Ethiopian TVET-System

INFORMATION TECHNOLOGY SUPPORT SERVICE

Level I

Based on May 2011 Occupational Standards

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Module Title: Receive and Responded workplace environment TTLM
Code: ICT ITS1 TTLM09 0919 v1
This module includes the following Learning Guides

LG14: Assess Own Work
LG Code: ICT ITS1 M06 L01- LG14
LG15: Assess Quality of Received Articles
LG Code: ICT ITS1 M06 L02-LG 15
LG16: Record Information
LG Code: ICT ITS1 M06 L03- LG16

LG17: Study Causes of Quality Deviations

LG Code: ICT ITS1 M06 L04 LG-17
LG18: Complete Documentation
LG Code: ICT ITS1 M06 L05LG 18

Instruction Sheet	LG14: Assess Own Work

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

- Standards against workplace being undertaken.

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 completed work against workplace standards relevant to the operations being undertaken.
- Demonstrate an understanding on how the work activities and completed work relate to the next process and to the final appearance of the activity.
- Identify and isolate faulty pieces or final products in accordance with company policies and procedures.
- Record and report faults and any identified causes in accordance with workplace procedures.

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below 3 to 6.
3. Read the information written in the information “Sheet 1 in page 3 respectively.
4. Accomplish the “Self-check 1 in page 10 respectively.

Information Sheet 1	Standards Against Workplace Being Undertaken

- Apply quality standards and procedures
- Quality Assurance and Quality Control in general
- What is Quality?
  - ✓ The ongoing process of building and sustaining relationships by assessing, anticipating, and fulfilling stated and implied needs.
  - ✓ Quality is the customers' perception of the value of the suppliers' work output.
  - ✓ A product or process that is Reliable, and that performs its intended function is said to be a quality product.
  - ✓ Quality is nothing more or less than the perception the customer has of you, your products, and your services!
  - ✓ Quality is nothing more or less than the perception the customer has of you, your products, and your services!

- **Quality Policy**

  Quality policy is a document jointly developed by management and quality experts to express the quality objectives of the organization, the acceptable level of quality and the duties of specific departments to ensure quality. Your quality policy should:
  - ✓ State a clear commitment to quality
  - ✓ Recognize customer needs and expectations
  - ✓ Be actively supported by senior management
  - ✓ List the quality objectives you want to achieve
  - ✓ Be understood by everyone in the organization
  - ✓ Be consistent with your organization's goals
  - ✓ Be maintained throughout your organization
  - ✓ Be applied throughout your organization

- **Responsibility and Authority**

  Define quality system responsibilities, give quality system personnel the authority to carry out these responsibilities, and ensure that the interactions between these personnel are clearly specified. And make sure all of this is well documented. This requirement must be met for those who:-
  - ✓ Manage quality system work

- ✓ Perform quality system work
- ✓ Verify quality system work

- **Resources**

Identify and provide the resources that people will need to manage, perform, and verify quality system work. Make sure that:

- ✓ Only trained personnel are assigned
- ✓ Managers have the resources they need to verify work.
- ✓ Internal auditors have the resources they need.

- **Management Representative**

Appoint a senior executive to manage your quality system and give him or her necessary authority. This senior executive must ensure that your quality system is developed and implemented. This executive must:-

- ✓ Monitor the performance of your quality system
- ✓ Control the performance of your quality system
- ✓ Report on the performance of your quality system
- ✓ Help improve the performance of your quality system
- ✓ Act as your organization's spokesperson on quality

- **Quality System**

Develop a quality system and a manual that describes it. Your quality system should ensure that your products conform to all specified requirements. Your quality manual should:-

- ✓ State your quality policy.
- ✓ List your quality objectives.
- ✓ Provide an overview of your quality system.
- ✓ Describe the structure of your organization.
- ✓ Discuss your quality system procedures.
- ✓ Introduce your quality documents and records.
- ✓ Teach people about your quality system.
- ✓ Control quality system work practices.
- ✓ Guide the implementation of your quality system.
- ✓ Explain how your quality system will be audited.

- **Quality Assurance**

Quality Assurance is a system of management activities involving planning, implementation, assessment, and reporting to make sure that the end product (i.e., environmental data) is of the type and quality needed to meet the needs of the user.

- **Quality Control**

Quality Control is the overall system of operational techniques and activities that are used to fulfill requirements for quality. The QC activities are used to produce and document the quality of the end product.

- **Quality Management Plan (QMP)?**

A QMP is a formal plan that documents an entity's management system for the environmental work to be performed. The QMP is an "umbrella" document which describes the organization's quality System in terms of the organizational structure, functional responsibilities of management and staff, lines of authority, and required interfaces with those planning, implementing, and assessing all environmentally related activities conducted.

- **Procedures of Quality system**

Develop and implement quality system procedures that are consistent with your quality policy.

- ✓ Develop your procedures for all areas of your quality system.
- ✓ Document your procedures, and keep them up to date.
- ✓ Each procedure should:
- ✓ Specify its purpose and scope.
- ✓ Describe how an activity should be carried out.
- ✓ Describe who should carry out the activity.
- ✓ Explain why the activity is important to quality.
- ✓ Describe when and where it should be carried out.
- ✓ Explain what tools and equipment should be used.
- ✓ Explain what supplies and materials should be used.
- ✓ Explain what documents and records should be kept.

Procedures may also refer to detailed work instructions that explain exactly how the work should be done.

- **Quality Management Plan (QMP)?**

A QMP is a formal plan that documents an entity's management system for the environmental work to be performed. The QMP is an "umbrella" document which describes the organization's quality System in terms of the organizational structure, functional responsibilities of management and staff, lines of authority, and required interfaces with those planning, implementing, and assessing all environmentally related activities conducted.

- **Quality planning**

Develop quality plans that show how you intend to fulfill quality system requirements. You are expected to develop quality plans for products, processes, projects, and customer contracts. Your quality plans should list the quality objectives you intend to achieve, and the steps you intend to take to achieve these objectives. When you construct your quality plan, consider the following questions:

- ✓ Do you need to purchase any new equipment or instruments, or any new inspection and test tools?
- ✓ Do you need to carry out any special training in order to fulfill all quality system requirements?
- ✓ Do you need to improve design, production, testing, inspection, installation, or servicing procedures?
- ✓ Do you need to improve your quality measurement and verification procedures?
- ✓ Do you need to develop any new measurement methods or instruments?
- ✓ Do you need to clarify your organization's standards of acceptability?
- ✓ Do you need to develop any new documents, forms, reports, records, or manuals?
- ✓ Do you need to allocate more resources in order to achieve the required levels of quality?

- **Quality management standards**

Quality management system (QMS) standards establish a framework for how a business manages its key processes. They can help whether your business offers products or services and regardless of your size or industry. They can also help new businesses start off on the right foot by ensuring processes meet recognized standards, clarifying business objectives and avoiding expensive mistakes.

To comply with the standard you'll first need to implement a QMS. Implementing a QMS can help your business to:

- ✓ Achieve greater consistency in the activities involved in providing products or services
- ✓ Reduce expensive mistakes
- ✓ Increase efficiency by improving use of time and resources
- ✓ Improve customer satisfaction
- ✓ Market your business more effectively
- ✓ Exploit new market sectors and territories

- ✓ Manage growth more effectively by making it easier to integrate new employees
- ✓ constantly improve your products, processes and systems

For example, the quality system of a manufacturing business might include looking at more efficient manufacturing processes or speeding up distribution.

The ISO 9000 series of standards is the main set of International Standards applying to the management of quality systems. It includes ISO 9001, the key internationally agreed standard for a QMS. Businesses can be certified against this standard when they meet its requirements. The ISO 9001:2008 standard

ISO 9001:2008 is the key internationally agreed standard for quality management systems. It is used by over 951,000 businesses in 175 countries worldwide (source: British Standards Institution (BSI), 2010).

The ISO 9001:2008 standard has four elements:

- ✓ Management responsibility - ensuring top level management shows commitment to the quality system and develops it according to customers' needs and the business' objectives
- ✓ Resource management - ensuring the people, infrastructure and work environment needed to implement and improve quality systems are in place
- ✓ Product realization - delivering what customers want, looking at areas such as sales processes, design and development, purchasing, production or service activities
- ✓ Measurement, analysis and improvement - checking whether you have satisfied customers by carrying out other measurements of your system's effectiveness

The advantages of ISO 9001:2008 for your business can include:

- ✓ Greater efficiency and less waste
- ✓ Consistent control of major business processes, through key processes lists - see our example key processes master list - opens in a new window
- ✓ Regulation of successful working practices
- ✓ Risk management
- ✓ Increased customer satisfaction
- ✓ Greater consistency in the quality of products and services through better control of processes
- ✓ Differentiation of your business from its competitors
- ✓ Increased profits

- ✓ Exploitation of new markets, both in the UK and overseas

However, you should also be aware of some of the disadvantages to implementing the standard. These can include:

- ✓ The cost of getting and keeping the certification
- ✓ The time involved
- ✓ Overcoming opposition to implementing change from within the business

The standard is adaptable to your business' needs and resources, though you may need the help of a consultant.

The ISO 9004:2009 standard

ISO 9004:2009 goes beyond ISO 9001:2008 and provides guidance on how you can continually improve your business' quality management system. It also contains information on managing for sustained success. This can benefit not only your customers but also:

- ✓ Employees
- ✓ Owners
- ✓ Suppliers
- ✓ Society in general

By measuring these groups' satisfaction with your business, you'll be able to assess whether you're continuing to improve.

The ISO 9000 series, which includes 9001 and 9004, is based around eight quality management principles that your senior managers should use as a framework for improvements to the business:

- Customer focus - they must understand and fulfill customer needs.
- Leadership - they should demonstrate strong leadership skills to increase employee motivation.
- Involvement of people - all levels of staff should be aware of their responsibilities within the business and the importance of providing what the customer requires.
- Process approach - identifying your essential business activities and considering each one as part of a process.
- System approach to management - managing your processes together as a system, leading to greater efficiency and focus. You could think of each process as a cog in a machine, helping it to run smoothly.
- Continual improvement - this should be a permanent business objective.

- Factual approach to decision-making - senior staff should base decisions on thorough analysis of data and information.
- Mutually beneficial supplier relationships - managers should recognize that your business and its suppliers depend on each other.

Self-Check 1	Written Test

Name:-_____ Date: - _____

Instruction: Answer all the questions listed below, if you have some clarifications- feel free to ask your teacher.

Part I: Choose the correct answer for the following questions and write on the space provided

_____ 1. Standards are sets of rules that outline specification of dimensions, design of operation, materials and performance.

A. Standards B. Quality C. Performance D. None

_____ 2. Key characteristic of quality for the customers include, _____

A. Good design and functionality B. Reliable/Dependable C. Consistency D. All

_____ 3. Quality measured in:-_____. A. Failure or reject rates B. Level of product returns C. Customer satisfaction D. All

_____ 4. Which one of the following are not the main components of quality management?

A. Quality planning C. Quality assurance

B. Quality control D. Quality improvement D. None

_____5. Is systematic process that translates quality rule into measurable objectives and requirements? (Use the list of chose on question number four, Q4).

_____ 6. It means to ensure that the product or service provided meets the specific requirements of the customer. (Use the list of chose on question number four, Q4).

_____ 7. Is any systematic process of checking to see whether a product or service being developed is meeting specified requirements? (Use the list of chose on question number four, Q4).

_____ 8. Quality Improvement is a formal approach to the analysis of performance and systematic efforts to improve it. (Use the list of chose on question number four, Q4).

_____ 9. Which one of the following are not determinants of service quality that may relate to any service/product? A. Competence B. Courtesy C. Credibility D. Security E. None

_____10. Which one of the following is determine the quality standard of computer system?

A. Hard disk capacity B. CPU speed C.RAM size D. All E. None

Part II: Write "True" if the statement is correct otherwise "False" on the space provided

_____ 1. Quality management is focused not only on product/service quality, but also the means to achieve it.

_____ 2. Quality control focuses on the product.

_____ 3. The aim of quality control is simply to ensure that the results generated by the test are correct.

_____ 4. Quality assurance is concerned with much more that the right test is carried out on the right sample.

_____ 5. A quality standard is a documented process intended to control work resulting in a certain level of excellence (quality).

_____ 6. Standards are the key to effective quality management

_____ 7. Service quality is a measure of how well a delivered service matches the customers' expectations.

_____ 8. TQM takes into account all quality measures taken at all levels and involving all company employees.

_____ 9. Quality management Standards (QMS) is standards establish a framework for how a business manages its key processes.

_____ 10. The condition of the sample and sample size affect the quality of results.

Part III: Write the shot answer for the following question neatly and briefly

1. Write at least five criteria of service quality?

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

Instruction Sheet	LG15: Assess Quality of Received Articles

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

- Final product against workplace

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 received materials, articles or final product against workplace standards.
- Measure the materials, articles, or products using appropriate measuring instruments in accordance with workplace procedures.
- Identify and correct the causes of any identified faults in accordance with the workplace procedures.

Learning Instructions:

- Read the specific objectives of this Learning Guide.
- Follow the instructions described below 3 to 6.
- Read the information written in the information “Sheet 1, Sheet 2, Sheet 3 and Sheet 4, Sheet 5 ” in page 3, 22, 29, 33 and 35 respectively.
- Accomplish the “Self-check 1, Self-check t 2, Self-check 3 and Self-check 4, Self-check 5 in page 16, 27, 32, 34 and 37 respectively.
- If you earned a satisfactory evaluation from the “Self-check” proceed to “Operation Sheet 1 in page 18.
- Do the “LAP test” in page 20, 28.

2.1. Overview

Technological advances have made computers an important part of every workplace. Many companies store valuable data on computer systems, databases and networks, and most workplace communication is done using computers and networks. Although computers allow businesses to streamline processes, distribute information quickly and stay competitive, it also allows the potential for security issues that can ultimately affect business operations and integrity.

- **Benefits**

  Because most data is stored on computers and almost all communication is done on an organization's computer network, the security of the data is crucial for the success of an organization. Monitoring workplace computers can be done using a variety of software products that monitor computer networks. This software can also be used to monitor or track employee activity and productivity as well. This ensures data is secure by using the software to block certain websites, alert information technology staff of potential threats, such as computer viruses, as well as monitor computer and Internet usage by employees.

- **Effects**

  Monitoring workplace computers can secure data stored on computer systems, as well as ensure employees are using workplace computers for business purposes. Some monitoring software comes highly recommended at a reasonable cost and can be customized to an organization's needs. This requires some additional efforts by management or information technology staff, but proves it's a valuable tool to ensure the security of business data and integrity. Although computer workplace monitoring has become a necessity, employees often don't understand the reasons for computer monitoring and may feel violated or micro-managed.

- **Considerations**

  When considering using computer monitoring software in the workplace, do extensive research on different products and services. Although some software is costly, it may be worth the investment to protect the integrity of a business. If an organization decides to use this software--inform employees. Allow employees to see the software and its capabilities by demonstrating its features in a group setting.

Be open and honest regarding how the software will be used and how it will add security to the business. Talk to employees about their rights regarding computer monitoring. The Texas Workforce Commission has policies for workplace computer monitoring and employees should be aware of those policies. Also allow employees to ask questions in a private setting if they wish.

- **Using appropriate measuring instruments**

  If you've shopped around for just the right desk for your space, but haven't found exactly what you're looking for, consider building your own. Counter top desks are a unique way to modify your work area. Whether starting with a brand new section counter top, or repurposing old counters after a remodel, counter top desks make a sturdy addition to your office furnishings. A moderately simple do-it-yourself project, building a counter top desk is considerably less expensive than having a custom desk built, and requires less than one day's work to complete from start to finish.

- **Instructions**

  1. Make a space plan and measure the area where the desk will sit to ensure the right fit. Decide whether the desk will be straight or a corner unit, and how the desk will be supported, and plan accordingly. Straight desks are a simpler project, but corner units afford more workspace and often allow for the best use of the available area.

  2. Purchase supplies for the project, including counter tops, support system, and any brackets that may be required. Counter top can be cut at the time of purchase, or ordered to fit, so be certain to have exact measurements to ensure a correct fit without further cutting. Collect all tools needed for the project before beginning.

  3. Prepare your support system before assembling your desk. The simplest support solution is to use kitchen cabinets, metal filing cabinets, or sturdy plastic or medal drawers. This will make your desk both sturdy and easy to move and requires no tools, cutting, or drilling. This support solution is particularly idea for granite, metal, or stone counter top materials which are difficult to cut or drill.

  4. Install the chosen support system, ensuring that it is both the proper height, and level, before applying counter tops. If you've chosen cabinets or other form of freestanding support, be certain they're positioned at appropriate intervals to support the weight of the counter top.

5. Affix the counter top to the support system one section at a time. If your counter is a heavy material, such as granite or stone, be certain the support system is sufficient to harbor the weight before applying the next section of counter. Once all sections of counter are installed, use a level to check that there the desk is even and level.

6. Apply the end cap finishing kit where necessary and add any brackets that might be required to anchor the counter top. This step is optional but may be necessary to ensure your desk is both attractive and stable.

- **Identifying all potential failure causes**

When confronted with a systems failure, there is often a natural tendency to begin disassembling hardware to search for the cause. This is a poor approach. Failed hardware can expose precious information and safeguards are necessary to prevent losing that information from careless remove procedures. One must know what to look for prior to disassembling failed hardware.
Faults that come and go are the worst ones to track down, since just when you think you know the cause of the problem and intend to do something about it can disappear, leaving you wondering whether or not it's cured.

The most serious random problem is a spontaneous reboot, which can be caused by a faulty, bad mains interference, or overheating, particularly of the CPU. This is often caused by failure of the CPU fan, but this is easy enough to check -- just open up the case and see if the fan is still spinning. If your cooling arrangements are not broken but simply insufficient (this can happen, particularly in the case of Athlon processors, which generate a lot of heat), you'll need to upgrade your CPU heat-sink and/or fan to bring its top temperature down to a more sensible level.

However, your computer is most likely to go wrong when you've just changed something, for instance when you've installed a new stick of RAM, a soundcard, hard drive, or a new CPU. Even though this may work perfectly well, you may have disturbed one of the cables inside your PC at the same time, giving you a completely unrelated problem; or if you've been overclocking your CPU, it may stop working when a new PCI card is installed.

- **Power Supplies**

If your PC won't boot up, no LEDs illuminate on the PC's front panel, and you can't hear your hard drives or cooling fans spin up, you may have a problem with your mains supply, or a faulty or dead computer PSU (Power Supply Unit). Faulty power

supplies can also cause random reboots: these can also mean that your power supply is working properly but is under such a heavy load that occasionally the voltages sag a bit, or even collapse.

- **BIOS Beep Codes**

  If the power supply is working, booting your PC will light the front panel-power LED and let the BIOS perform a Power-On Self-Test, or POST. This initializes system hardware; tests RAM the keyboard, serial and parallel ports, initialize the floppy drive and hard disk controller, and diagnose any basic problems. If none are found, you'll get one short beep from the internal PC speaker. A combination of long or short beeps signifies a problem, and in most cases your PC will refuse to carry on. Although many 'beep codes' are similar from motherboard to motherboard, you really need to refer to the manual to find out what each sequence of beeps signifies.

- **Cable Issues**

  Another source of sometimes weird hardware faults is internal cabling. For instance, if the IDE cable connecting your motherboard and hard drive is not inserted correctly, your drive may not be detected by the BIOS at all. One of the conductors on all IDE cables will either be colored red or have writing printing on it, so make sure these identification marks match up with pin one on your hard drive, and pin one on the motherboard socket.

- **Summary on How to Fix and Avoid General Protection Faults**

  If you usually get a general protection fault when your computer has been running for a certain length of time, then overheating is a likely cause. You may have to reduce the level of over clocking or replace a fan that isn't working. When the problem occurs after the addition of new memory, remove or replace it to see if this cures the problem. If you can't do any of this yourself, get an engineer to do it for you.

  - When the fault always occurs soon after turning on your computer, it may be caused by a driver used by one of the programs that loads at start up or by Windows itself. You can try a Windows install but choose the repair option, which will fix corrupt or missing files without losing your data or programs. If the fault always happens when a particular program is running, uninstall and then re-install it. Also, check the supplier's website for a later version of the program or drivers and install them.

  - Actually finding the cause of the general protection fault can be a time-consuming process and you can speed this up by using a tool that will automate the task. One of the best I've found for this is Registry Patrol, which, despite its name, does much more than just sort out the PC's registry. It will, in fact, undertake a deep

scan of the whole computer, sorting out all the drivers and DLLs that are the most likely cause of general protection faults. As a bonus, it will also fix all types of other problems so that you end up with a machine that starts quicker, runs better and is less likely to crash.

- Registry Patrol comes with a guarantee that it will do what it promises and is available to try as a free download from the company's website (www.registrypatrol.com). Once you've installed it and run the scan, your PC will run as it did when it was new and general protection faults will be a thing of the past.

Self-Check 1	**Written Test**

Name: _____ Date:_____

Instruction*:* Answer all the questions listed below, if you have some clarifications- feel free to ask your teacher.

Please ask your trainer for the questionnaire for this Self-Check.

Instruction Sheet	LG16: Record Information

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

- Quality performance in workplaces

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 in accordance with workplace procedures
- Maintain records of work quality according to the requirements of the company

Learning Instructions:

5. Read the specific objectives of this Learning Guide.
6. Follow the instructions described below 3 to 6.
7. Read the information written in the information “Sheet 1, Sheet 2, Sheet 3 and Sheet 4, Sheet 5 ” in page 3, 22, 29, 33 and 35 respectively.
8. Accomplish the “Self-check 1, Self-check t 2, Self-check 3 and Self-check 4, Self-check 5 in page 16, 27, 32, 34 and 37 respectively.
9. If you earned a satisfactory evaluation from the “Self-check” proceed to “Operation Sheet 1 in page 18.
10. Do the “LAP test” in page 20, 28.

Information Sheet 1	Quality Performance in Workplaces

- **Quality Performance**

Performance measures designed to move associates toward business goals can be a powerful method for action. Because "you get what you measure," it is important to think through how and what you measure so you can achieve the desired results. And measuring profitability is attractive because it goes straight to the heart of every builder's existence. Performance measures of profitable builders are as varied as their business strategies. A good place to start is examining your own business goals and tune-up your measures at the company level. Then proceed to create department measures that align with company goals. Your organization will be the winner.

- **The Six-Factor Model of Personality in the Workplace**

The following are the six-factor model with job performance and other job-related activities. Motivation, deviation, absences, and job satisfaction are related to the five factors.

This is a review of the relation between the Six-factor model of personality and performance in the workplace.

- **Motivation in the Workplace**

Motivation is the driving force by which humans achieve their goals. Motivation is said to be intrinsic or extrinsic. The term is generally used for humans but it can also be used to describe the causes for animal behavior as well. According to various theories, motivation may be rooted in a basic need to minimize physical pain and maximize pleasure, or it may include specific needs such as eating and resting, or a desired object, goal, state of being, ideal, or it may be attributed to less-apparent reasons such as selfishness, morality, or avoiding mortality.

- **Job Satisfaction**

Job satisfaction has been defined as a pleasurable emotional state resulting from the consideration of one's job; an affective reaction to one's job; and an attitude towards one's job. Weiss (2002) has argued that job satisfaction is an attitude but points out that researchers should clearly distinguish the objects of cognitive evaluation which are affect (emotion), beliefs and behaviors.

- **Departure in the Workplace**

Workplace deviance occurs when an employee voluntarily pursues a course of action that pressures the well-being of the individual or the organization.

Employees who had a positive perception of their workplace were less likely to pursue deviant behavior. Research indicates that personality acts as a moderating factor: workplace deviance was more likely to be endorsed with respect to an individual when both the perception of the workplace was negative and emotional stability.

- **Performance in the Workplace**

  The single factor of carefulness is the most predictive of job performance

  ✓ **Absences**

  Job absence is very much a part of job performance: employees are not performing effectively if they do not even come to work. Shy, careful employees are much less likely to be absent from work, as opposed to extraverted employees who are low on carefulness.

  ✓ **Teamwork**

  Oftentimes in the workplace the ability to be a team player is valued and is critical to job performance. Although this strengthen the case that job performance is related to the five-factor model via increased cooperativeness among coworkers, the role of personality by implying that actual job performance (task performance) is related to cognitive ability and not to personality .

  ✓ **Using 5S to Increase Performance in the Workplace**

  5S is the name of a workplace organization methodology that uses a list of five Japanese words which are **seiri** (Sorting), **seiton** (Straightening or setting in order / stabilize), **seiso** (Sweeping or shining or cleanliness / systematic cleaning), **seiketsu** (Standardizing) and **shitsuke** (Sustaining the discipline or self-discipline). Translated into English, they all start with the letter "S". The list describes how to organize a work space for efficiency and effectiveness by identifying and storing the items used, maintaining the area and items, and sustaining the new order. The decision-making process usually comes from a dialogue about standardization which builds a clear understanding among employees of how work should be done. It also instills ownership of the process in each employee.

  The QCDSM program ensures this will happen on a daily basis. In addition to QCDSM, members of senior management must carry out periodic inspections of each target area. One common error by senior management is never being visible on the factory floor. 5S provides the foundation for improving performance through continuous improvement. It focuses on:

  - Increasing quality by removing waste from the workplace.

- Provide reduction in operating costs by reducing non value added activities.
- Improving delivery by simplifying processes and removing obstacles
- Improving safety through improved housekeeping and identification of hazards

Provide an environment where continuous improvement is embraced through workers problem solving and suggestions, thereby improving morale.
Simply put, 5S works best if the implementation of the program is based on the 5S Performance Improvement Formula:
P=Q+C+D+S+M
Where;

- ✓ **P** - Increase productivity.
- ✓ **Q** - Improve product quality.
- ✓ **C** - Reduce manufacturing costs.
- ✓ **D** - Ensure on-time delivery.
- ✓ **S** - Provide a safety working environment
- ✓ **M** - Increase worker morale.

- **Quality at work**

"Do to others as you would have them do to you" Have you realized the importance of Quality in your daily life. Imagine the scooter/car you bought yesterday refuses to start today. In every situation you must have chosen the "quality" brand with faith. You choose quality in every walk of your life. Without Quality in each service you are receiving everyday you feel miserable. We demand quality. Quality is important for you. So is for everyone. When we demand quality we have the duty to deliver quality also. As a member of society continuously motivated for a "QUALITY" life we also do our part unconsciously. Imagine the satisfaction you gain by giving proper directions to a lost person. You have given a quality service. We derive tremendous satisfaction out of doing a good turn or quality work at any moment. Greater will be our satisfaction if we extend this "Quality" aspect into each moment of our life.

Quality is more important than we realize. Quality makes life what it is. We as professionals in software are responsible for the quality of our products. Imagine yourself typing a 5 page document and the application crashes without saving your work. Imagine as a data entry operator after entering 50 fields losing the data by pressing a wrong key. What it does to you? The faith placed in the product is shaken and you will be pretty scared to repeat the job despite many reassurances. Faith once lost cannot be regained. As a software developer it may be a mere bug

to you. But to the user it is more than that. The quality of software depends on putting quality at each stage of software development cycle.
Quality is not someone's responsibility. It is everyone's responsibility. A wrongly connected transistor in 250 W music systems can make it dumb. A loosely fitted nut in a scooter can smash the scooter. Quality at every stage of product development is essential for delivering a Quality Product.

Think Quality, Write Quality Code, deliver Quality product. Quality belongs to none. Quality cannot be qualified or quantified. You have done some work. There will always be a better way to do it. Quality is the best you can do. Imagine a painter - he is never satisfied with his work. Every time he looks at the painting he will feel like adding one line here and another there. He ponders, He wonders, He beautifies his creation. If we at our professional arts of conceptualization design, coding, testing look at our work with such an artistic eye Quality will be come naturally into our products. Continuous improvement, zeal for perfection is needed to build quality at work. Together we can make it.

Self-Check 1	Written Test

Name: - _____ Date: - _____

Instruction*:* Answer all the questions listed below, if you have some clarifications- feel free to ask your teacher.

Instruction Sheet	LG17: Study Causes of Quality Deviations

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

- Causes of deviations from final products with workplace 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 –

- Investigate and report causes of deviations from final products in accordance with workplace procedures
- Recommend suitable preventive action based on workplace quality standards and identified causes of deviation from specified quality standards of materials or final product

Learning Instructions:

11. Read the specific objectives of this Learning Guide.
12. Follow the instructions described below 3 to 6.
13. Read the information written in the information “Sheet 1, Sheet 2, Sheet 3 and Sheet 4, Sheet 5 ” in page 3, 22, 29, 33 and 35 respectively.
14. Accomplish the “Self-check 1, Self-check t 2, Self-check 3 and Self-check 4, Self-check 5 in page 16, 27, 32, 34 and 37 respectively.
15. If you earned a satisfactory evaluation from the “Self-check” proceed to “Operation Sheet 1 in page 18.
16. Do the “LAP test” in page 20, 28.

Information Sheet 1	**Quality performance in workplaces**

- **A Standard Procedure for Quality Assurance Deviation Management**
  - ✓ **What is a Deviation?**

    A Deviation is a departure from standard procedures or specifications resulting in non-conforming material and/or processes or where there have been unusual or unexplained events which have the potential to impact on product quality, system integrity or personal safety.

  - ✓ **Types of Deviations:**

Following are some examples of deviations raised from different functional areas of business:-

- ✓ **Production Deviation** - usually raised during the manufacture of a batch production.
- ✓ **Quality Improvement Deviation** - may be raised if a potential weakness has been identified and the implementation will require project approval.
- ✓ **Audit Deviation** - raised to flag non-conformance identified during internal, external, supplier or corporate audits.
- ✓ **Customer Service Deviation** - rose to track implementation measures related to customer complaints.
- ✓ **Technical Deviation** - can be raised for validation discrepancies. For example: changes in Manufacturing Instruction.
- ✓ **Material Complaint** - rose to document any issues with regards to non-conforming, superseded or obsolete raw materials/components, packaging or imported finished goods.
- ✓ **System Routing Deviation** - raised to track changes made to Bill of materials as a result of an Artwork change.

- **When to Report Deviation:**

A Deviation should be raised when there is a deviation from methods or controls specified in manufacturing documents, material control documents, standard operating procedure for products and confirmed out of specification results and from the occurrence of an event and observation suggesting the existence of a real or potential quality related problems.

A deviation should be reported if a trend is noticed that requires further investigation. All batch production deviations (planned or unintended) covering all manufacturing facilities, equipments, operations, distribution, procedures, systems and record keeping must be reported and investigated for corrective and preventative action.

Reporting deviation is required regardless of final batch disposition. If a batch is rejected a deviation reporting is still required.

- **Different Levels of Deviation Risks:**

For the ease of assessing risk any deviation can be classified into one of the three levels 1, 2 & 3 based on the magnitude and seriousness of a deviation.

✓ **Level 1: Critical Deviation**

Deviation from Company Standards and/or current regulatory expectations that provide immediate and significant risk to product quality, patient safety

or data integrity or a combination/repetition of major deficiencies that indicate a critical failure of systems.

✓ **Level 2: Serious Deviation**

Deviation from Company Standards and/or current regulatory expectations that provide a potentially significant risk to product quality, patient safety or data integrity or could potentially result in significant observations from a regulatory agency or a combination/repetition of "other" deficiencies that indicate a failure of system(s).

✓ **Level 3: Standard Deviation**

Observations of a less serious or isolated nature that are not deemed Critical or Major, but require correction or suggestions given on how to improve systems or procedures that may be compliant but would benefit from improvement (e.g. incorrect data entry).

- **How to Manage Reported Deviation:**

  The department Manager or delegate should initiate the deviation report by using a standard deviation form as soon as a deviation is found. Write a short description of the fact with a title in the table on the form and notify the Quality Assurance department within one business day to identify the investigation. QA has to evaluate the deviation and assess the potential impact to the product quality, validation and regulatory requirement. All completed deviation investigations are to be approved by QA Manager or delegate. QA Manger has to justify wither the deviation is a Critical, Serious or Standard in nature. For a deviation of either critical or serious nature QA delegate has to arrange a Cross Functional Investigation. For a standard type deviation a Cross functional Investigation (CFI) is not necessary. Immediate corrective actions have to be completed before the final disposition of a batch. Final batch disposition is the responsibility of Quality Assurance Department.

- **Workplace Prevention and Response**

  Workplace violence can be any act of physical violence, threats of physical violence, harassment, pressure, or other threatening, disruptive behavior that occurs at the work site. Workplace violence can affect or involve employees, visitors, contractors, and other non-Federal employees.

- **Responsibilities**

  It is up to each employee to help make a safe workplace for all of us. The expectation is that each employee will treat all other employees, as well as

customers and potential customers, with dignity and respect. You can and should expect management to care about your safety and to provide as safe a working environment as possible by having preventive measures in place and, if necessary, by dealing immediately with threatening or potentially violent situations which occur.

- **Prevention of Workplace Violence**
  A sound prevention plan is the most important and, in the long run, the least costly portion of any agency's workplace violence program.

- **Identifying Potentially Violent Situations**
  If you ever have concerns about a situation which may turn violent, alert your supervisor immediately and follow the specific reporting procedures provided by your agency. It is better to err on the side of safety than to risk having a situation escalate.
- **Responding to Violent Incidents**
  No matter how effective agencies' policies and plans are in detecting and preventing incidents, there are no guarantees against workplace violence. Even the most responsive employers face this issue. When a violent incident does occur, it is essential the response be timely, appropriate to the situation, and carried out with the recognition that employees are traumatized and that the incident's aftermath has just begun.

- **Disclosure of Information**
  Disclosing information obtained from employees without their written consent. An exception to this prohibition however, is if an employee specifically threatens another person.

Self-Check 1	Written Test

Name: _____ Date: _____

Instruction*:* Answer all the questions listed below, if you have some clarifications- feel free to ask your teacher.

Instruction Sheet	LG18: Complete Documentation

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

- Records Information on quality production performance

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 –

- Records Information on quality and other indicators of production performance
- Records all production processes and outcomes.

Learning Instructions:

17. Read the specific objectives of this Learning Guide.
18. Follow the instructions described below 3 to 6.
19. Read the information written in the information “Sheet 1, Sheet 2, Sheet 3 and Sheet 4, Sheet 5 ” in page 3, 22, 29, 33 and 35 respectively.
20. Accomplish the “Self-check 1, Self-check t 2, Self-check 3 and Self-check 4, Self-check 5 in page 16, 27, 32, 34 and 37 respectively.
21. If you earned a satisfactory evaluation from the “Self-check” proceed to “Operation Sheet 1 in page 18.
22. Do the “LAP test” in page 20, 28.

Information Sheet 1	Records Information on Quality Production Performance

5.1. Quality Performance in Production Management

The challenge is increasing production while maintaining high quality. This process can be difficult to measure, but best way to gauge quality is to first measure it. Use key performance indicators (KPIs) to improve quality. KPIs help management to manage and measure both production and quality. Financial analysts and mangers also use KPIs as a measure of productivity.

Instructions:

- ✓ Identify the three most important processes in production. Examples include inventory purchases, assembly, distribution and accounts payable.
- ✓ Map out each process on a flow chart diagram. Start with first step in each process and end with the last step. This helps all parties involved in the process to visualize the process as well as where possible errors in production may occur.
- ✓ Identify the best way to manage production for each process. For instance, assembly can be managed with the number of items produced and distribution can be managed by the total number of items delivered.
- ✓ Define what an error or issue is within the process. For instance, for assembly, measure the number of errors or mistakes by determining how many of the total device being produced did not work or were permanent. For distribution, you could determine the number of errors by monitoring on-time delivery. The error depends on the process and your firm's definition of quality.

Assign a quality metric to each production process. Combine Step 3 and 4. For instance, for assembly, one metric can be the number of products assembled incorrectly or the number of malfunctions. For distribution, the metric can be the number of on-time deliveries. Again, the metric depends on what's most important for your organization

- **Production process**

The production process is concerned with transforming a range of inputs into those outputs that are required by the market. The transforming resources include the buildings, machinery, computers, and people that carry out the transforming processes. The transformed resources are the raw materials and components that are transformed into end products. Any production process involves a series of links in a production chain. At each stage value is added in the course of production. Adding value involves making a product more desirable to a consumer so that they will pay more for it. Adding

value therefore is not just about manufacturing, but includes the marketing process including advertising, promotion and distribution that make the final product more desirable. It is very important for businesses to identify the processes that add value, so that they can enhance these processes to the ongoing benefit of the business.

- **Types of process**
  There are three main types of process: **job, batch and flow production**.

- **Job production**
  Job or \'make complete\' production is the creation of single items by either one operative or a team of operative\'s. Job production is unique in the fact that the project is considered to be a single operation, which requires the complete attention of the operative before he or she passes on to the next job. Examples from the service industries include cutting hair, and processing a customers\' order in a store.

- **Batch production**
  The term batch refers to a specific group of components, which go through a production process together. As one batch finishes, the next one starts. For example on Monday, Machine A produces a type 1 engine part, on Tuesday it produces a type 2 engine part, on Wednesday a type 3 and so on. All engine parts will then go forward to the final assembly of different categories of engine parts.

- **Flow production**
  Batch production is described as \'intermittent\' production and is characterized by irregularity. If the rest period in batch production disappeared it would then become flow production. Flow production is therefore a continuous process of parts and sub-assemblies passing on from one stage to another until completion.

Self-Check 1	**Written Test**

Name: _____ Date:_____

Instruction*:* Answer all the questions listed below, if you have some clarifications- feel free to ask your teacher.

Experts

The development of this Learning Gide for the TVET Program Information technology support service Level I.

No	Name of Trainers	Phone Number	E-mail Address	Region
1	Abdulakim Ahemed	0921900418		Harari
2	Assefa Million	0911034866	amen192005@gmail.com	Harari
3	Derese Teshome	0913938439	dereseteshome@gmail.com	AA
4	Getenesh Osamo	0923816933	gete.osamo@gmail.com	SNNPR
5	Remedan Mohammed	0913478937	remedanm77@gmail.com	Harari
6	Sewayehu W/Yohanes	0911716733	Baroke0816@gmail.com	SNNPR
7	Damelash Yihalem	0911912015	demenati@gmail.com	Harari