CHAPTER 10 COORDINATE INFORMATION COMMUNICATIONS TECHNOLOGY (ICT) FUNCTIONS/COORDINATING INFORMATION COMMUNICATION TECHNOLOGY

10.1. Introduction of the Unit of Learning / Unit of Competency

This a core unit prepares trainee to study: policy development and dissemination, management of procurement of ICT services and resources, manage required installations, repairs and maintenance. The business manager shall coordinate ICT integration, manage innovation in modern business to enhance advancement in modern technology. The trainee shall acquire competences for preparing and disseminating ICT reports, conduct user training and give recommendations for continual improvement.

ICT is critical because it equips the trainee with modern technology in order to integrate various departments in an organization as well as their clients with ease.

Basic learning resources required for the course include: Internet connectivity and appropriate software will be critical in delivery of this unit.
Observing safety when using various soft-wares is vital. Netiquette and ethics are to be observed in this unit.
Trainee should expect to: develop, manage and install among other elements of ICT.
ICT is fundamental business unit which is significant.

10.2. Performance Standard

Develop an organization's ICT policy and manage ICT Innovations according to organization policy, manage procurement of ICT Services according to the procurement policies and procedures, Manage ICT Installation, maintain virtual platforms in accordance with ICT Policy and user feedback. The trainee should as well be able to undertake user training, prepare and interpret ICT reports as per the organization's procedures.
The trainee should be able to implement practical ideas and theories learnt in the business unit.

10.3. Learning Outcomes

10.3.1. List of Learning Outcomes
1. Develop organization's ICT policy
2. Manage Procurement of ICT Services
3. Manage ICT Installation and Maintenance
4. Manage Organizations ICT Integration
5. Manage ICT Innovation
6. Manage Virtual Platform/Social Media
7. Analyze and Interpret Reports Generated from ICT System
8. Conduct ICT User Training
9. Prepare ICT report

10.3.2 Learning Outcome No. 1. Develop organization's ICT policy

10.3.2.1. Learning Activities

Learning Outcome No. 1. Develop organization's ICT policy	
Learning Activities	**Special Instructions**
Select an ICT technical team using a sample strategic plan	Access the ICT authority website and download the authority strategic plan to evaluate the requirements of forming a technical team.
Develop a draft ICT policy from a template	Develop a template from the government ICT policy downloadable from (ICT Authority Kenya, 2019): http://icta.go.ke/national-ict-policy/
Use role play to critique the draft ICT policy developed	The trainer to form groups and assign various institutional responsibilities
Amend the draft ICT policy	
Use role play to undertake approval of the reviewed ICT policy	
Use various methods of sharing the approved ICT policy e.g. share using email, Scan QR code, and Fingerprints scanner.	The trainees to form Whatsapp groups and share the developed policy as a scanned pdf document.

10.3.2.2. Information Sheet No. 10/LO2

Introduction

This learning outcome intends to enable a trainee develop an ICT policy for an institution. The trainee should be aware of all the stages involved in coming up with a draft ICT policy. The trainer must enable an environment of sample ICT policy development focusing on various national standards as well as institutional policies.

Definitions of key terms

ICT Policy is a policy document that outlines how an institution can effectively use ICTs.

Amendment of ICT draft policy: It's a bill that modifies and governs the ICT body in Kenya. It's available in this website.www.icta.go.ke

Methods, processes procedures guidelines

All methods and standards governing ICTs in Kenya are available at www.icta.go.ke

Content

Drafting ICT Policy

As the ICT department tries to meet the needs of the workforce, it also needs to develop policies to ensure the acceptable uses of ICTs within the organization. Developing an ICT policy for an

organization is as important as having any other policy within the organization. Note also that, an effective policy allows the organization to define how and for what purposes ICTs will be used, while also providing the opportunity to educate employees about ICTs and the risks and reward associated with them.

The following is the guide towards development of an ICT policy:
1. Articulate the main aims of using ICT within the institution.
2. Identify health and safety issues regarding the use of ICT resources.
3. Plan training opportunities for staff to develop their skills and understanding in ICT.
4. Include audits of both technical aspects (e.g. an inventory of serial numbers of equipment and licenses) and ICT skills (e.g. staff capability).
5. Provide details of technical support available in and outside institution.
6. Outline ICT leadership in the institution.
7. Give details of the use of software and hardware across the institution.
8. Identify the role of ICT in supporting extracurricular activities, taking into account its use by parents and the wider community.
9. Make reference to data protection issues.
10. Explain the role of ICT in institution administration, e.g. electronic registration systems.
11. Describe how the internet will be used and highlight the safeguards in place to maintain internet security and protect pupils.
12. In the case of maintained institutions using the National Curriculum, outline how computing programs of study will be delivered.

Conclusion
An ICT policy is an institution specific document focusing on effective use of deployed ICTs. The business manager is required to assess the organization, plan and prepare the ICT policy. The approved policy should be disseminated appropriately in accordance with the standard operating procedures.

10.3.2.3. Self-Assessment
1. Undertake amendments on draft ICT policy based on review report
2. Develop and approve ICT policy in in accordance with the ICT objectives in the strategic plan
3. Share ICT policy among organization departments according to organization policy
4. Which of the following would not be classified as an innovation advance?
    a) A company's R&D facility.
    b) The launching of a completely new product.
    c) A modification that improves an existing good or service.
    d) A major improvement in a production process.
5. Tacit knowledge is:

a) Knowledge that can be written down.
b) Lost when employees leave the firm.
c) Easily transferable from one employee to another.
d) Not important to the business.

6. Which of the following can be seen as part of a commercial firm's intellectual property?
   a) Scientists employed by a pharmaceutical company.
   b) A technological breakthrough at a state funded university.
   c) Expenditure on R&D.
   d) A brand name such as Coke.

7. When looking for new ideas to exploit commercially, multinationals:
   a) Depend exclusively on their own R&D efforts.
   b) Always set up partnerships with university research laboratories.
   c) May collaborate with rivals, suppliers, or customers.
   d) Spend large sums of money on R&D.

8. Which of the following are likely to be the most active innovators?
   a) A small retailer in India.
   b) A medium-sized Spanish textile firm.
   c) A large Chinese producer of smartphones.
   d) A large Brazilian mining company.

9. Technological advance does not:
   a) Allow firms to bring new goods and services to the market.
   b) Make it possible to freeze competitors out of the market place.
   c) Increase productivity.
   d) Guarantee that business will be successful.

10. China raises a problem for Western firms trying to protect their intellectual property rights (IPRs) because of:
    a) The high cost of taking out patents.
    b) The failure by the Chinese authorities to enforce the law on IPRs.
    c) The high cost of pursuing infringers of IPRs through the Chinese courts compared with the US.
    d) The hostile attitude of the Communist Party to Western firms.

11. Information and communications technology (ICT) means that international firms:
    a) Can monitor their employees more closely.
    b) Find it more difficult to control remote foreign subsidiaries.
    c) Do not need to redesign jobs.
    d) Face increasing production costs.

12. The development of the Cloud can result in:
    a) Small firms finding it more difficult to communicate with large numbers of customers.
    b) Big multinationals facing more competition from small and medium-sized rivals.

c) Multinationals focusing solely on competing with their large established rivals.

d) An increase in a small firm's expenditure on IT personnel and infrastructure.

13. Schumpeter's concept of creative destruction involves:

a) Firms competing in perfectly competitive markets.

b) Oligopolists competing through innovation.

c) Firms competing solely on price.

10.3.2.4. Tools, Equipment, Supplies and Materials

- Laptops/Computer lab
- Network Cables
- Tablets
- Model strategic plan
- Stationery
- Model Organizational Policies and procedures
- Internet

10.3.2.5. References

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10.3.3. Learning Outcome No. 2. Manage Procurement of ICT Services

10.3.3.1. Learning Activities

Learning Outcome No. 2. Manage Procurement of ICT Services	
Learning Activities	**Special Instructions**
Use the case study provided to assess the ICT needs of an institution.	Check the case study presented in the information sheet section.
Role play on the procurement of ICT resources and services. Describe the procurement procedures used within your training institution.	Use sample ISO 9001:2015 certified institution quality management procedures on procurement ICT procedures. Trainer may use procedures within the training institution.
Role play on verification of delivered ICT goods and services.	Must use an approved form for acceptance of delivered goods or services. Read the public procurement and disposal act of 2015 and its regulations.

10.3.3.2. Information Sheet No. 10/LO2

Introduction

The procurement of ICTs is a process that requires proper assessment of needs, cost evaluation and finally proper inspection in order to acquire the best technology at a fair cost. The skills and competences for must be perfected. This unit equips the trainee with all necessary skills and competencies.

Definitions of key terms

ICT Services – This include but not limited to Hardware, Software, Data, Users and communication technologies.

Methods, processes/ procedures/ guidelines

All methods and standards governing ICTs in Kenya are available at www.icta.go.ke

Content

ICT needs assessment focuses on the identification of all required devices, infrastructure and services appropriate for the functions of the organization. Users forward request for various items for delivery of services. These requests need to be discussed by the ICT technical team which will propose on the cost-effective technologies that will work for the organization.

Procurement procedures vary from institution to institution. For instance, public procurement has a draft of laws regulations to be adhered to.

The following is the general procurement procedure:

   i. Budgeting
  ii. Submission of procurement requests
 iii. Approval of request
  iv. Request Specification
   v. Request for questions/Advertisement
  vi. Evaluation of quotations, Proposals or tenders
 vii. Award of contracts
viii. Delivery, inspection and acceptance
  ix. Payment
   x. Distribution to requesting departments
  xi. Close off

Inspection and acceptance are a major part of any procurement process. The following is a sample inspection and acceptance form for use in the activity above:

THE MERU NATIONAL POLYTECHNIC

INSPECTION AND ACCEPTANCE FORM

Supplier's Name	
Postal Address	
Telephone Contact	
Date/Time Of Delivery	
Name of Person Delivering the Goods.	
Vehicle Reg. No	

PART B
Description Of Goods/Services/ works & Amount

PART C

LPO No:	Date of LPO:
Delivery Note No:	Date of Delivery:
Invoice No:	Date of Invoice:
Credit Note No:	Date of Credit:

PART D

Item	Yes (✓) or No (✗)	Comments
Accept		
Reject		
Duration of Delivery		

NB: ✓ FOR ACCEPTANCE
✗ FOR REJECT

PART E
INSPECTION AND ACCEPTANCE COMMITTEE MEMBERS

NO	NAME	SIGNATURE	DATE
1			
2			
3			
4			
5			
6			
7			

PART F
REMARKS BY CHAIR

NB: This form must be completed at all times during the receiving of goods/services.
This form must be signed by members of the inspection and acceptance committee and the user.
The completed form will constitute part of the documents in processing payment.

Figure 37: Inspection and Acceptance Form

Case study1

The ICT International University has constructed an auditorium without any ICT infrastructure, the auditorium has provision for ICT equipment. The purpose of the auditorium is to enable an audience hear and watch performances. You are required to carry out a study and come up with the ICT needs for the auditorium.

Conclusion

A business manager must note that acquisition of ICTs takes the following steps; needs identification, requisition, approval, request for quotations or tenders, evaluation, award, delivery and reception of goods and service. During delivery it is important to have a standard way of verification and acceptance of goods/services.

10.3.3.3. Self-Assessment

1. Carry out ICT needs assessment according to organizations business operations
2. Receive requisitions from user departments according to ICT policy
3. Do invitation to tender or quotation according to the budget and the mode according to procurement procedure and regulations
4. Carry out ICT services sourcing in accordance with the procurement policy
5. Undertake verification of procured ICT services according to the procurement policy
6. Distribute procured services to respective departments based on procurement policy
7. The terms purchasing and procurement should not be seen as synonymous. As such, which of the following statements do you think has greatest validity?
   a. Purchasing has a broader meaning than procurement
   b. Procurement has a broader meaning than purchasing
   c. Procurement is broadly equivalent to purchasing
   d. None of the above
8. The electronic integration and management of all procurement activities including purchase request, authorization, ordering, delivery and payment between a purchaser and supplier is known as:
   a. E-procurement system
   b. E-procurement process
   c. E-procurement
   d. All of the above
9. The range of potential options for improving purchasing processes are indicated by benefits described by the Chartered Institute of Purchasing and Supply such as:
   a. Content management
   b. Evaluation of end-to-end trading cycles
   c. Multimedia
   d. All of the above
   e. None of the above

10. Generally, which sequence is most typical of the procurement process?
   a. Originator to approver to buyer to supplier
   b. Originator to buyer to approver to supplier
   c. Approver to originator to buyer to supplier
   d. Supplier to originator to approver to buyer
   e. None of the above

10.3.3.4. Tools, Equipment, Supplies and Materials

- Laptops/Computer lab
- Model strategic plan
- Model Organizational Policies and procedures
- The PPRA Act 2015 and its regulations
- Internet

10.3.3.5. References

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10.3.4. Learning Outcome No. 3. Manage ICT Installation and Maintenance

10.3.4.1. Learning Activities

Learning Outcome No. 3. Manage ICT Installation and Maintenance	
Learning Activities	**Special Instructions**
Develop system requirements for the human resource management system.	Using the template provided in the information sheet below, trainees should be able to develop all functionalities of a human resource management system
Identify the system specifications provided by service providers.	Sample system specifications provided in the information sheet below can be used in class
Use role play and manage installation of a human resource management system	Trainer to plan a setup focusing on a software provider and the client.
Define ICT level and rights of different system users; use the human resource management system. The following officers from the HR department must be defined: Chief HRO, HRO, Asst. HRO, Data clerks.	Use the user levels provided in the information sheet to identify appropriate ICT user levels.
Perform a security audit on the human resource system and undertake backup	Read on Security threats and control Measures from (Makori, Mwende, & Munene, 2019) Check book details from the references section.
Analyze user feedback and request the service provider to improve the human resource management	Trainer to develop user feedback complaining about the users not able to apply for leave while at home.

10.3.4.2. Information Sheet No. 10/LO2

Introduction

This information sheet provides some of the important guides for the delivery of this unit of competence. The information provided will enable the trainee learn various skills and competencies of systems installation and maintenance.

Definitions of key terms

ICT System is a set of hardware and software that works together to enable an organization achieve its objectives through technology.

Methods, processes/ procedures/ guidelines

All methods and standards governing ICTs in Kenya are available at www.icta.go.ke

Content

The template for developing system specifications to be used to develop human resource management system specifications.

See attached PDF

Human resource management system requirements.pdf****

Sample system specifications for the human resource management system.

SYSTEM REQUIREMENT FOR THE MERU NATIONAL POLYTECHNIC ERP

Both the server and the client machines must meet certain requirements for ABN UNISOL solution to function optimally. The general requirement is that there are two servers to be availed. One is primary and hosts the ERP core database. This can be considered as the ERP SERVER.

Similarly, as a practice, we separate the portal server that handles remote requests. This implies that there shall be need for the portal to have a dedicated server. The same server can be utilized in the implementation of web-based integrations.

Server Requirements

The primary server has to match the expectations in terms of the expected number of users and the nature of the processes that they intend to undertake. It is therefore in most cases of a higher specification than the secondary server. However, the specification below would serve as a general guideline of the servers that shall be required to support the system.

PRIMARY SERVER

This server is used to host the core platform and database of the ERP

Component	Specifications
Operating System	Windows Server 2012 and above
Database	MS SQL Server 2012 and above
Server Processor Core	8 or more
Processor speed	2.1 GHz or more
Form factor chassis	Rack
Expansion slots	(6)
Memory	4.0TB HDD with 128 GB RAM
Graphic card	Choice of up to 2 doublewide GPGPU's, or 3 single
Network controller	1Gb 331i Ethernet Adapter 4 Ports per controller and/or Optional Flexible LOM
Wide Screen LCD	20 Inch

Sample user rights and levels for the human resource management system.
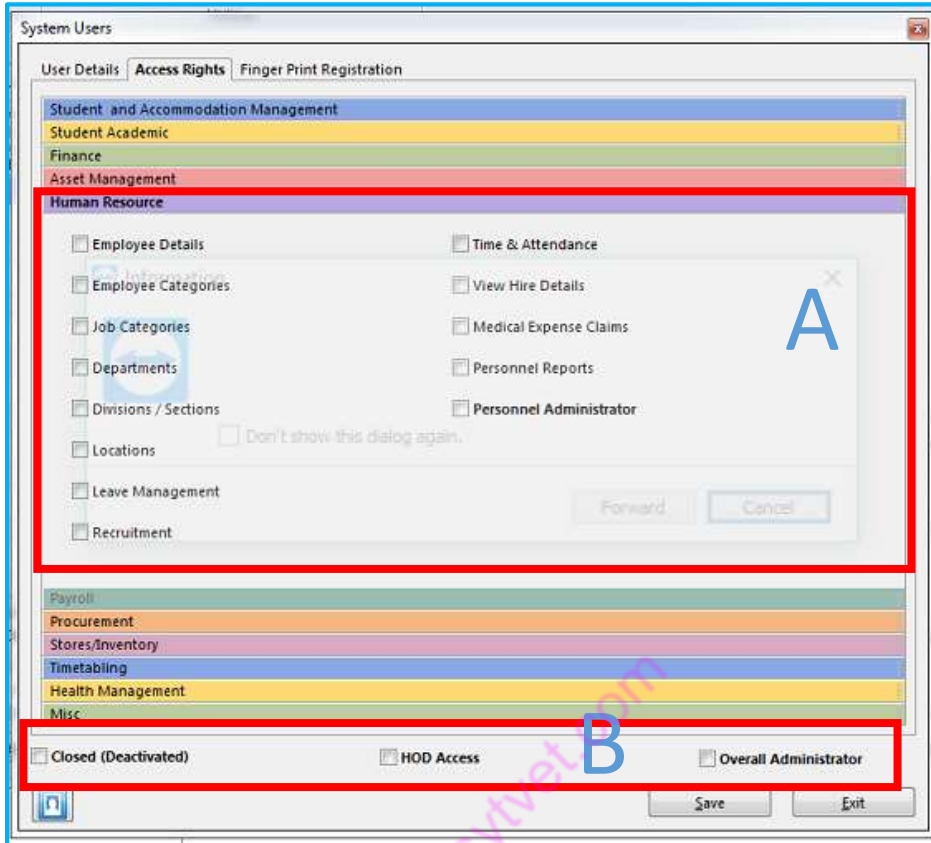
10.3.4.3. Self-Assessment

1. Provide requirements of the ICT system Installation in accordance with the nature of the service and service providers policy guidelines
2. Conduct installation process in accordance with the ICT service provider policy and contract between the organization and the service provider
3. Define the ICT access levels and rights in accordance with ICT policy
4. Maintain ICT system as per the ICT policy requirements
5. Develop and implement ICT backup procedures in accordance with ICT policy
6. Review the ICT system in accordance with the feedback gathered from the users
7. E-procurement aims to improve performance of what is known as the 'five rights of purchasing'. One aim of e-procurement is increasing savings by sourcing items:
   a. At the right price
   b. Of the right quantity
   c. From the right source
   d. Of the right quality
8. Another aim of e-procurement is increased choice of supplier leading to sourcing items:
   a. From the right source

    b. At the right price

    c. Of the right quantity

    d. Delivered at the right time

9. A recent simple classification of different types or applications of e-procurement was produced by Smart. Which of the following is NOT one of these?

    a. E-transparency

    b. E-informing

    c. E-tendering

    d. E-sourcing

10.3.4.4. Tools, Equipment, Supplies and Materials

- Laptops/Computer lab
- Model Organizational Policies and procedures
- Internet
- Printers

10.3.4.5. References

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10.3.5. Learning Outcome No. 4. Manage Organizations ICT Integration

10.3.5.1. Learning Activities

Learning Outcome #No. 4. Manage Organizations ICT Integration	
Learning Activities	Special Instructions
Watching a video on fundamentals of computer networks and the discussing the requirements of building an organizations network	Use the YouTube video at https://www.youtube.com/watch?v=cNwEVYkx2Kk Or search for an appropriate video
Discuss various ways of sharing information	Demonstrate by use of a file sharing app on a smartphone
Visit the institutions ICT office, observe and discuss the ERP system use.	
Discuss reasons for upgrading or downgrading ICT systems e.g. moving from office 2003 to office 2016	

10.3.5.2. Information Sheet No. 10/LO4

Introduction

ICT integration is defined as the use of ICT to introduce, reinforce, supplement and extend skills (Pisapia, 2019). ICT integration has been attracting a great deal of interest among researchers in professional development communities and human-computer interaction circles. The business manager must be at the top to leverage on use of ICT for service delivery.

Definitions of key terms

ICT Integration is the use of ICT to introduce, reinforce, supplement and extend skills (Low, 2019).

Methods, processes/ procedures/ guidelines

All methods and standards governing ICTs in Kenya are available at www.icta.go.ke

Content

Computer networks are the basic enablers of ICT integration within an organization. The computer network starts with ability to exchange data between 2 devices for example by use of Bluetooth technology. Once information can be shared between devices within organization, we term this as a Local Area Network (LAN) sharing. If then now information can be shared seamlessly throughout the world, we call this internet. The image below illustrates a computer network.
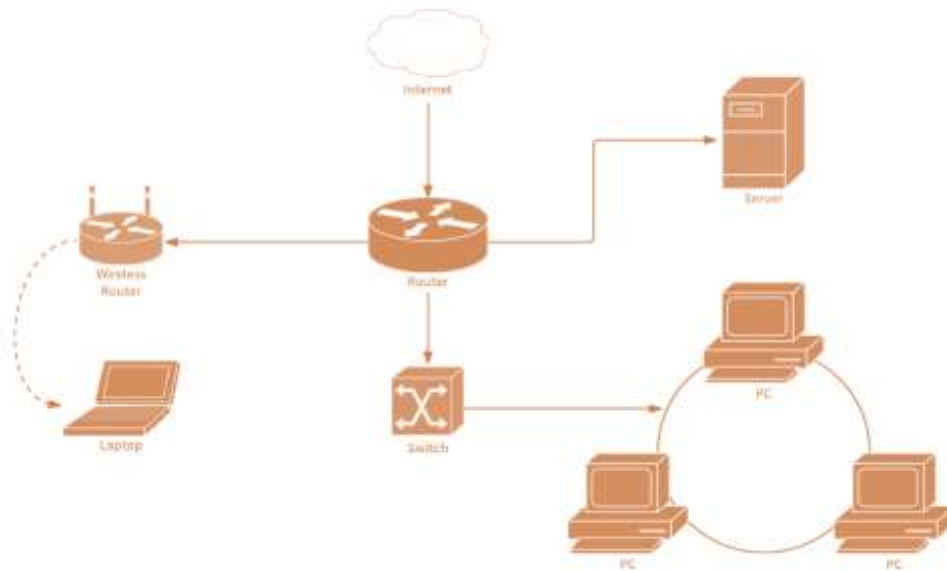
Figure 38: File sharing methods on a computer network

Computer networks allow you to share information with friends, family, co-workers and customers. Network file sharing is the process of copying data files from one computer to another using a live network connection.

Before the Internet and home networks became popular, data files were often shared using floppy disks. Nowadays, some people still use CD-ROM / DVD-ROM disks and USB sticks for transferring their photos and videos, but networks give you more flexible options. This article describes the different methods and networking technologies available to help you share files.

File Sharing With Microsoft Windows

Microsoft Windows (and other network operating systems) contain built-in features for file sharing. For example, Windows file folders can be shared across either a local area network (LAN) or the Internet using any of several methods. You can also set up security access restrictions that control who can obtain the shared files.

Complications can arise when attempting to share files between computers running Windows and ones that don't, but the below alternatives can help.

FTP File Transfers

File Transfer Protocol (FTP) is an older but still useful method to share files on the Internet. A central computer called the *FTP server* holds all the files to be shared, while remote computers running *FTP client* software can log in to the server to obtain copies.

All modern computer operating systems contain built-in FTP client software, and popular Web browsers like Internet Explorer can also be configured to run as FTP clients. Alternative FTP

client programs are also available for free download on the Internet. As with Windows file sharing, security access options can be set on the FTP server requiring clients to supply a valid login name and password.

Email

For decades, files have been transferred from person to person over a network using email software. For instance, Google have several applications for storing data. It has Google drive which one can store up to 15GB freely. Google photos also helps in saving photographs and videos automatically from a smartphone and internet connected computer. They can be shared on emails and other social media platforms easily. On can access them through email anywhere anytime. Email systems are designed for transferring small amounts of data and generally limit the size of individual files that can be shared. Advantages of email usage is that it can be used to trace a criminal in case of a committed crime by ICT expert.

Online Sharing Services

Finally, numerous Web services built for personal and/or community file sharing exist on the Internet including well-known options like Box and Dropbox. Members post or upload their files using a Web browser or app, and others can then download copies of these files using the same tools. Some community file sharing sites charge member fees, while others are free (advertising supported). Providers often tout the cloud storage technology advantages of these services, although available storage space tends to be limited, and having too much personal data in the cloud is a concern for some consumers. WhatsApp accounts are also used to connect and share within organizations, clients and communities.

Conclusion

Computer networks enable institutions share resources and provide a centralized integrated way of doing business. Data sharing start with basic networks like the use Bluetooth connections of phone infrared transfers. Computer networks use various devices that the business manager may be required to be aware of.

10.3.5.3. Self-Assessment

1. Undertake systems networking in the organization according to organization structure
2. Develop and implement systems of sharing information in accordance with the organization requirements
3. Establish enterprise resource planning (ERP) according to organization policy
4. Report challenges in the system according to the standard operating procedures
5. Upgrade or downgrade ICT system in accordance with the ICT policy
6. Business intelligence (BI) is a broad category of application programs which includes :
   a) Decision support
   b) Data mining
   c) OLAP

d) All of the mention

7. Point out the correct statement :
   a) OLAP is an umbrella term that refers to an assortment of software applications for analyzing an organization's raw data for intelligent decision making
   b) Business intelligence equips enterprises to gain business advantage from data
   c) BI makes an organization agile thereby giving it a lower edge in today's evolving market condition
   d) None of the mentioned

8. BI can catalyze a business's success in terms of :
   a) Distinguish the products and services that drive revenues
   b) Rank customers and locations based on profitability
   c) Ranks customers and locations based on probability
   d) All of the mentioned

9. Which of the following areas are affected by BI?
   a) Revenue
   b) CRM
   c) Sales
   d) All of the mentioned

10. Point out the wrong statement :
    a) Data is factual information for analysis
    b) BI is a category of database software that provides an interface to help users quickly and interactively scrutinize the results in a variety of dimensions of the data
    c) Customer relationship management (CRM) entails all aspects of interaction that a company has with its customer
    d) None of the mentioned

11. _____ is a performance management tool that recapitulates an organization's performance from several standpoints on a single page.
    a) Balanced Scorecard
    b) Data Cube
    c) Dashboard
    d) All of the mentioned

10.3.5.4. Tools, Equipment, Supplies and Materials
- Laptops/Computer lab
- Smartphones
- Xender app (any app for sharing data)
- Internet adapters and Bluetooth dongles
- Model Organizational Policies and procedures
- Internet

10.3.5.5. References

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10.3.6. Learning Outcome No. 5. Manage ICT Innovation
10.3.6.1. Learning Activities

Learning Outcome No. 5. Manage ICT Innovation	
Learning Activities	**Special Instructions**
Download and evaluate ICT standards from the ICT Authority website.	www.icta.go.ke
Discuss costs associated with adopting new ICT technologies against benefits.	
Analyze the case study in the information sheet section and assess the impact on new technologies.	Use case study showing a change over from use of basic phones to smartphones in service delivery.

10.3.6.2. Information Sheet No. 10/LO5

Introduction
This learning outcome intends to enable a trainee develop an ICT policy for an institution. The trainee should be aware of all the stages involved in coming up with a draft ICT policy. The trainer must enable an environment of sample ICT policy development focusing on various national standards as well as institutional policies.

Methods, processes/ procedures/ guidelines
All methods and standards governing ICTs in Kenya are available at www.icta.go.ke

Content:
Organizational Innovations
Innovation is a complex construct and overlaps with a few other prevalent concepts such as technology, creativity, and change. Research on innovation spans many fields of inquiry including business, economics, engineering, and public administration. Scholars have studied innovation at different levels of analysis such as individual, group, organization, industry, and economy. The term organizational innovation refers to the studies of innovation in business and public organizations (Damanpour, 2019).

Examples of business innovations
Organizational innovation at Microsoft: agility as an overriding principle
Anyone who enters Microsoft with a suit either has an interview or is a consultant. The casual style is the most visible characteristic of flexible hierarchies. Behind this is a simple philosophy: a company without rigid hierarchies is more agile. Microsoft has learnt from its own painful experiences: With Windows Vista, the company had gotten lost in the complexity trap, constant coordination had made development more and more complicated. Microsoft responded with

organizational innovation. Already in 1999, the company was radically reorganized. Too much bureaucracy and too much departmental thinking had paralyzed the ability to innovate at that time.

Organizational Innovation at Samsung – Freedom of hierarchy for strategic creative areas Samsung has a clear strategic goal:

"Good design is the most important way to differentiate us from our competitors," said long-time CEO Jong-Yong Yun. On his way from a cheap manufacturer to one of the most innovative companies in the world, he prescribed a kind of creative shock therapy for the company: Instead of continuing to manufacture the cheapest equipment, Yun used organizational innovation and opened design centers around the world. In these new products were developed.

In order to give his creative talents direct access to top management, he established a Chief Design Officer. This made it possible for the first time for employees to have their ideas heard by the Executive Board. What was now still an innovation barrier, became the traditional South Korean culture. It is rather hostile to business innovation and organizational change: the culture does not allow employees to freely express their opinions and ideas. In order to overcome these barriers, Samsung has implemented a special type of organizational innovation in the Design Centers: Managers were trained in innovation leadership. This style is different from the one at headquarters. There is no dress code in the Design Centers. Every employee is encouraged to speak his mind and contradict superiors without fear of violating cultural rules. Freedom of hierarchy in strategically important areas of innovation. The culture of operating units at the company headquarters continues to be traditionally South Korean.

Organizational innovation at McDonalds – "Noodle Team" instead of rigid hierarchies

Rigid structures and hierarchies are unfamiliar to McDonald's. When it comes to developing new ideas, everybody is involved as far as possible: partners who supply the raw material, employees from various areas and hierarchical levels as well as customers. As a method of organizational innovation, McDonalds has created its own test kitchens and so-called "noodle teams" in which employees at all levels of the hierarchy develop new ideas and try them out. The hierarchies are flat. Anyone can contact anyone, discuss new ideas with anyone. For former CEO Jim Skinner, this is one of the company's competitive advantages: "The result is a wealth of ideas that flow through the organization. They come from all directions."

Staying Agile through Organizational Innovation

What happens when rigid hierarchies are established in a company once again? When processes and workflows become bloated, when bureaucracy becomes overwhelming? Innovation leaders encounter this by renewed organizational innovation. With only one goal:- to banish any inefficient processes and unnecessary bureaucracy from the company.

Case 1

Mutembei graduated with a diploma in fashion and design. He opened his design store where he sells designer clothes. Mutembei uses a basic phone to describe his products to his clients. His friend penny advised him to purchase a smartphone and use WhatsApp to send images to his clients. He also bought a digital camera to take high quality images, the cost of these devices greatly reduced his capital. His sales doubled and now he is proud of the new technology.

Case 2

Bilhah opened a bakery. Her business was not doing well due to country's economic hard time and so she had to come up with a brilliant strategic plan. She was advised to create Facebook and twitter accounts for her pastry business. She acquired many followers who later started giving orders for birthday, wedding and corporate anniversary cakes from every corner of Kenya. She was relying on customers who were passing by her bakery shop before she advertised online; but through ICT she was able to break distance barriers by showcasing her work through photographs and videos when she is preparing her recipes and baking.

Conclusion

Organizational innovations keep it at the company at the top. Proper management of organizational innovations is an important part of the organization. Organization innovations require to be registered or patented to protect them from being stolen by competitors.

10.3.6.3. Self-Assessment

1. identify and evaluate current technologies in ICT according to the organizational needs
2. Identify and conduct training needs in ICT according to the needs and approved budget
3. Adopt and manage ICT technologies as per ICT guidelines
4. Conduct impact assessment on new ICT technology uptake according to the organization policy
5. Make recommendation on ICT uptake
6. Innovation is defined as:
    a) The commercialization of a new product or process.
    b) The invention of a new product or process.
    c) A new product or process idea.
    d) The implementation of a new production method.
7. Process innovation refers to:
    a) The development of a new service.
    b) The development of a new product.
    c) The implementation of a new or improved production method.
    d) The development of new products or services.
8. Innovation can help to provide a temporary competitive advantage when:

a) Barriers to entry are high.

b) Barriers to imitation are low and intellectual property rights are difficult to enforce.

c) There are few other competitors.

d) Barriers to entry are low.

9. Following establishment of a dominant design in the product life cycle, what would you expect to happen?

a) Emphasis on product innovation rather than process innovation.

b) Emphasis on process innovation rather than product innovation.

c) Competition to increase as new firms enter the industry.

d) Competition to decrease as more firms exit than enter the industry.

10. Established firms relative to new firms are better at:

a) All types of innovation.

b) Innovation which is competence-enhancing.

c) Innovation which is competence-destroying.

d) Innovation which is disruptive.

11. In which markets are network effects likely?

a) Markets subject to increasing returns

b) 'Tippy' markets

c) Hi-tech product markets

d) All of the above

12. Which of the following are valuable in a standards war?

a) Competitive advantage

b) Late mover advantage

c) Early mover advantage

d) Technological advantage

10.3.6.4. Tools, Equipment, Supplies and Materials for the specific learning outcome

- Laptops/Computer lab
- Smartphones
- Digital Cameras
- Model Organizational Policies and procedures
- Internet

10.3.6.5. References

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10.3.7. Learning Outcome No. 6. Manage Virtual Platforms
10.3.7.1. Learning Activities

Learning Outcome No. 6. Manage Virtual Platforms	
Learning Activities	**Special Instructions**
Google search the topic: Top social sites to identify the most used virtual platforms.	
Create a Facebook page and customize it to fit an organization.	www.facebook.com

Identify the various communication channels through virtual platforms.	Train on use of direct messages, chat rooms, group chats data voice calls among others
Identify rules that affect organization use of virtual platforms from the ICT policy of the institution	
Brainstorm on security issues associated with virtual platforms.	Read more on Data Security and Control from (Makori, J.O., Mutuku, J. & Munene, K. ,2019)
Analyze user feedback on published Facebook page one of the students administrates.	

10.3.7.2. Information Sheet No. 10/LO6

Introduction

This learning outcome intends to enable a trainee develop an ICT policy for an institution. The trainee should be aware of all the stages involved in coming up with a draft ICT policy. The trainer must enable an environment of sample ICT policy development focusing on various national standards as well as institutional policies.

Definitions of key terms

ICT Policy is a policy document that outlines how an institution can effectively use ICTs.

Methods, processes/ procedures/ guidelines

All methods and standards governing ICTs in Kenya are available at www.icta.go.ke

Content

Whether you are a seasoned social media marketer, a marketer looking to venture into social media marketing, or a business owner looking to leverage on social media, it's helpful to know the most popular social media sites around. This will allow you to maximize your brand reach on social media, engage with the right people, and achieve your social media goals (Lua, 2019).

The following are the top ten social media sites of 2019 according to (Lua, 2019):
  a) Facebook
  b) YouTube
  c) WhatsApp
  d) Messenger
  e) WeChat
  f) Instagram
  g) QQ

h) Tumblr
i) Qzone
j) Tik Tok

How to Beef Up Your Facebook Business Page in 2019

Facebook is the top social media site hence the need to leverage on its existence to develop your business.

The following are some of the strategies that can be used.

Update Your Page Template

Found under Page Settings, Facebook offers a variety of Business Page templates with default buttons and tabs to help marketers showcase content in a way that best aligns with your business type and goals. While the template options look somewhat similar, they prioritize information based on your business or industry — such as promoting the "donate" call-to-action button or ability to start a fundraiser for a local nonprofit.

Select the Right Call-To-Action (CTA) Button

Facebook Business Pages include a prominent CTA directly below the cover image, which you can (and should) update based on current campaigns and offers that support your business goals.

Create an Eye-Catching Cover Image or Video

The Business Page Cover Image is prime real estate to feature attention-grabbing imagery and content for your business. If you're not leveraging this aspect of your page effectively, consider a refresh to help promote the most important aspect(s) of your organization — products, services, offers, career opportunities, etc. — and align with your featured CTA button.

Leverage Recommendations

One of the best ways to increase your brand awareness and gain new customers is by leveraging your existing customer or fan base. Help more people find your business and begin building social proof by adding Facebook Recommendations (previously reviews) to your Business Page.

Capitalize on Messenger

Facebook Messenger is a great way to create meaningful relationships with your customers, enabling users to contact or message you directly through your Page. And if you're concerned about someone reaching out while you're offline or unavailable to respond, don't worry! Facebook has expanded the Business Page Messenger to now support 24/7 customer service and responsiveness.

Once messaging is activated on your page, brands can create pre-set greetings and automated responses to support you in off-hours and still feel accessible to users with important feedback or inquiries.

This helps marketers connect with users, even when you're offline or unavailable for immediate response (Vavruska, 2019).

- Create a Custom Messenger Greeting
- Turn on Instant Replies and Away Messages
- Save Common Replies
- Review Conversation Insights

What are star ratings on social media?

Star Ratings are an internationally recognized symbol for quality accommodation standards. They are used in more than 70 countries worldwide and reflect the cleanliness, quality and condition of guest facilities (Star ratings Australia, 2019).

How to set up a Facebook Page for your business

Step 1: Sign up

Go to facebook.com/business and click **Create a Page** in the top right-hand corner. You'll be greeted with several business type options including local business or place, brand or product, and cause or community. Select the type of business you're creating the Facebook Page for. If your business type falls into more than one of the category options, choose the one your customers are most likely to think of when they think about your business.

When you click on a business type, a box will open asking for a few further details, like the name of your business, your address, and your Page category. Categories are basically sub-types within the larger business category you've already chosen. When you start typing in the category field, you'll see a list of potential category options to choose from.

Local Business or Place

Olaf's Large Sandwiches and Deli Meats
Sandwich Shop
66 Alder Drice
Los Angeles, California
90210
310-555-5555

By clicking Get Started, you agree to the Facebook Pages Terms.

Get Started

When you're ready, click **Get Started.** Note that doing so indicates your acceptance of Facebook's terms and conditions for Business Pages, so you might want to check those out before you proceed.

Step 2. Add Pictures

Next, you'll upload profile and cover images for your Facebook Page. It's important to create a good visual first impression, so choose wisely here. Make sure the photos you choose align with your brand and are easily identifiable with your business.

You'll upload your profile image first. This image accompanies your business name in search results and when you interact with users, and also appears on the top left of your Facebook Page. If you're a big brand, using your logo is probably a safe way to go. If you're a celebrity or public figure, a picture of your face will work like a charm. And if you're a local business, maybe a well-shot image of your signature offering is what will allow a potential follower or customer to make the connection immediately.

Your profile picture will appear as a square on your Facebook Page, but will be cropped to a circle in ads and posts, so don't put any critical details in the corners. Once you've chosen a great one, click **Upload Profile Picture.**

Now it's time to choose your cover image, the most prominent image on your Facebook Business Page. This image should capture the essence of your brand and convey your brand personality. It will display at 820 x 312 pixels on desktop or 640 x 360 pixels on mobile. The image must be at least 400 pixels wide and 150 tall.

Once you've selected an appropriate image, click **Upload a Cover Photo**.

Step 3: Explore your new Page

Ta-da! Your page is alive, albeit it extremely sparse. At this point, you'll be prompted to take a quick walk-through of a few features. Unless you're already well aware of how Facebook Business Pages operate, we recommend clicking through the prompts, just so you know where everything is. It only takes a few seconds.

Of course, while the skeleton of the Facebook Page for your business is now in place, you've still got some work to do before you share it with your audience.

Step 4: Add a short description

This is your opportunity to tell people about your business. It should be just a couple of sentences (maximum 155 characters), so there's no need to get too elaborate here. Click **Add a Short Description**, then just share what your customers need to know as clearly and concisely as possible. You can add a longer description later on.
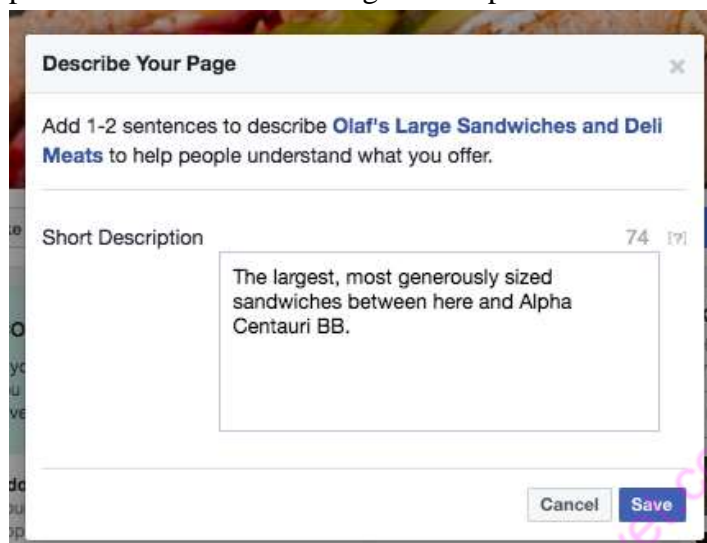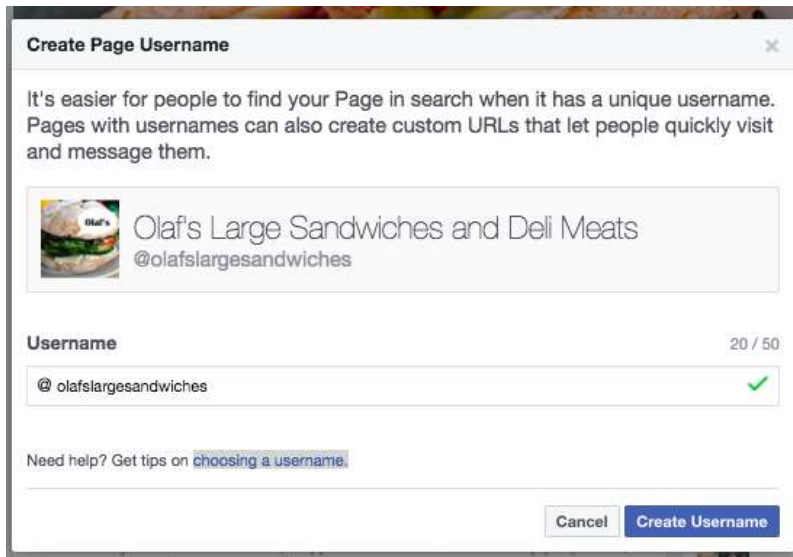

Click **Save** when you're done.

Step 5: Create your username

Your username, also called your vanity URL, is how you'll tell people where to find you on Facebook. Your username can be up to 50 characters long, but don't use extra characters just because you can. You want it to be easy to type and easy to remember. Your business name or some obvious variation of it is a safe bet.

Click **Create a Username for Your Page** to set up your vanity URL.

Click **Create Username** when you're done. A box will pop up showing you the links people can use to connect with your business on Facebook and [Facebook Messenger](#).
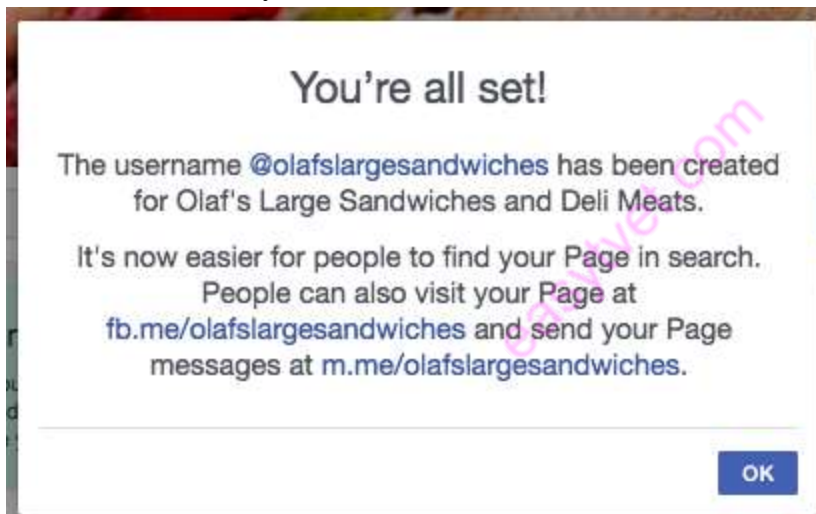
Click **OK** to continue filling in your Facebook for business Page details.

This is also the screen where you can add a longer description of your business. Click **Edit Story** on the right side of the Page to provide a detailed description of what your business offers customers and why they should Like or Follow your Page. This is a great place to set expectations about how you'll interact with fans through your Facebook Page for business purposes and to offer a compelling reason for them to engage with you online.

To specify your business location and hours, click **Edit Page Info** on the top right of the screen.

When you're finished, click **Save Changes**.

Step 7. Create your first post

Before you start inviting people to like the Facebook Page for your business, you'll want to make sure you share some valuable content. You can create some of your own posts, or share relevant content from thoughtful leaders in your industry.

You could also create a more specific type of post, like an event or product offer—just click through the tabs at the top of the status box to bring up all the options.
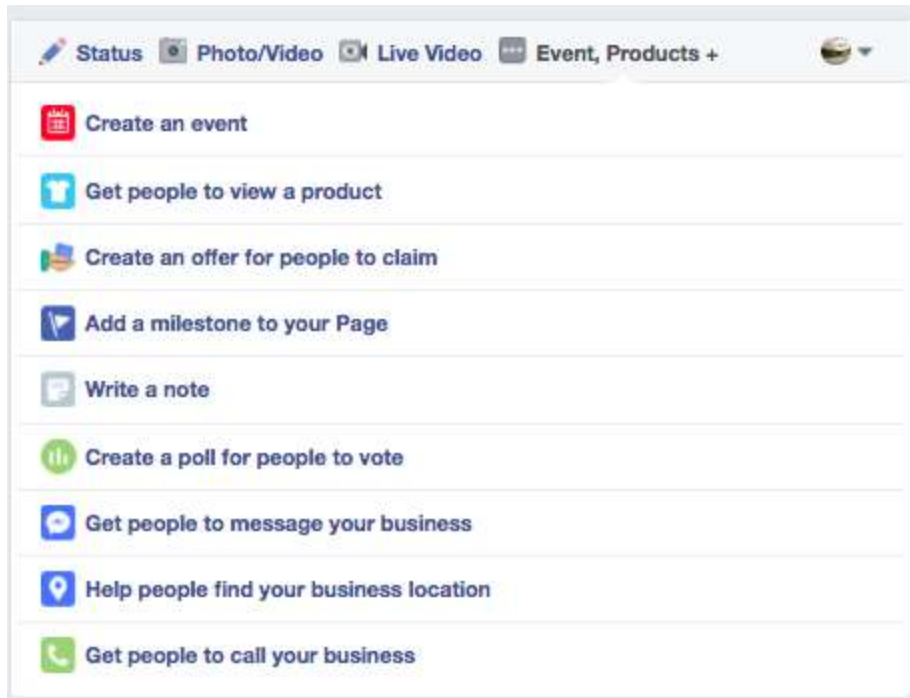
Make sure that whatever you post offers value for your visitors when they arrive at your Facebook Page, so they'll be inclined to stick around.

Your Facebook Business Page now represents a robust online presence that will make potential customers and fans feel comfortable interacting with you.

Step 8: Start engaging

Now you're ready to give your Facebook Business Page a bit of a nudge. Invite family and friends to like the Page. Use your other channels, like your website and Twitter, to promote it. Add "follow us" logos on your promotional materials and/or email signature. If you're comfortable with it, you can even ask your customers review you on Facebook, too.

Conclusion

Virtual platforms may give a company a competitive edge hence require proper management. It is worth noting that the virtual platforms may negatively impact on an organization.

NB: The business manager must carefully control the online presence of the company.

10.3.7.3. Self-Assessment
1. identify virtual platforms according to organization needs
2. Train personnel on the use of social media according to organizational policy
3. Customize virtual platform in accordance with organizations needs
4. Develop online services for the business in accordance with ICT policy
5. Monitor and review system feedback as per ICT policy
6. Provide systems security in accordance with ICT policy
7. What is one of the big differences between traditional media and social media?

a. Participatory production.

b. Social media reaches only a few people at a time.

c. The management structure of the companies.

d. Traditional media offers no way for audiences to communicate with media producers.

8. Which of the following is NOT a fundamental area of change regarding people's media habits?

a. Conversation.

b. Collaboration.

c. Choice.

d. Communication.

e. Curation.

9. An important lesson learned in online political campaigns in recent years and other collaborative efforts that had online components is

a. People much prefer to do their own thing and not work in groups.

b. There are always a couple of people who disrupt the work of others in the group.

c. People must be able to meet face to face at times as well as online.

d. Social media has still not lived up to its promise of helping people collaborate.

e. All of the above.

10. A portable chunk of code that can be embedded in Web pages to give extra functionality is known as a

a. Folksonomy.

b. Widget.

c. Curator.

d. Wiki.

e. Listserv.

11. The state of spam, or unwanted commercial e-mails, in today's Internet could best be described as

a. Increased numbers of spam messages have made e-mail largely useless for business today.

b. Spammers have become far more sophisticated in their techniques to avoid spam filters.

c. Antispam legislation and technology have helped reduced spam to a five-year low.

d. Spam filters have largely been ineffective and spam continues to grow as a percentage of online traffic.

10.3.7.4. Tools, Equipment, Supplies and Materials

- Laptops/Computer lab
- Smartphones
- Model Organizational Policies and procedures
- Internet

10.3.7.5. References

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10.3.8. Learning Outcome No. 7. Analyze and Interpret Reports Generated from ICT System

10.3.8.1. Learning Activities

Learning Outcome No. 7. Analyze and Interpret Reports Generated from ICT System	
Learning Activities	**Special Instructions**
Analyze and interpret reports: using a sample fact sheet and system report provided.	Fact sheet and system report must be provided Sample system report.pdf,Fact sheet.pdf
Generate an analysis report and disseminate it to the relevant office through a role play setup.	

10.3.8.2. Information Sheet No. 7/LO7
Introduction

This learning outcome intends to enable a trainee develop appropriate competence of analysis of reports and manage the reports generated from the ERP of the organization.

Definitions of key terms

ICT Report is the output of the analysis of data in information systems. Data is in the form of one of many types of reports. These reports will aggregate the data and present them in a coherent format that the management in the company can then use to aid them in the decision-making process. The reports could be no more than summaries of such things as sales, or they could be more detailed.

Methods, processes/ procedures/ guidelines

All methods and standards governing ICTs in Kenya are available at www.icta.go.ke

Content
Basic Kinds of Reports Produced by a Management Information System
The Greater Ecosystem of Information Systems

Management information systems aren't the only kind of information system out there. There are many others *that are used* in businesses for different purposes.

Decision Support Systems

Decision support systems, as you may have guessed from their name, basically assist the decision-making process that is carried out by management. Basically, they do this by *generating the necessary data* and performing preliminary statistical analysis on it. The manager's final judgment will still be required. However, the job is greatly simplified for them as they have all the data they need at their fingertips.

Transaction Processing Systems

Transaction processing systems are tasked with *three things:* they *collect transactions,* then *store them*, and then *process them* on a daily basis as the *transactions pass through* the systems. In case the need arises to modify transactions that have been done in the past or even cancel them, then such systems offer that functionality as well.

Executive Information Systems

Even executives need a system that helps them do their job. Basically, the Executive information system will give them a *bird's-eye view* of the entire company by providing them with company-wide data whenever they need it. The system will *generate* convenient reports for the executives

of the company with graphs and other pictorial representations; these pictorial representations are ***analyses of various aspects*** of the company's operations that can provide executives with a look at the ***bigger picture*** of how well the company is ***accomplishing its mission*** in achieving its goals. Ultimately, such a system helps executives in the decision-making process by allowing them to make quality decisions.

You may have noticed that this seems ***similar to the task*** carried out by a ***decision support system.*** To be sure, it is. A decision support system can be used by anyone in the company from ***lower level management to executives.*** An executive information system is simply the decision support system used by the executives.

MIS Reporting System

The fodder used by an **MIS reporting system** to produce reports is raw data from the processing systems in the office, such as the software on the computers, the transactional information coming from the transaction processing systems, and even the mobile applications running on employee phones for business purposes.
The output of the analysis of this data is in the form of one of many types of reports. These reports will ***aggregate the data*** and present them in a coherent format that the management in the company can then use to aid them in the decision-making process. The reports could be no more than summaries of such things as sales, or they could be more detailed.

The Summary Reports

These reports take data from different categories and aggregate it. It could be from different products, or different business units or geographical regions or accounting periods.
The information that is being aggregated in summary reports is usually presented in such a way that ***management can make sense of it.*** If it is an inventory summary, then it will consider vital information like the value of inventory in stock as well as the value of new purchases. If it is a sales summary, then it will contain information about sales revenue as well as divisions for that revenue in terms of geographical location, product category, and so on. No matter what kind of management information system you are using, even if it is as simple as a spreadsheet, it will allow you to specify the format in which you want the report.

The Trend Reports

Trend reports simply show trends, which allow you to compare how different things perform and they also enable you to compare present performance with past performance. A trend report of sales, for example, shows the performance of a given product category or business unit over the course of, say, a year. That year will then be broken down into months, weeks, and so on so that you

can see how well it did over different periods. You can also see how well a product category or business unit is doing from one year to the next.

When management uses *trend reports*, they can pinpoint problem areas and figure out how to correct them. A business unit *that's not doing well* may need for the leadership in it to be changed, so it can improve. A product category that is suffering may need to either be improved or scrapped altogether.

The Exception Reports

An exception is anything outside of the norm. An *exception report* will collect every single instance of these abnormal occurrences and then put them in one place where management has easy access to it. An exception report allows *management* to see *what's not going right* and *then prioritize what needs* to be solved immediately. If, for example, inventory levels are well below the norm, then management can order more supplies. If a business unit is making much less revenue than the norm, then management can take action.

On-Demand Reports

On-demand reports are produced on demand. The way they look and what is contained in them depend on both the *requirements of the manager* that needs them and on the prevailing *circumstances*. The **management information format** can either be a standard format or a custom one as required by the requester.

The 3-Step Key Report Analysis Process

STEP 1: Completeness

In order to validate a key report, the tester will look to verify that the sampled report is complete by evaluating the query code and parameters used to run the report or by performing a comparison to a related report of identical data or total from an independent source. The report-to-report comparison method is appropriate when evaluating the same data from two systems (e.g., Key Report for Sales Returns in the form of a data dump from one system that can be compared for completeness against a separate system's sales return data). By utilizing this method, the reports/data dumps are able to be compared and verified to be complete using a VLOOK-UP quickly. This allows for efficient verification of completeness and for the tester to advance to the accuracy sample selection stage of the key report testing.

The second method of validating key report completeness is more common, as a result of it being less likely that a key report has a related report that it can be directly tied to for verification. As such, the tester will obtain system screenshots showing the query code/source code or parameters that were used to run the key report. This is a straightforward process for standard/canned reports that are unable to be modified. In these cases, the tester only has to obtain the screenshot to verify that the standard system report was correctly accessed and used to run the key report due to the report fields being un-editable.

The process of validating the key report that is run via a "custom" system query has an added step. The tester will also need to examine the query code to ensure that the query is appropriate, which entails selecting the correct source or data tables from which to pull the support, identifying required report fields, and selecting the desired date range for the report.

STEP 2: Accuracy

In order to validate a report for accuracy, the tester will need to select samples from the key report and agree the sampled information back to the source data (Lindinger, Cavalieri, & Hayes, 2019). The source data can be in the form of a raw data download from the system, or from screen shots from the source system. The tester may also perform recalculations of the report information to determine whether or not it is accurate. As previously stated, the tester will need to select a sample of items from the list, based on the population, and agree the samples back to the source data.

STEP 3: Last Modification Dates

The final step in the key report testing process is a continuation of the last modification inquiries of control owners and requests of IT that were made during our planning phase. Once accuracy and completeness testing over key reports has been performed, it is once again necessary to obtain follow-up system screenshots to validate that the tested key reports have remained unmodified. This final step is often required by the external auditors that place reliance upon key report testing. Although last modification screenshots were already requested and documented during planning, this last set of system screenshots provides both the tester and those relying upon the key report testing the assurance that the key reports have not been modified since the date of field work was completed through fiscal year end. It is essential to make these requests approximately a month out from the end of the fiscal year so that the tester is allotted time to review the report modification dates and perform Q4 key report testing over any reports that underwent unexpected modifications. There has been a lot of focus on key reports by external auditors, which is why it is important for management to keep a current list of key reports, and to test the reports as required. Not only is it important for management to test key reports for this reason, but also for management to rely on the validity of their own data in making business decisions.

Conclusion

Management expects accurate and consistent reports form the management information systems. Validation of reports with actual data is therefore very important. All business managers must be able to produce reports from the system, analyze and interpret them.

10.3.8.3. Self-Assessment
1. Develop information analysis system as per the organization policy
2. Obtain departmental reports according to the organization policy
3. Conduct analysis and interpretation according to the ICT policy

4. Disseminate analyzed departmental user reports according to organization procedures
5. Undertake periodic review of ICT system in accordance with ICT policy and procedures/SOPs
6. Which of the following is not usually found in a report of a quantitative study?
    a) Measurement
    b) Results
    c) Confession
    d) Validation
7. The introductory section of a research report should aim to:
    a) Identify the specific focus of the study.
    b) Provide a rationale for the dissertation, or article.
    c) Grab the reader's attention.
    d) All of the above.
8. What is the purpose of the conclusion in a research report?
    a) It just a summary what the article already said.
    b) It summarizes the key findings in relation to the research questions.
    c) It contains a useful review of the relevant literature.
    d) It outlines the methodological procedures that were employed.
9. In a report of quantitative research, an empiricist repertoire serves to:
    a) Confuse the reader with long and technical words.
    b) Demonstrate the researcher's reflexivity about their role in the research process.
    c) Give the impression that the results were objective and logically inevitable.
    d) Provide a confessional tale of what went wrong in the procedure.

10.3.8.4. Tools, Equipment, Supplies and Materials
- Laptops/Computer lab
- Model strategic plan
- Model Organizational Policies and procedures
- Internet

10.3.8.5. References

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10.3.9. Learning Outcome No. 8. Conduct ICT User Training
10.3.9.1 Learning Activities

Learning Outcome No. 8. Conduct ICT User Training	
Learning Activities	**Special Instructions**
Use role play and carry out an ICT training needs assessment, come up with training objectives, carry out the training according to the organizations budget and prepare the training report.	

10.3.9.2. Information Sheet No. 10/LO8
Introduction

User training involves imparting the necessary competences required to effectively utilize ICT resources within the organization. This learning outcome intends to equip the business manager with all relevant skills required to undertake user training within an organization.

Definitions of key terms

ICT User training is process of identifying gaps in user competences of ICT systems and planning on how to train and undertaking the actual training to fill the gaps.

Methods, processes/ procedures/ guidelines

All methods and standards governing ICTs in Kenya are available at www.icta.go.ke

Content

ICT Training needs assessment

The business manager can use standard or develop own questionnaire for undertaking a training needs assessment based on the ICTs deployed in a certain institution. The general steps of conducting a training needs assessment is as follows:

Step 1: Determine the Desired Business Outcomes.

Step 2: Link Desired Business Outcomes with Employee Behavior.

Step 3: Identify Trainable Competencies.

Step 4: Evaluate Competencies.

Step 5: Determine Performance Gaps.

Step 6: Prioritize Training Needs.

Step 7: Determine How to Train

ICT training needs purely depends on the ICT services deployed in an institution safe from basic ICT skills that are required by all employees.

The following is a sample template that can be used:

Setting training needs objectives

If you can't measure it, you can't manage it (MicroTek, 2019). At the beginning of every training program, there is a driving purpose; but unless you have clear, written goals and objectives, how will you know once you've achieved that purpose? Setting training goals and objectives will keep your program on track and help you maximize outcomes.

Training Goals versus Objectives

While many assume that goals and objectives are the same, the distinction between them is important. Let's look at a roadmap for example: the compass on the map provides the general direction, whereas the highways are the specific routes that describe how to go in a particular direction.

A goal statement is your compass—it is very broad and speaks to a primary outcome. Experts in our industry have been tying training goals to business outcomes—setting goals on performance and competencies that explicitly relate to ROI and ROE (return on expectations) for the proposed training. For example, a goals statement may answer the following: "What business outcomes do I want training to address?"

Objectives are like the highways on a roadmap—they describe measurable results you are to achieve to meet goals. Whereas you might have one or two goal statements, you'll likely have several objectives that relate back to the over-arching goal.

Don't confuse objectives with program activities—objectives *describe* the results to be achieved by the program and help monitor progress toward program goals.

S.M.A.R.T. Training Objectives

As you create training program objectives, keep them **S.M.A.R.T.**

- **Specific:** State objectives clearly, so there is no room for misinterpretation.
- **Measurable:** Objectives should be measurable so that you have tangible evidence of accomplishment.
- **Achievable:** Objectives should stretch you slightly so the goal feels challenging, yet attainable.
- **Relevant:** Your objectives should be directly applicable to your end goals.
- **Time-Bound:** Objectives should indicate a timeline for which they are to be completed. Apply realistic time scales to your objectives.

Impact-Oriented Training Objectives

As indicated earlier that experts in our industry have stressed the importance of tying training objectives to business impact—specifically how training relates to ROI and ROE. When developing objectives you'll want to think in terms of the business and performance outcomes your training program can impact.

- **Lower Costs:** You can tie training objectives to lowered costs in terms of employee turnover rates, fewer workplace accidents and improved efficiencies.
- **Increased Profits:** If you're doing sales training, you can track individual performance objectives before and after training.
- **Improve Time-to-Market or Accelerate Time-to-Profit:** Tie competency and performance metrics back to time-to-profit or time-to-market measures.
- **Operational Efficiency Improvements:** Skills development training could be related back to business goals relating to operational efficiency.

- **Improve Customer Satisfaction:** Your training can directly affect your customer's satisfaction scores.

Conclusion

Every training will have its own objectives, dependent on the goals set for the program. Determine the best goals to meet the needs of your organization. Clearly identifying these training goals and objectives will keep your training focused on results and illustrate an investment in your company's success.

10.3.9.3. Self-Assessment

1. Carry out training needs assessment in accordance with HR training procedures
2. Set training objectives based on training needs
3. Prepare training programmes as per HR procedures
4. Prepare training budget according to organization finance procedures and policy
5. Obtain training resources in accordance with budget
6. Carry out ICT training as per training programme and budget
7. Carry out evaluation of training as per training needs and objectives set
8. Prepare and share training report according to organization procedures
9. What is the term for incremental changes to processes in an organization using information technology?
   a) Business Process Improvement
   b) Business Process Reengineering
   c) Business Process Change
   d) Business Process Advance
10. What is the first step in a 'Stage gate' process?
    a) Develop a product.
    b) Demonstrate a plan.
    c) Initiate learning.
    d) Generate ideas and concepts.
11. Which is not an example of an external factor for learning and knowledge?
    a) Demographic change
    b) Political influences
    c) Organizational structure
    d) Social change

10.3.9.4. Tools, Equipment, Supplies and Materials

- Laptops/Computer lab
- Model Organizational Policies and procedures
- Internet
- Smartphones

10.3.9.5. References

1. ICT Authority Kenya. (2019, 5 30). National ICT Policy Kenya. Retrieved from ICT Authority Kenya: http://icta.go.ke/national-ict-policy/
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10.3.10. Learning Outcome No. 9. Prepare ICT report
10.3.10.1. Learning Activities

Learning Outcome #No. 1. Develop Business Strategic plan	
Learning Activities	Special Instructions
• Prepare and share an ICT report based on a template	• Trainee to use the template and share only to the project implementation committee members.

10.3.10.2. Information Sheet No. 10/LO9
Introduction

This learning outcome intends to equip the trainees with skills of preparing ICT reports and sharing in accordance with standard operating procedures of an organization. The layout of an ICT report can be accessed online at (Status net, 2019)

Definitions of key terms

ICT Report is a status document outline the expected implementation or operation targets and the current status.

Methods, processes/ procedures/ guidelines

All methods and standards governing ICTs in Kenya are available at www.icta.go.ke

Content

Case Studies

The Meru National Polytechnic is implementing an enterprise resource planning system. You have been given the responsibility of project manager for the human resource and payroll management systems. Develop system requirements and a template for writing the implementation report.

Conclusion

ICT reports are a major function that will allow proper system integration as well as inform management any short falls and strengths of all acquired ICTs. The business manager must sharpen their report writing skills emanating from system requirements defined at the beginning of ICT projects.

10.3.10.3. Self-Assessment

1. Prepare and share organization ICT report in accordance with SOPs
2. Identify areas of concern based on targets and ICT procedures
3. Implement ICT recommendations as per ICT policy
4. Which of the following is not normally included in a written account of qualitative research?
    a. An introduction, locating the research in its theoretical context.
    b. An explanation of the design of the study.
    c. A discussion of the main findings in relation to the research questions.
    d. A decision to accept or reject the hypothesis.
5. What is the term for the act of acquiring an IS architecture from the market?
    a) External buying
    b) Ordering
    c) Outsourcing
    d) Procuring
6. Which is not an implementation activity for an information system?
    a) IS marketing plan
    b) System documentation
    c) Software development
    d) User training and development
7. What is the term for forcing people to accept change?
    a) Conditioning
    b) Conversion
    c) Converting

d) Coercion

10.3.10.4. Tools, Equipment, Supplies and Materials for the specific learning outcome

- Laptops/Computer lab
- Model Organizational Policies and procedures
- Internet

10.3.10.5. References

1.　　　ICT Authority Kenya. (2019, 5 30). National ICT Policy Kenya. Retrieved from ICT Authority Kenya: http://icta.go.ke/national-ict-policy/

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