures, resource controls and evaluation.
- Contain a related series of actions, often separated by long periods so you can wait and see progress and results.
- Use a variety of appropriate disciplines at different times during the project.
- Establish a means for communicating what has been done and what has to be done to facilitate communication about changes to project team members.
- Include a clear trail of actions taken and decisions made to substantiate the decision to proceed, document lessons learned and avoid needless reinvention on future similar projects.

Documenting and controlling corrective and preventive actions ensure that appropriate action was taken within a reasonable timeframe and it facilitates resulting changes of work.

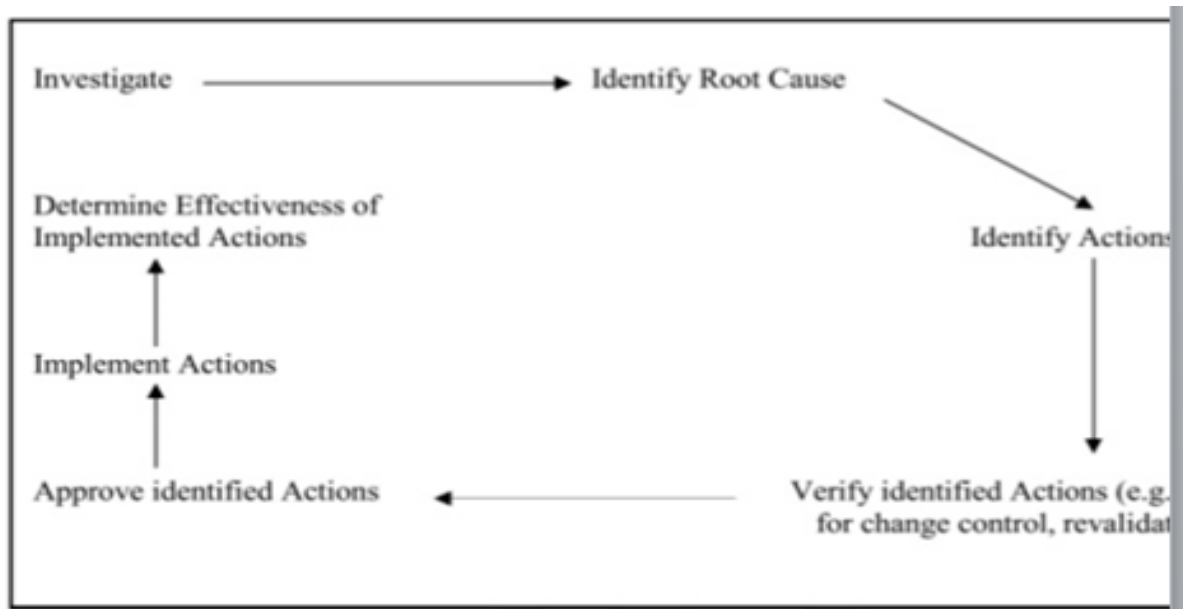


Figure 2.1. Corrective and preventive action strategy

2.3. Problem Solving Techniques

Problem solving, the isolation and analysis of a problem and the development of a permanent solution, is an integral part of the quality- improvement process”.

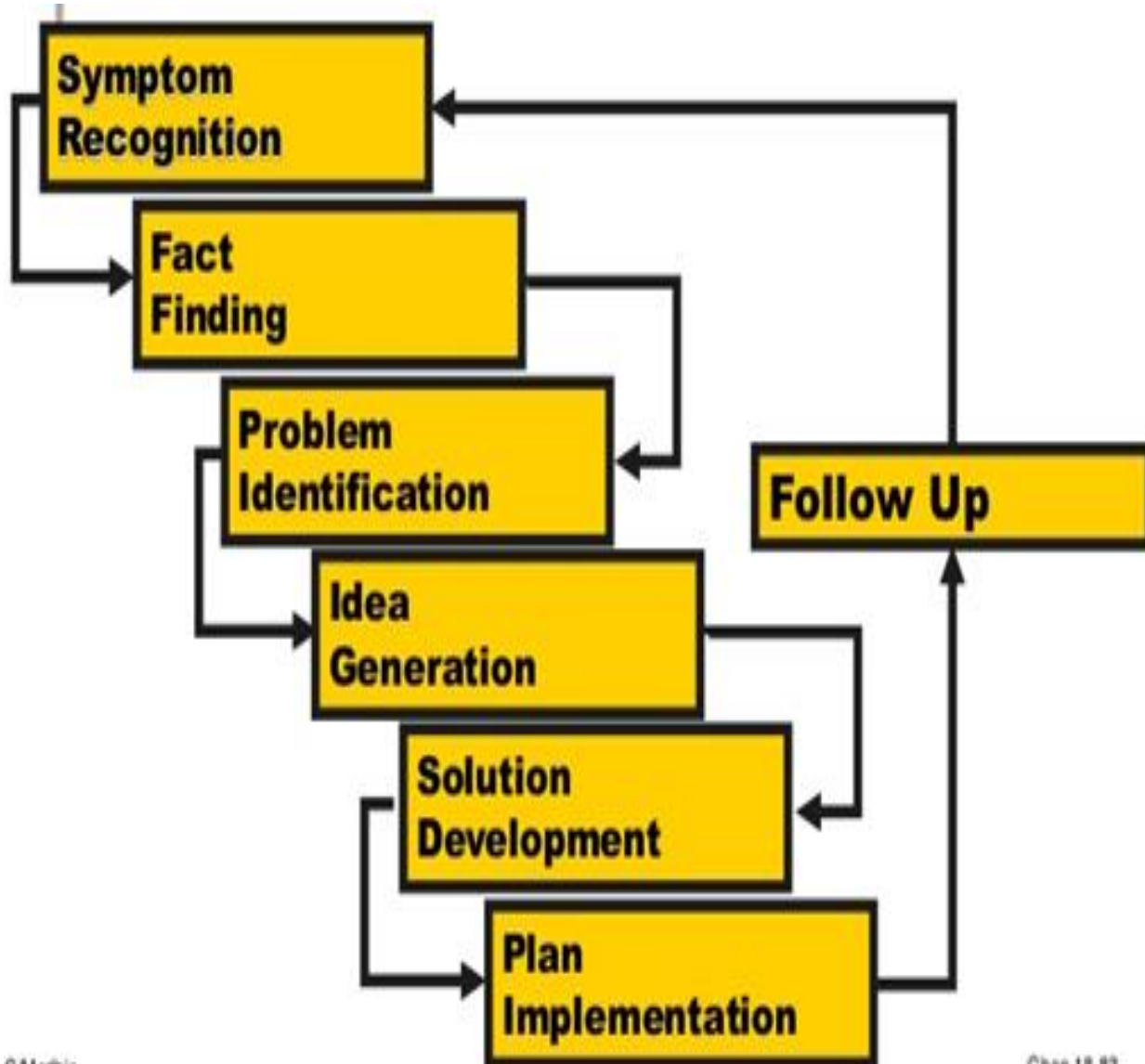


Figure 2.2. Problem Solving Process

Self-check 2	Written test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. Differentiate between corrective action and preventive actions?(3 pts)
2. List down ways of avoiding misconceptions between corrective action and preventive actions? (3 pts)
3. List down the purposes of Developmental Action Process (Treated as Preventive Actions)? (3 pts)
4. What are the major sources for identification of quality deviations? (3 pts)

Note: Satisfactory rating - 6 points

Unsatisfactory - below 6 points

You can ask you teacher for the copy of the correct answers.

Answer Sheet 2

Score = _____

Rating: _____

Name: _____

Date: _____

Short Answer Questions

1. _____

2. _____

3. _____

4. _____

3.1. Causes of quality deviations in design and construction

Quality deviation data are collected from nine fast-track industrial construction projects. The data are collected after the construction phase of the projects and identify the direct costs associated with rework (including redesign), repair, and replacement. Analyses of the data indicate that deviations on the projects accounted for an average of 12.4% of the total project costs.

3.1.1. Contamination

One of the most common causes of process deviation (especially in batch production) is contamination during a previous step or an ingredient impurity. The technicians might notice that cells are dying but not be sure what is killing them. Often this points to an impurity of some kind, such as contamination with bacteria, mycoplasma or viruses. But having the right data analysis processes can help you better identify the source of the contamination.

3.1.2. Equipment failure

If a piece of equipment comes loose or a part is broken or malfunctions, it can cause problems in your process. Or, there could be a problem with one of the sensors. Maybe the database is compressing the data in a way that causes unusual readings (or worse, failing to make unusual readings obvious). That doesn't necessarily mean the production is wrong, the data could be wrong, but even then you need to fix it. Because if the data is wrong, you cannot sell the product, since it's not compliant. The key is to be able to fix the problem before it affects the batch by applying predictive maintenance. For that, you must know that critical quality attributes were not affected and that you have caught the deviation in time.

3.1.3. Human Error

If a process is not followed correctly, a stainless steel reactor wasn't completely cleaned between batches, or chemicals were not properly flushed away, it could affect the next production run. Humans can, and do make mistakes, but don't be too quick to blame all

production problems on human error. Especially in today's heavily automated world, human error is hopefully less and less common in pharma production. If you are seeing a large number of deviations from human error, it's important to look at whether your process was designed properly, and if your operators have the right training.

3.1.4. Raw Material Problems

If there is a problem with the raw material that goes undiscovered, perhaps because it's not properly measured or tested, you had a change in supplier or media, or it was contaminated during transport, you could start seeing unexpected deviations. These are often easy to spot because they create specific variations, but the sooner you discover them the better. They could impact the quality of production otherwise.

3.1.5. Process Interruption

If your process is interrupted for some reason, whether from equipment failure, power outage or another reason, your processes compromised. It's important that you have the metrics and data available to be able to validate the critical process parameters to know if a short power interruption or other issue has caused an irreparable deviation to your process.

3.1.6. Process unknowns

There could be many unknowns in your production process or factors that impact each other in combination. Multiple unknown variables could be affecting each other and leading to deviations in your processes.

Self-Check 3	Written Test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. Write at least four Causes of quality deviations in design and construction activity ?(4pts)
2. How Contamination was Causes of quality deviations?(3 points)
3. How Equipment failure was Causes of quality deviations?(3pts)
4. How Human Error was Causes of quality deviations?(3pts)
5. How Human Error was Causes of quality deviations?(3pts)

Note: Satisfactory rating - 8 points Unsatisfactory - below 8 points
You can ask you teacher for the copy of the correct answers.

Answer Sheet 3

Score = _____
Rating: _____

Name: _____

Date: _____

Short Answer Questions

1. _____

2. _____

3. _____

4. _____

5. _____

Instruction Sheet	Learning Guide #18: Complete documentation
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This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –

- Recording information on quality and other indicators of service performance
- Recording all service processes and outcomes.

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- Record information on quality and other indicators of service performance
- Record all service processes and outcomes.

LEARNING INSTRUCTIONS:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below
3. Read the information written in the “Information Sheets 1 and 2. Try to understand what are being discussed.
4. Accomplish the “Self-checks 1 and 2” in each information sheets on pages 89 and 95
5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-checks).
6. After you accomplish self-check 1 and 2, ensure you have a formative assessment and get a satisfactory result; then proceed to the next LG.

Information Sheet-1

Recording information on quality and other indicators of service performance.

1.1. Ways of recording information on quality and other indicators of service performance

1.1.1. Key Performance Indicators (KPI)

Key Performance Indicators, also known as KPI or Key Success Indicators (KSI) help an organization define and measure progress toward organizational goals. Once an organization has analyzed its mission, identified all its stakeholders, and defined its goals, it needs a way to measure progress toward those goals. Key Performance Indicators are those measurements.

Key Performance Indicators are quantifiable measurements, agreed to beforehand, that reflect the critical success factors of an organization. They will differ depending on the nature of the organization.

- TVET colleges may focus its Key Performance Indicators on the number of trainers who successfully qualified the COC.
- A business may have as one of its Key Performance Indicators the percentage of its income that comes from return customers.
- A Customer Service Department may have as one of its Key Performance Indicators, in line with overall company KPIs, percentage of customer calls answered in the first minute.
- A Key Performance Indicator for a water delivery organization might be number of clients used safe drinking water during the year.

Whatever Key Performance Indicators are selected, they must reflect the organization's goals, they must be key to its success, and they must be quantifiable (measurable).

- Key Performance Indicators usually are long-term considerations. The definition of what they are and how they are measured do not change often. The goals for a particular Key Performance Indicator may change as the organization's goals change, or as it gets closer to achieving a goal.

- KPI should reflect the organizational goals. An organization that has as one of its goals "to be the most profitable company in our industry " will have Key Performance Indicators that measure profit and related fiscal measures.
- KPI must be quantifiable:-If a Key Performance Indicator is going to be of any value, there must be a way to accurately define and measure it. "Generate More Repeat Customers" is useless as a KPI without some way to distinguish between new and repeat customers. "Be the most popular company" won't work as a KPI because there is no way to measure the company's popularity or compare it to others.
- KPI must be key to organizational success:-Many things are measurable. That does not make them key to the organization's success. In selecting Key Performance Indicators, it is critical to limit them to those factors that are essential to the organization reaching its goals. It is also important to keep the number of Key Performance Indicators small just to keep everyone's attention focused on achieving the same KPIs.

1.2. Uses of KPI

You use Key Performance Indicators as a performance management tool.

- KPIs give everyone in the organization a clear picture of what is important, of what they need to make happen.
- You use that to manage performance.
- You make sure that everything the people in your organization do is focused on meeting or exceeding those Key Performance Indicators.
- Show what the target for each KPI is and show the progress toward that target for each of them. People will be motivated to reach those KPI targets.
- KPI is important in selection of quality of service delivered or the product of the company. Every strategy, employment or business processes have measures of success. Without a measure of success, it is difficult to evaluate the extent to which a person or a business process can be effective.

1.2.1. KPI as strategic measure, is necessary to meet the following elements:

- Can be a means of communication and directly related to the chosen strategy of the company ;

- Quantifiable, can be evaluated objectively;
- Indicators can be calculated ;
- Target setting for improvement can be done ;
- Possibility of benchmarking with other companies to do;
- Measurement is still valid (validity of measures - not old invalid measures);
- Data and resources available (availability of data and resources);
- Measurement does not exceed the cost of the benefit ;

Self-Check 1	Written Test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. How to Use of key performance indicators in different sectors?(3 points)
2. Write at least four elements KPI as strategic measure?(4pts)
3. How Key Performance Indicators are quantifiable measurements?(3pts)
4. Write at least four use of key performance indicators?(4pts)

Note: Satisfactory rating - 7 points

Unsatisfactory - below 7 points

You can ask you teacher for the copy of the correct answers.

Answer Sheet 1

Score = _____

Rating: _____

Name: _____

Date: _____

Short Answer Questions

1. _____

2. _____

3. _____

4. _____

Information Sheet-2

Recording all service processes and outcomes.

2.1. Ways of recording all service processes and outcome

2.1.1. Recording outcomes:

• **the critical link between engagement and improvement**

Recording is an essential task in human services. It helps to focus the work of staff and supports effective partnership and planning with people who use services. When adopting outcomes focused approach, practitioners should be encouraged to use recording as an analytical tool and as a way of clarifying the purpose of their interventions. In addition to its role in supporting values and principles of professional practice, recording ensures that there is a documented account of work undertaken. It supports continuity when there is a change of staff and provides a means for managers to monitor work. It becomes a major source of evidence when there are critical incidents or enquiries. Recording is also necessary for planning, monitoring and reviewing progress, at individual, service, organizational and locality levels.

• **Recording outcomes**

Assessment involves a process of investigation, working with the individual, their family and others to capture their story and the outcomes important to them. Following assessment, the next step is to work with the person to priorities outcomes and agree a support plan, with identified actions for all involved. At review, the practitioner discusses with the person whether and to what extent they have achieved the relevant outcomes. The review should include discussion of all outcomes, not just those identified in the plan. This allows both for identification of new issues and recognizes the impact of any support on multiple outcomes.

Key questions in recording outcomes might include:

- ✓ What are the key outcomes that are important to this person?
- ✓ What are the main issues in relation to the identified outcomes?
- ✓ What actions are required to be taken to achieve the outcomes, and when?
- ✓ What role might the person/their family/natural supports play in this?
- ✓ What other support/services might lead to improved outcomes?
- ✓ What's already working and what's been changing toward what you want?
- ✓ How will you know that you have achieved those outcomes?

- ✓ How well are the outcomes being achieved?
- ✓ What role is being played by the person/ natural supports in achieving outcomes?
- ✓ What is being done by services to support the achievement of outcomes?
- ✓ What more/else needs to happen?
- ✓ What are the outcomes important to this person now?
- ✓ Are there other outcomes being achieved than those identified in the support plan?
- ✓ Are some elements of support no longer required?

While the examples above indicate challenges around recording outcomes, it is important to acknowledge that recording can itself be viewed as burdensome by staff. Although most staff recognize recording as necessary, the time involved can be resented for taking them away from their real job of ‘working with people, particularly if they don’t see the value of the information generated.

- **Value demands:**

The professional values include respecting the service user, recording from a person-centered perspective and reflecting the persons’ story. However, the record also has a role in surveillance aspects of social work, causing tensions with values.

- **Functional demands**

Involve establishing eligibility, communication with providers and sharing information with colleagues. The requirement to record negative aspects of an individual’s circumstances to establish eligibility was viewed as being in conflict with person - centered values and potentially having a detrimental effect on self-esteem.

- **Accountability demands:**

Records may be subject to legal or other scrutiny and may be used for performance purposes. Defensive recording was practiced in some cases where challenge was anticipated, but the pressure created by volume of work meant that systematic recording could not be sustained in all cases, leaving the worker potentially vulnerable. Two thirds of respondents felt that recording systems were designed primarily to produce management information and PIs, which might not benefit service users or staff.

2.2. Communicate effectively within defined workplace procedures

You might have different levels of management responsibility during your career, from handling projects to running departments or overseeing a specific company function. If you become a business owner or are hired to run a company, you’ll need to manage the

workplace effectively to meet your goals and stay in business. The key to managing an effective workplace is first to define “effective,” and then set strategies, policies and procedures for meeting that definition.

2.2.1. Effective:-

On the most basic level, a company is "effective" if it makes a profit. To achieve profitability, you'll need to create an environment in which people with different skills working in different areas can form an effective and efficient unit. This requires setting certain outcome goals for employees, such as specific levels of sales and productivity levels. It also requires setting performance goals such as filling orders on time and keeping accurate financial records. By creating specific goals and parameters, you develop a sound strategy for an effective workplace.

2.2.2. Set Outcome Goals:-

To be effective, your employees must know the company's goals beyond profitability. The marketing team, for example, must know the goals of the sales department so it can create advertising and promotions that support those efforts. The finance and production departments must work together to understand how to control production costs without reducing quality. Set big-picture goals for each department, discussing with the staff why the company has each department in the first place. Setting long-term strategies helps your staff create targeted tactics to reach those outcomes.

2.2.3. Set Performance Goals

Once your employees know their purpose within the company, create individual performance goals for each one. Set numeric goals with deadlines, where possible. For example, the marketing department might work to increase traffic to your website, add a new distribution channel or increase sales among a specific target customer group. Your finance department might be tasked with increasing profit margins by reducing overhead costs, decreasing debt by a specific amount each quarter or decreasing payroll taxes by adding voluntary employee benefits. Each staff member should have a detailed, written job description and be given an annual review to determine his effectiveness. To maximize performance, provide ongoing worker training and make sure staff have the tools they need to perform their jobs.

2.2.4. Create Personnel Policies:-

In addition to setting outcome and performance goals, you must set individual behavior goals to keep your workplace running smoothly. This requires you to create a company handbook or employee manual that sets parameters for workplace behavior.. Negative or dishonest employees can reduce morale, derail productivity and increase your turnover. Annual reviews should include managers evaluating subordinates and subordinates providing feedback on superiors.

2.2.5. Monitor Your Progress:-

Waiting until the end of the year to see if you met your goals can be a recipe for disaster. Instead, track and analyze your outcome goals and performance goals each month. Review your annual projections to determine if you are on track to meet your goals or if you need to make changes. If an employee or department aren't meeting the goals you set, that's not necessarily a sign of poor performance. A variance analysis might determine that you set unrealistic goals and that the employee or department is as effective as can be expected based on the realities of your situation vs. your projections. Communications skills are critical to managing effective workplaces, so keep your subordinates informed of their progress.

2.3. Why Good Documentation is essential?

- ✓ Good documentation is an essential part of the quality assurance system.
- ✓ Good documentation practice is an expected practice.
- ✓ Correct, complete, current, and consistent information effectively meet customer and stakeholder' requirements
- ✓ Helps to reduce observations raised on inadequate documentation practices.

2.3.1. Contents of Good Documentation

- ✓ Approve, review and update documents
- ✓ Changes & current revision status of documents identified
- ✓ Relevant versions of applicable documents available at points of use
- ✓ Documents remain legible and readily identifiable
- ✓ Documents of external origin identified and their distribution controlled
- ✓ Prevent unintended use of obsolete documents, and archiving

2.3.2. Poor documentation practices

- ✓ Document error correction not signed/dated, and didn't include a reason for the correction
- ✓ Write-overs, multiple line-through and use of "White-out" or other masking device
- ✓ Sample sequence table and audit trail not documented (if its not documented, it didn't happen)
- ✓ Out-of-specification (OOS) procedure not detailed enough; flow chart and /or check-list not available.

2.4. How are mistakes corrected in quality documents

- ✓ Draw a single line through the error
- ✓ Make the correction next to the error
- ✓ Write an explanation for the error
- ✓ Sign and date the correction.

Self-Check 2	Written Test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. How recording outcome is an essential task in human services?(2)
2. Write five Key questions in recording outcomes might include?(5)
3. Why Good Documentation is essential?(3)
4. How are mistakes corrected in quality documents?(4pts)
5. Write four Contents of Good Documentation?(4pts)

Note: Satisfactory rating - 9 points Unsatisfactory - below 9 points
You can ask you teacher for the copy of the correct answers.

Answer Sheet 2

Score = _____
Rating: _____

Name: _____

Date: _____

Short Answer Questions

1. _____
2. _____
3. _____
4. _____
5. _____

Reference

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