CIT415: INTRODUCTION TO E-COMMERCE

NATIONAL OPEN UNIVERSITY OF NIGERIA

FACULTY OF SCIENCES

DEPARTMENT OF COMPUTER SCIENCE

COURSE CODE: CIT415

COURSE TITLE: INTRODUCTION TO E-COMMERCE

**CIT415
INTRODUCTION TO E-COMMERCE**

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NATIONAL OPEN UNIVERSITY OF NIGERIA

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Africa Centre of Excellence on Technology Enhanced Learning (ACETEL)

Course Guide

Introduction

You are welcome to CIT415: Introduction to E-Commerce. This is a 3 credit course for undergraduate that runs for 15 weeks. The course consists of 6 modules which is divided into 20 units. The course introduce you to the concept of E-commerce, types, benefits, e-business, issues, catalog, online shopping, processing order, payment gateways, purchasing, identifying shoppers and security. The course addresses facilities for e-commerce, methodologies for developing e-commerce websites and managing the e-commerce website.

Course Competencies

1. Developing E-commerce Website
2. E-Commerce Catalogue Development
3. Processing Orders in E-Commerce
4. Tracking Shoppers' Information

Course Objectives

The course objectives are to:
- Explain the concept, types and benefits of E-commerce
- Distinguish between E-commerce and E-business
- Discuss the development of E-commerce Catalogue
- Develop E-commerce Website
- Explain how to Track Shoppers' Information
- Explain the processes of securing E-commerce system

Working Through this Course

To successfully complete this course, you need to read carefully the study units, listen attentively to the audios and videos, do all assessments given promptly, open the links and read, participate in discussion forums, study using the recommended books and other materials provided, prepare your portfolios, and participate in the online facilitation.

Each of the study unit, consist of the introduction, intended learning outcomes, the main content, conclusion, summary and references/further readings. The introduction highlights the expectations in the study unit. Read and note the intended learning outcomes (ILOs). The intended learning outcomes highlights to you what you should be able to do at the completion of each study unit. So, you can evaluate your learning at the end of each unit to ensure you have achieved the intended learning outcomes. To meet the intended learning outcomes, knowledge is presented in texts, video and links arranged into modules and units. Click on the links as may be directed but where you are reading the text off line, you will have to copy and paste the link address into a browser. You can download the audios and videos to view offline. You can also print or download the texts, then save in your computer or external drive. The conclusion gives you the theme of the knowledge you are taking away from the unit. Unit summaries are presented in downloadable audios and videos.

There are two main forms of assessments – the formative and the summative. The formative assessments will help you monitor your learning. This is presented as in-text questions, discussion forums and Self-Assessment Exercises.

The summative assessments would be used by the university to evaluate your academic performance. This will be given as Computer Base Test (CBT) which serve as continuous assessment and final examinations. A minimum of two computer base test will be given with only one final examination at the end of the semester. You are required to take all the computer base tests and the final examination.

There are 20 study units in this course divided into 6 modules. The modules and units are presented as follows:

Study Units

Module 1:   Introduction to Basic Concepts and Definitions
        Unit 1:   Basic Definitions of E-Commerce
        Unit 2:   Types of E-Commerce
        Unit 3:   Benefits and Key Ideas in E-Commerce

Module 2:   Understanding E-Business and E-Commerce
        Unit 1:   Concepts of E-Business and E-Commerce
        Unit 2:   Facilities and Support for E-Commerce and E-Business Systems
        Unit 3:   Issues and Problems that Affects E-Commerce and E-Business
                        Development

Module 3:   Website Development for E-Commerce
        Unit 1:   Introduction and Techniques for Web Design
        Unit 2:   Methodologies for Developing E-Commerce Website
        Unit 3:   Managing Websites for E-Commerce
        Unit 4:   Creating and Maintaining a Successful Web Presence

Module 4:   Product Catalog Development
        Unit 1:   E-Commerce Catalog Development
        Unit 2:   Processing Orders in E-Commerce
        Unit 3:   Online Shop

Module 5:   Shopping Cart
        Unit 1:   Introduction to Shopping Cart
        Unit 2:   Functions of a Shopping Cart
        Unit 3:   Payment Gateways for Shopping Carts
        Unit 4:   Shopping Cart Problems

Module 6:   Completing the Purchasing Process and Tracking Information
        Unit 1:   Completing the Purchasing Process
        Unit 2:   Tracking Shoppers' Information
        Unit 3:   Security in E-Commerce

References and Further Readings

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Shaker, H. and Uddin, M (2013). Review on electronic commerce. Middle-East Journal of Scientific Research 18 (9). DOI: 10.5829/idosi.mejsr.2013.18.9.12421

Turban, E., Whiteside, J., King, D., & Outland, J. (2017). *Introduction to Electronic Commerce and Social Commerce* (4[th]ed.). Gewerbestrasse, Switzerland: Springer Nature.

Presentation Schedule

The presentation schedule gives you the important dates for the completion of your computer-based tests, participation in forum discussions and participation during facilitation. Remember, you are to submit all your assignments at the appropriate time. You should guard against delays and plagiarisms in your work. Plagiarism is an offence in academics and is highly penalized.

Assessment

There are two main forms of assessments in this course that will be scored. The Continuous Assessments and the final examination. The continuous assessment shall be in three fold. There will be two Computer Based Assessment. The computer-based assessments will be given in accordance to university academic calendar. The timing must be strictly adhered to. Each of the Computer Based Assessments shall be scored a maximum of 10%, while your participation in discussion forums and your portfolio presentation shall be scored maximum of 10% if you meet 75% participation. Therefore, the maximum score for continuous assessment shall be 30% which shall form part of the final grade.

The final examination for CIT415 will be maximum of two hours and it takes 70 percent of the total course grade. The examination will consist of questions that reflect cognitive reasoning.

Note: You will earn 10% score if you meet a minimum of 75% participation in the course forum discussions and in your portfolios otherwise you will lose the 10% in your total score. You will be required to upload your portfolio using google Doc. What are you expected to do in your portfolio? Your portfolio should be note or jottings you made on each study unit and activities. This will include the time you spent on each unit or activity.

How to get the Most from the Course

To get the most in this course, you need to have a personal laptop and internet facility. This will give you adequate opportunity to learn anywhere you are in the world. Use the Intended Learning Outcomes (ILOs) to guide your self-study in the course. At the end of every unit, examine yourself with the ILOs and see if you have achieved what you need to achieve.

Carefully work through each unit and make your notes. Join the online real time facilitation as scheduled. Where you missed the scheduled online real time facilitation, go through the recorded facilitation session at your own free time. Each real time facilitation session will be video recorded and posted on the platform.

In addition to the real time facilitation, watch the video and audio recorded summary in each unit. The video/audio summaries are directed to salient part in each unit. You can assess the audio and videos by clicking on the links in the text or through the course page.

Work through all self-assessment exercises. Finally, obey the rules in the class.

Facilitation

You will receive online facilitation. The facilitation is learner centred. The mode of facilitation shall be asynchronous and synchronous. For the asynchronous facilitation, your facilitator will:

- Present the theme for the week;
- Direct and summarise forum discussions;
- Coordinate activities in the platform;
- Score and grade activities when need be;
- Upload scores into the university recommended platform;
- Support you to learn. In this regard personal mails may be sent.
- Send you videos and audio lectures; and podcast

For the synchronous:

- There will be eight hours of online real time contact in the course. This will be through video conferencing in the Learning Management System. The eight hours shall be of one-hour contact for eight times.
- At the end of each one-hour video conferencing, the video will be uploaded for view at your pace.
- The facilitator will concentrate on main themes that are must known in the course.
- The facilitator is to present the online real time video facilitation time table at the beginning of the course.
- The facilitator will take you through the course guide in the first lecture at the start date of facilitation

Do not hesitate to contact your facilitator. Contact your facilitator if you:

- do not understand any part of the study units or the assignment.
- have difficulty with the self-assessment exercises
- have a question or problem with an assignment or with your tutor's comments on an assignment.

    Also, use the contact provided for technical support.

Read all the comments and notes of your facilitator especially on your assignments, participate in the forums and discussions. This gives you opportunity to socialise with others in the programme. You can raise any problem encountered during your study. To gain the maximum benefit from course facilitation, prepare a list of questions before the discussion session. You will learn a lot from participating actively in the discussions.

Finally, respond to the questionnaire. This will help the university to know your areas of challenges and how to improve on them for the review of the course materials and lectures.

Course Information

Course Code: CIT 415
Course Title: Introduction to E-commerce
Credit Unit: 3

Course Status: Core
Course Blub: This course addresses the concepts of e-commerce, expresses the difference between e-commerce and e-business. It discusses issues of e-commerce and payment gateways. Areas to be covered include: Introduction and definition of e-commerce, online shopping, processing orders, online shopping, purchasing, identifying shopper' information and security of the system. Other areas include catalogue, development, managing and maintaining e-commerce website.

Ice Breaker
Welcome to CIT415: Introduction to E-Commerce. You are encouraged to update your profile with updated information about yourself so that we can interact and get to know each other in an effective and enjoyable way. In a nutshell, what do you expect about this course? To learn about an effective and efficient e-commerce and the development of an e-commerce website, right? Yes, you are on the right course.

Module 1:   Introduction to Basic Concepts and Definitions

Module Introduction

This module will introduce learners to concepts of e-commerce, what it entails be it is regarded as e-commerce, types and benefits of e-commerce system and key areas to which e-commerce can function. This module has three (3) units:

Unit 1: Basic Definition of E-Commerce
Unit 2: Types of E-Commerce
Unit 3: Benefits and Key Ideas in E-Commerce

In each of these units, I will go through a topic and give a self-assessment exercise(s) at the end of the unit. Then, give resources for further reading at the end of each units.

Unit 1:   Basic Definitions of E-Commerce

Contents
1.0   Introduction
2.0   Intended Learning Outcomes (ILOs)
3.0   Main Content
    3.1   Definition of E-commerce
    3.2   Features of E-commerce
4.0   Self-Assessment Exercise(s)
5.0   Conclusion
6.0   Summary
7.0 References/Further Readings

1.0 Introduction
In this unit, you will acquire the knowledge and understanding of an E-commerce and reason 5C concepts is very important. You will understand the significance of internet to e-commerce.

2.0 Intended Learning Outcomes (ILOs)
By the end of this unit, you will be able to:
    Explain the concepts of e-commerce and also highlights the 5Cs.

3.0   Main Content
3.1   Definition of E-commerce
E-Commerce simply means Electronic Commerce; E-commerce is the buying and selling of goods, products, or services using the internet as a medium whereby the buyer gets to see the products online, order it and make payment through the mode accepted by the seller. The seller then delivers these products to the consumer via available and accepted means. E-commerce is also known as internet commerce. Online stores like Amazon, Shopify, Ebay, Olx are examples of E-commerce websites. E-commerce concept is a fast rising one, gaining steady popularity as there is Increased accessibility and availability of Internet access which is making many small and medium and even large-scale businesses to be considering e-commerce as a valid and more profitable sales channel. Ecommerce is better understood with the concepts of the 5Cs, the 5C model consists of:

- Commerce which is like a market place that consist of the buyers and sellers, transaction terms and facilities to perform business transactions. This helps create and strengthen a universal supply chain.

- Collaboration: the internet being a network of networks supports interrelationships among businesses and individuals in a manner that is not limited by space, time, national or organizational constraints.

- Communication: the internet technology and the world wide web provides a great interactive medium for self-expression (as in reviews or comments of clients) and self-presentation (as a means for businesses to showcase their products or services; a kind of marketing)

- Connection: it is likely that different businesses use different software platforms to run their business processes, leveraging on the advantages of the internet, it is achievable to incorporate the different software platforms of different businesses that want to collaborate.

- Computation: large scale sharing of resources is paramount to a successful business transaction. The internet technology facilitates this to ease successful completion of business processes.

3.2 Features of E-commerce
- Wider range of audience: with the internet as the backbone of ecommerce, business transactions can take place across national boundaries in a more convenient and cost-effective form.

- Universal standard: internet technology has a universal standard, its not a different one in UK and a different one in Nigeria.

- Rich content: ecommerce allows for integration of the various forms of content, one can use video, audio, combination of two or all three.

- Ease of interaction: clients interact with businesses from the comfort of their homes. There is no need to physically visit a store as in the place of the traditional commerce.
- Personalization or customization: the various technologies integrated to the internet allows businesses to send personalized/customized messages that can be delivered to individuals or even groups.

- Ubiquity: the internet technology is widely available and accessible from anywhere at any time; be it at home, at work via mobile devices like a mobile phone phone, ipad, and even PCs.

- Business digitalization: this involves comprehensively using the internet and other tools of Information and Communication Technologies to link information and cooperate seamlessly every stakeholder of the business.

- Automation of business processes to increase delivery speed

4.0   Self-Assessment Exercise(s)
1. the following are 5C models of E-commerce except
a. computation
b. connection
c. commerce
d. competition

2. One of the following is afeature of E-commerce
a. Planning Management
b. Ease of interaction
c. Supply Relationship
d. Customer Planning

5.0   Conclusion
The unit shows that, 5C model gives comprehensive way of identifying e-commerce. Though, features of e-commerce could be wide however, universal standard, rich content, wide range coverage and ease of interactions are some of the most important features.

6.0   Summary
You are believed by now to have understand an E-commerce, know some of the characteristics that exist such as Commerce, Collaboration, Connection, Communication and Computation.

7.0   References/Further Readings
Codeship   (2020).   Benefits   of   ecommerce.   Retrieved   from https://www.gcg42.ac.in/medias/media/other/554/benefits-of-e-commerce.pdf

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Unit 2:   Types of E-Commerce

Contents
1.0   Introduction
2.0   Intended Learning Outcomes (ILOs)
3.0   Main Content
        3.1   Types of E-commerce

1.0 Introduction

In this unit, you will identify the types of e-commerce and understanding the characteristics and differences between each of the e-commerce.Each of this e-commerce types are discussed one after the other so that you can grab the full understanding without misconception.

2.0 Intended Learning Outcomes (ILOs)

By the end of this unit, you will be able to:
Identify the types of E-commerce
Differentiate between the different types of E-commerce

3.0 Main Content

3.1 Types of E-commerce

E-commerce can be divided into different types, some are: Business to Business (B2B), Business to Customer (B2C), Customer to Customer (C2C), and Customer to Business (C2B).

3.1.1 Business to Business (B2B):
only the companies are doing business with each other. Here, the final consumers are not involved. Therefore, the online transactions that are carried out in a business to business e-commerce transaction involve parties like the manufacturers, wholesalers, retailers etc. B2B e-commerce is simply the electronic exchange of products, services or information between businesses rather than between businesses and consumers as expected. Examples include companies such as Xero that offers inbound marketing and sales and accounting software for small to medium businesses or a construction materials company selling its products to architects and interior designers. Business to business ecommerce is the largest form of ecommerce and it requires high level of security in exchanging data.

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3.1.2 **Business to Customer (B2C):** here, the business sells directly to customers. The customers can browse the website, see reviews and order directly from the business. After the order, the good is shipped directly to them (the customers). Some of the most popular business to customer websites are; Amazon, Jumia and Konga. The businesses strive to reach individuals and not businesses as in business to business type. Various means are employed for this purpose like newsletters, email list, instant messaging and the likes. Advertisers and content providers can as well assist in the marketing process of ensuring that these businesses reach the intended audiences using contents like digital news, photos, music, videos and even artworks.

3.1.3 **Customer to Customer (C2C):** for this model, the consumers are in direct contact with one another and they can buy or sell freely without any middleman. This model enables the consumers to buy and sell used goods like furniture, mobile phones or electrical appliances. Examples of websites that use this model are: OLX and Jiji. Consumer to consumer ecommerce presents a means for consumers to set their rules for the business transaction, they set their prices as well and the buying party checks for themselves if the set prices and rules are favorable before making a deal with the selling party. The consumer that's selling prepares the product to be sold and place it on sale on their own while the consumer that's purchasing chooses from the different displayed good s to be sold or uses the search engine to search for what to be purchased and chooses from the returned results of the search like on eBay.

3.1.4 **Consumer to Business (C2B):** this model is the inverse of business to consumer because here, as the name implies, it's the consumers that sell to the business. Freelancers and businesses that buy from then are a perfect example for this model of E- Commerce. Here, individuals (that is, consumers) create value (could be goods or services) that businesses consume. A programmer for instance can give his/her service and abilities to utilize and maintain the online resources of a system as a specialist in the programming field. A platform known as "fiver" works on this model.

3.1.5 **Business to administration**: also known a s business to government which usually involve exchange of data between businesses and the government via the internet, an example is when a business wants to advertise its product or service at the government level. Business to administration type of ecommerce includes different services like legal documents, social security, fiscal measures and the likes.

3.1.6 **Consumer to administration**: also known as consumer to government entails electronic transaction between individuals (consumer) and the government. When an individual makes a request or a query from the government, it works on the model of consumer to administration type of ecommerce. It creates a way that is easy for communication between governments and individuals. Examples include payment of health services, distance learning, information dissemination and so on.

3.1.7 **M-Commerce** (mobile commerce) is the buying and selling of goods and services through wireless technology-i.e., handheld devices such as cellular telephones and personal digital assistants (PDAs).

It does not always require internet, such as mobile banking. It is also referred to as next generation e-commerce. Japan is seen as a global leader in m-commerce.

As content delivery over wireless devices becomes faster, more secure, and scalable, some believe that m-commerce will surpass wireline e-commerce as the method of choice for digital commerce transactions.

Industries affected by m-commerce include: financial services, telecommunications, service/retail, and information services.

4.0   Self-Assessment Exercise(s)
1. E-commerce could be refers to as:
   (a) digital market place that consist of buyers and sellers
   (b) connection of enterprise market for buyers only
   (c) communication of products by sellers only
   (d) collaboration not for business purpose

2. business to administration e-commerce involve:
   (a) exchange of data between businesses and the government via the internet
   (b) exchange of data between business and administration face to face
   (c) consumer to business owners via internet
   (d) consumer to government via internet

5.0   Conclusion
The unit shows that, e-commerce business to business invoves only companies doing business together. Business to consumer sells directly to consumer, consumer to consumer have direct contact with one another while consumer to business allows consumer to sell to business and mobile commerce encourages buying and selling through wireless technology.

6.0   Summary
You are believed by now to have understand the characteristics of each of the e-commerce types, their distinct features and how it operates. This also shows the seven types of e-commerce.

7.0   References/Further Readings

Codeship (2020). Benefits of ecommerce. Retrieved from https://www.gcg42.ac.in/medias/media/other/554/benefits-of-e-commerce.pdf

Išoraitė, M. and Miniotienė, N. (2018). Electronic Commerce: Theory and Practice.   DOI: https://doi.org/10.5281/zenodo.1258437

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Shaker, H. and Uddin, M (2013). Review on electronic commerce. Middle-East Journal of Scientific Research 18 (9). DOI: 10.5829/idosi.mejsr.2013.18.9.12421

Unit 3:   Benefits and Key Ideas inE-Commerce

Contents
1.0   Introduction
2.0   Intended Learning Outcomes (ILOs)
3.0   Main Content
        3.1 Benefits of E-commerce
        3.2 Disadvantages of E-commerce
        3.3Key Ideas in E-commerce
4.0   Self-Assessment Exercise(s)
5.0   Conclusion
6.0   Summary
7.0   References/Further Readings

1.0 Introduction

In this unit, benefits of e-commerce are highlighted, issues are discussed and key ideas in e-commerce are noted for easy understanding.

2.0 Intended Learning Outcomes (ILOs)

By the end of this unit, you will be able to:
        Discuss the benefits that could be derived from e-commerce
        Highlight the disadvantages that could be notice and
        Explain the meaning of some terminologies of e-commerce

3.0 Main Content

3.1 Benefits of E-Commerce

E-commerce has come with some benefits, which are:

- Cheaper cost: E-Commerce is usually much cheaper than because a physical store is not necessary. Businesses that have a physical store in a popular location will have higher cost of operation and maintenance.

- Wider reach: with e-commerce, there is no restriction, no limitation to how large the audience to reach will be. People from different countries who are willing and able to patronize an ecommerce business can contact the business, place orders and the business works out delivery to them. With ecommerce, businesses can have as many clients as possible.

- Direct (face to face) interaction is not needed: unlike the traditional means of commerce which is based on face to face interaction for when clients have an enquiry and for the business's response too; ecommerce does not need this. The electronic channels like email, live chats and the likes are used for these purposes and more.

- E-Commerce removes geographical barriers. Which means you can buy and sell from any part of the world.

- E-Commerce enables sellers to lower transaction cost as they don't need to pay rent for a physical store. This will enable them to maximize their profit.

- Goods are delivered quickly and easily with little efforts on the side of the consumer.

- Complaints are addressed quickly and consumers can see reviews of other consumers before purchasing an item.

- E-Commerce saves time, effort and energy of the consumers and of the seller.

- With E-Commerce, customers get to shop any day at any time as there is no closing hour like physical stores.

- E-Commerce enables the buyer and seller to be in direct contact with no intermediary. This gives room for personal touch and quick transaction.

3.2 Disadvantages of E-commerce

- Security: The platform being used for the ecommerce can be hacked which can lead to client's details being compromised and used for illegal and fraudulent purposes.

- Trust: It might take time for the ecommerce to get clients that will actually patronize it. People have trust issues to entrust their money or details via the internet as ecommerce usually has no physical store which makes tracing very difficult or even impossible.

- Credit card fraud is another security threat that ecommerce is exposed to and this is like the most common and most accepted means of payment for ecommerce transactions.

3.3 Key Ideas in E-commerce

- **D2C:** means direct to consumer. Middle men are cut off and business deliver their product or services directly to the consumer without wholesalers or retailers. It is direct!
- **White labelling:** when a business applies its brand name to a generic product after purchasing from a distributor. If a food business buys snacks from a distributor of food company and then applies its own business brand name on the snacks it has purchased, that is white labelling.

- **Private labelling:** a business makes a deal with the manufacturer directly to create a unique product specially for the business with an exclusive right for them as the sole seller. If a food business approaches the manufacturers of "minimiechinchin" to exclusively start producing say chips for them with an exclusive right that only this business can sell the chips, this is private labelling.

- **Wholesaling:** wholesaling involves a retailer carrying out the business process like a wholesaler by offering a discount in price when its products are sold in bulk. The business will have piece prices and bulk prices so they can sell in bit and also in bulk but there will be a discount in price for bulk purchase.

- **Drop-shipping:** is a way of marketing and selling items that will be delivered by a third party (manufacturer or supplier). Consumers pay the drop-shipper, drop-shipper pays the supplier for the good or service to be delivered to the consumer. Drop-shippers are like middle men that connect suppliers to consumers. Shopify is a good example of drop-shipping platform.

Subscription: consumers pay certain agreed amount to business and business delivers the equivalent good or service to consumer regularly at scheduled intervals. A good example is DSTV subscription

4.0 Self-Assessment Exercise(s)

1. The following are benefits of e-commerce except:
   (a) Cheaper cost

(b) Wider reach
(c) Face to face interaction
(d) Quick delivery of goods

2. The following are factors that hinders e-commerce except:
    (a) Insecurity
    (b) Lack of trust
    (c) Credit card fraud exposure
    (d) Internet access

5.0   Conclusion

The unit highlights the benefits that can be derived from the use of e-commerce. Some demerits are also identified such as security threat to credit card use, trust issue by entrusting details online, however, the benefits can be seen to overweight the issues hence, e-commerce has increased in usage.

6.0   Summary

You are believed by now to have understandthat e-commerce benefits to supersede the disadvantages due to cheap cost, wider reach, save time, quick response, direct sales, less face to face contact against trust, fraud and security threat.

7.0   References/Further Readings

Kutz, M. (2016). Introduction to Ecommerce, combining businesses and information technology. Retrieved from https://bookboon.com/en/introduction-to-e- commerce-ebook

Shaker, H. and Uddin, M (2013). Review on electronic commerce. Middle-East Journal of Scientific Research 18 (9). DOI: 10.5829/idosi.mejsr.2013.18.9.12421

Module 2:   Understanding E-Business and E-Commerce

Module Introduction

This module will introduce learners to facilities that support e-commerce and e-business, explain the difference between e-commerce and e-business and also highlights issues that affects e-commerce and e-business. This module has three (3) units:

Unit 1:   Concepts of E-Business and E-Commerce
Unit 2:   Facilities that Support E-Commerce and E-Business Systems
Unit 3:   Issues and Problems that affects E-Commerce and E-Business Development

In each of these units, I will go through a topic and give a self-assessment exercise(s) at the end of the unit. Then, give resources for further reading at the end of each units.

Unit 1:   Concepts of E-Business and E-Commerce

Contents
1.0   Introduction
2.0   Intended Learning Outcomes (ILOs)
3.0   Main Content
          3.1   Introduction
          3.2   E-commerce at a glance
          3.3   E-commerce vs E-business
          3.4   The Key Elements of an E-Business solution
4.0   Self-Assessment Exercise(s)
5.0   Conclusion
6.0   Summary
7.0   References/Further Readings

1.0 Introduction

This unit create an overview of e-commerce and e-business. The unit gives the difference that could be observe between e-commerce and e-business. The unit ends with the key elements of an e-business.

2.0 Intended Learning Outcomes (ILOs)

By the end of this unit, you will be able to:
          Evaluate the role of e-commerce and e-business
          Identify key elements of an e-business solution

3.0 Main Content

3.1   Introduction

In the emerging global economy, e-commerce and e-business have increasingly become a necessary component of business strategy and a strong

catalyst for economic development. The integration of information and communications technology (ICT) in business has revolutionized relationships within organizations and those between and among organizations and individuals. Specifically, the use of ICT in business has enhanced productivity, encouraged greater customer participation, and enabled mass customization, besides reducing costs.

With developments in the Internet and Web-based technologies, distinctions between traditional markets and the global electronic marketplace-such as business capital size, among others-are gradually being narrowed down. The name of the game is strategic positioning, the ability of a company to determine emerging opportunities and utilize the necessary human capital skills (such as intellectual resources) to make the most of these opportunities through an e-business strategy that is simple, workable and practicable within the context of a global information milieu and new economic environment. With its effect of leveling the playing field, e-commerce coupled with the appropriate strategy and policy approach enables small and medium scale enterprises to compete with large and capital-rich businesses.

3.2 E-Commerce at a glance

Electronic Commerce is what referred to as E-commerce. It is the process of conducting sales transactions over the internet. E-commerce is the use of electronic communications and digital information processing technology in business transactions to create, transform, and redefine relationships for value creation between or among organizations, and between organizations and individuals (Lallana, Quimbo, &Andam, 2000).

This concept aids the companies and industries opportunity of transacting products and services online with no need to visit the physical office. Essentially, businesses could be easily posted online for onward sales transactions through E-commerce. This overcomes geophysical and geographical barriers. By the virtue of the deployment of e-commerce, it has, at present, become an integral component of a business strategy.

3.3 E-Commerce vs E-Business

Despite that some individuals interchangeably use e-commerce and e-business, both are clearly different. In e-commerce, ICT is used to to enable the external activities and relationships of the business with individuals, groups and other businesses. While e-business is the transformation of an organization's processes to deliver additional customer value through the application of technologies, philosophies, and computing paradigm of the new economy. That is, e-commerce is a particular form of e-business. Compared to e-Commerce, e-Business is a more generic term because it refers not only to information exchanges related to buying and selling but also servicing customers and collaborating with business partners, distributors and suppliers. Interestingly, in e-business, three primary processes, as illustrated by Lallana et al. (1997) are enhanced viz:

1. **Production processes**: These include procurement, ordering and replenishment of stocks; processing of payments; electronic links with suppliers; and production control processes, among others;

2. **Customer-focused processes**: These include promotional and marketing efforts, selling over the Internet, processing of customers' purchase orders and payments, and customer support, among others; and

3. **Internal management processes**: These include employee services, training, internal information-sharing, video-conferencing, and recruiting. Electronic applications enhance information flow between production and sales forces to improve sales force productivity. Workgroup communications and electronic publishing of internal business information are likewise made more efficient

3.4   The key elements of an e-Business solution are:
1. Customer Resource management(CRM)
2. Enterprise resource planning (ERP)
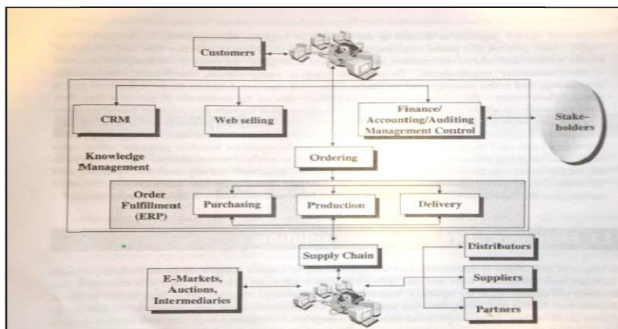3. Supply Chain Management (SCM)
4. Knowledge Management
5. e-Markets

Figure 1. Ingredients of an e-business solution

4.0   Self-Assessment Exercise(s)
1. one of the following is not enhancing process of e-business.
(a) production processes
(b) lifting processes
(c) customer-focused processes
(d) internal management processes

5.0   Conclusion
The unit shows that e-commerce and e-business are clearly different from one another. The former is a commerce that run solely on ICT and the later uses ICT to upgrade its business.

6.0 Summary

You are believed by now to have understand the difference between e-commerce and e-business, the processes of e-business such as production, customer-focused and internal management as well as the key elements of e-business solutions.

7.0 References/Further Readings

Definition adapted and expanded from Emmanuel Lallana, Rudy Quimbo, Zorayda Ruth Andam, *ePrimer: An Introduction to eCommerce*(Philippines: DAI-AGILE, 2000), 2.

Lallana, Quimbo, Andam, 4. Cf. Ravi Kalakota and Andrew B. Whinston, *Electronic Commerce:A Manager's Guide* (USA: Addison Wesley Longman, Inc., 1997), 19-20.

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Unit 2: Facilities that Support E-Commerce and E-Business Systems

Contents

1.0 Introduction

In this unit, you will acquire the knowledge and understanding of facilities to achieve e-commerce would be discuss. Method of payments are highlighted, incorporated facilities to support both e-commerce and e-business are mentioned and relevant components of an e-business model are explained.

2.0 Intended Learning Outcomes (ILOs)

By the end of this unit, you will be able to:

Evaluate and discuss the different payment methods
Highlight facilities to support e-commerce and e-business
Discuss relevant components of an e-business model

3.0 Main Content

3.1 Introduction

In unit 1, the concepts of e-business and e-commerce have been explicitly discussed. However, the explained concept would be of no value, if and only if the facilities to achieve it are not considerably put in place. To this effect, unit 2 is dedicated to discuss this, so that the aim and objectives of the concept would be achieved and materialized.

Various applications of e-commerce are continually affecting trends and prospects forbusiness over the Internet, including e-banking, e-tailing and online publishing/onlineretailing.

A more developed and mature e-banking environment plays an important role in ecommerceby encouraging a shift from traditional modes of payment (i.e., cash,checks or any form of paper-based legal tender) to electronic alternatives (such as e-paymentsystems), thereby closing the e-commerce loop.

The traditional mode relationship and electronic alternatives are diagrammatically represented in Figure 2. below
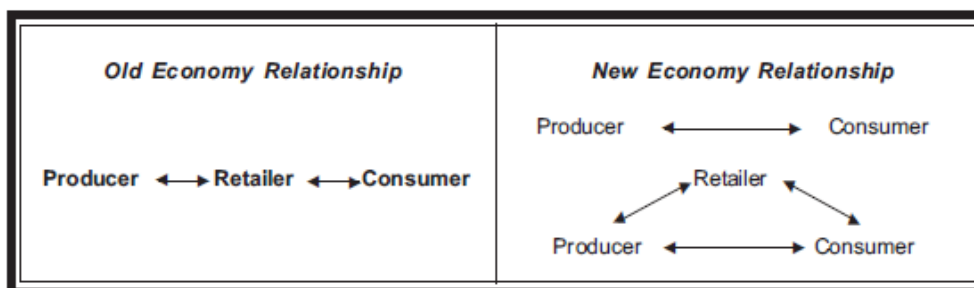

Figure 2: Traditional economy system vs Electronic economy system

To achieve the mandates of the **E-Commerce and E-Business Systems**, the following payment methods have been found to be supported facilities.

However, two payment methods have been found effectively. These payment methods are as follow:

3.2   Traditional Payment Methods
    3.2.1   Cash-on-delivery: Many online transactions only involve submitting purchase orders online. Payment is by cash upon the delivery of the physical goods.
    3.2.2   Bank payments: After ordering goods online, payment is made by depositing cash into the bank account of the company from which the goods were ordered. Delivery is likewise done the conventional way.

3.3   Electronic Payment Methods
    3.3.1   Innovations affecting consumers, include credit and debit cards, automated teller machines (ATMs), stored value cards, and e-banking.
    3.3.2   Innovations enabling online commerce are e-cash, e-checks, smart cards, and encrypted credit cards. These payment methods are not too popular in developing countries. They are employed by a few large companies in specific secured channels on a transaction basis.
    3.3.3   Innovations affecting companies pertain to payment mechanisms that banks provide their clients, including inter-bank transfers through automated clearing houses allowing payment by direct deposit.

3.4   Incorporated facilities to support e-commerce and e-business Some of the incorporated facilities to support e-commerce and e-business systems are highlighted below:
- Mobile (smart) phones
- Website
- Ecommerce shopping cart
- Social media

3.5   Relevant components of an e-business model
- A **shared digital business infrastructure**, including digital production and distribution technologies (broadband/wireless networks, content creation technologies and information management systems), which will allow business participants to create and utilize network economies of scale and scope
- A **sophisticated model for operations,** including integrated value chains-both supply chains and buy chains;
- An **e-business management model,** consisting of business teams and/or partnerships; and
- **Policy, regulatory and social systems**-i.e., business policies consistent with e-commerce laws, teleworking/virtual work, distance learning, incentive schemes, among others.

4.0   Self-Assessment Exercise(s)
1. the following are relevant components of an e-business model except:
(a) melt structured model

(b) shared digital business infrastructure
(c) sophisticated model for operations
(d) e-business management model

5.0 Conclusion

The unit shows that different payments methods are used for e-commerce and e-business, also gives some facilities that helps in the running of e-commerce and e-business, and also highlighted relevant components of an e-business model.

6.0 Summary

By now, it is believed that you detail the different methods involved in payment, understand that mobile, website, shopping cart and social media are some incorporated facilities to aid e-commerce and e-business.

7.0 References/Further Readings

Martin, K. (2016). *Introduction to E-commerce: Combining Business and Information Technology.* Backboon.com

Unit 3: Issues and Problems that affects E-Commerce and E-Business Development

Contents
1.0   Introduction
2.0   Intended Learning Outcomes (ILOs)
3.0   Main Content
    3.1   Technical Challenges
    3.2   Economic Challenges
4.0 Self-Assessment Exercise(s)
5.0   Conclusion
6.0   Summary
7.0   References/Further Readings

1.0 Introduction

In this unit, you will know and understanding the challenges faced by e-commerce and e-business development.

2.0 Intended Learning Outcomes (ILOs)

By the end of this unit, you will be able to:

Highlight the technical challenges faced by e-commerce and e-business
Highlight the economic challenges faced by e-commerce and e-business

3.0 Main Content

3.1 Introduction

In the previous units, we have discussed the concepts of e-commerce and e-business. Other thing earlier discussed is the facilities that support e-commerce and e-business systems. In this unit, we are to understudy the issues and problems that affect e-commerce and e-business development.

It is crystal clear that the present transaction systems have greatly changed the manner and approach of transaction. This is in line with the 21st century global economic agenda. However, as much beneficial as e-commerce and e-business are, there are some outstanding issues affecting this novel direction of transactions. These challenges would undoubtful mitigate the exponential growth of the system as well as down-speeding the take-over of these transactions over the traditional means.

The issues affecting these systems could be majorly classified into two, namely: technical and economic challenges.

3.2 Technical challenges

ICT systems which remain paramount in these systems have to be effective not only within the boundaries of an organisation, rather synergise with ICT systems of other organisations. This synergy rests on user-centred design (UCD) interfaces.

Therefore, the issues and problems under this technical challenges are the responses to the following questions:

- How heterogeneous are the involved ICT systems allowed to be?
- Is the present IT infrastructure, in developing countries and Nigeria in particular, fit for e-commerce?
- How to protect the ICT system to prevent its destruction, damage, or manipulation?
- Are the present ICT systems for e-commerce secure?
- Are payment procedures and modules secure enough?
- How guaranteed is the protection of personal data of involved people, especially customer data?

- Having realised that e-commerce depends on people, are the IT personnel qualified enough?
- How updated are the available technical support?

3.3 Economic challenges

E-Commerce is primarily a concept of management and organisation. It is not solely a matter of technology. Some of the lingering issues confronting e-commerce and e-business development under guise economic perspectives are highlighted below.

- Are the business protocols and procedures acceptably standardised among the actors?
- Is the participation open to all? Who makes and how the decision of participation is made?
- How to adopt or change the business model?
- What might happen after e-sales channel is opened? Will traditional sales channel suffer from it?
- How can we measure the success of our e-commerce activities? Will costs be compensated through revenues?
- How do we build relationship with customers, suppliers, and other business partners to realise the merits of e-commerce?
- How to redesign the business processes – in terms of employees change?

All aforelisted issues have been found in literature to be the problems affecting the e-commerce and e-business development. And until the necessary remedies are provided, e-commerce and e-business would continue to witness snail development.

4.0 Self-Assessment Exercise(s)

1. what is the main system needed to achieve the mandate of e-commerce?
(a) IT System
(b) Financial System
(c) Banking System
(d) Internet System

5.0 Conclusion

The unit shows that ICT systems is significant e-commerce system however, most be synergized with ICT systems of other organisation. Some problems affecting e-commerce and e-business development are identified and need to be remedied before real development could be witness.

6.0 Summary

You are believed by now to have understand the technical challenges and economic challenges that hinders development of e-commerce and e-business and how they can be tackled.

7.0 References/Further Readings

Martin, K. (2016). *Introduction to E-commerce: Combining Business and Information Technology.* Backboon.com

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Module 3: Website Development for E-Commerce

Module Introduction

This module introduces learners to website development that could be used for e-commerce. The module highlights technicality in creating and maintaining a successful web presence and also methodologies for developing and managing e-commerce websites. The module has three (3) units:

Unit 1: Introduction and Techniques for Web Design
Unit 2: Managing and Methodologies for Developing E-Commerce Websites
Unit 3: Creating and Maintaining a Successful Web Presence

In each of these units, I will go through a topic and give a self-assessment exercise(s) at the end of the unit. Then, give resources for further reading at the end of each units.
Introduce the module and state the units under the module.

Unit 1: Introduction and Techniques for Web Design

Contents
1.0   Introduction
2.0   Intended Learning Outcomes (ILOs)
3.0   Main Content
    3.1   Introduction
    3.2   Web Development
    3.3   Internet
        3.3.1   www
        3.3.2   Hypertext Transfer Protocol
        3.3.3   Uniform Resource Locator
        3.3.4   Hypertext Markup Language
    3.4   E-commerce Website Design

1.0 Introduction

In this unit, u will acquire the knowledge of techniques of designing a website, what makes up an internet, benefits of e-commerce website and specialty in designing e-commerce website.

2.0 Intended Learning Outcomes (ILOs)

By the end of this unit, you will be able to:

       Design e-commerce website

       Highlight the benefits of e-commerce website

       Understand the Techniques of Web Design

3.0 Main Content

3.1 Introduction

To have an effective and efficient e-commerce website takes a great deal, and as such, there is a need to have a very good website design to enable easy and smooth communication with the target audience

3.2 Web Design

Web design is a very important skill required to understand the production, appearance, maintenance, and development of websites on the Internet.

Web design is the procedure involved in the creation and planning of a website. Web designers are in charge of putting together text, images, video, and audio to create beautiful and meaningful content on the browser for an individual's use and consumption. To create a meaning website there is a need to understand how the Internet works and the basic components of the Internet. This shall be discussed below:

3.3 Internet

The computer network has been in existence for more than 50years. The first computer network named ARPANET (Advanced Research Projects Agency Network) was a project created by the Pentagon's Advanced Research Projects Agency in 1969, purposely to provide a secure and survivable communication

network for organizations engaged in defense-related research at the United States. The fear that an attack could destroy all information stored in a single computer prompted them to create and store their information in multiple interconnected computers (Connolly & Hoar, 2015). Gradually, the network became more sophisticated and is in use globally through the help of a protocol called the Transmission Control Protocol/ Internet Protocol (TCP/IP) which allowed users to link various branches of other complex networks directly to the ARPANET, and this was later called the Internet. The Internet is a giant network of networks comprised of several networks interconnected together through several means such as; satellite, microwave, telephone cable, and fiber optic cable. The Internet has ever since becoming the largest computer network in the world which provides new and easy ways of connecting, accessing, and interacting with people and content.

3.3.1 World Wide Web (WWW)

The WWW developed by Tim Berners-Lee in 1990 is a giant client-server system with several servers distributed worldwide to enable communication. Without the world wide web, it will be difficult to connect and communicate with each other via the Internet, thereby making it a very important component of the Internet (Berners-Lee, Cailliau, Groff &Pollermann, 2010). WWW enables interaction between the client and the web servers, such that it allows users to view multimedia-based documents through the Web browser. The web browser is in charge of accepting user input and display it in a way that will be properly understood. Currently, the Internet and World Wide Web have improved the way people connect, communicate, and carry out business transactions (Berners-Lee et.al., 2010).

3.3.2 Hypertext Transfer Protocol (HTTP)

This is the protocol used for formatting and transferring files or messages over the Internet. Hypertext implies that the files or messages can contain references or links to other messages whose selection will trigger more requests.

3.3.3 Uniform Resource Locator (URL)

This is a web address used by a web browser to access and locate information on the World Wide Web. It is made up of a formatted text string that contains a protocol, colon (:), and two slashes (//), such as http://www.google.com. The URL or web address is case sensitive and does not contain spaces.

3.3.4 HyperText Markup Language (HTML)

This defines the structure and format of a webpage, as well as how web pages will be displayed in web browsers. It is a language used for website creation which can then be viewed by anyone afterward (Connolly & Hoar, 2015).

3.4 E-commerce Website design

Recently, e-commerce has emerged as a new way of performing business transactions between buyers and sellers. Electronic commerce (E-commerce) is described as the buying and selling of products and services via the Internet. It offers several benefits and opportunities, and as such can help to boost the business turnover. E-commerce has changed the narratives of transacting as a lot of people prefer to shop or buy online (Brinck, Gergle& Wood, 2001), and this has brought about a lot of competitors online.

Thereby, to have an edge ahead of competitors there is a need to have a website that is interactive with good layouts, reliable information, great payment options, and excellent customer service (Wang, 2016). As discussed earlier, the e-commerce website can be developed using HTML, CSS, JavaScript, etc. and some other multimedia software such as Adobe flash and fireworks.

3.5 Benefits of E-commerce Website

- Ease and convenience: one of the major factors to be considered when designing the e-commerce website is accessibility. The website has to be easily accessible by potential customers. Effects such as hyperlinks, mouse hover, and some other attributes can be part of the features on the website for ease of use. Every dealing in an e-commerce website is in real-time, no time or location limit; and this tends to be a great advantage (Treese& Stewart, 1998).
- Products and services promotion: when a website is easily accessible and usable, it will be easier to manage the target audience or anyone visiting the page. E-commerce enhances interaction and directs connect with customers, which can bring about various promotion strategies about their products and services and thereby enhance the popularity of the brand.
- Time and Cost saving: once the website is created rightly, it will be instantaneous and this will put a lot of things in order, there will be more time to manage the customers, products, services, and promotions. Also, customers will enjoy the use of the website more as they can easily view various available products, place orders, make payments, and get their goods as soon as possible. Not only that, when the website is easily accessible and usable any website maintenance or updates to be carried out on it will be done at a low cost.
- Consistency of Information: consistency and accuracy of information are ensured in an e-commerce website. This will be possible because all information will be updated and shared at once on the same platform; unlike when news or information is delivered to customers by different people and at various times. This will improve customer service and relationship (Rockwell, 1998)

3.6 Techniques for Web Design

It is essential to master the tricks involved in designing an exceptional website, to stand out amongst competitors. To have a responsive and interactive e-commerce web design that will benefit both parties (buyers and sellers) visiting the website as well as increase traffic. There are certain steps or techniques in setting up a website, these include:

- Domain name selection or registration

The domain name is simply the website name; this should not be mistaken for a URL, because they are different. The domain name is very important in website design as this is the address that users will use to locate the website. To set up a website, the basic step to be taken is the domain name registration. This should be carefully done and uniquely selected (). This will rightfully guide whoever wants to access the website with any search engine via the internet. The domain name is divided into 2 parts. The first known as Top Level Domain (TLD) and the Second Level Domain (SLD).

The TLD is the first step performed in the Domain Name registration. This is the last part of the domain name written after the dot(.). It is of various types, such as the generic Top-Level Domain (gTLD) which consists of (.com, .org, .net). Also, the country code Top Level Domain (ccTLD) for example; .ng-for Nigeria, .jp-for Japan, .my-for Malaysia etc. The domain registrar can either accept or reject any of the gTLD based on their discretion, though most domain holders register their name under the three gTLDs to avoid confusing their target users or customers.

The SLD or 2LD is the second to the last part of the domain name before the TLD, for instance, the *google* of google.com. This part is a very crucial part of an e-commerce website, as this will most times depict the business brand name. While registering the SLD, it is very important to perform a trademark search to ensure that the chosen name is not belonging to someone else or registered by another website.

During the domain name registration, there is a need to perform a search to check whether the name intends to be used hasn't been picked by another website to ensure uniqueness and authenticity. After successfully choosing the domain name, the registrars provide the domain holders with various price and duration options, as well as the registration contract agreement which should be signed and agreed upon accordingly.

- Web hosting

Web hosts are computers or organizations that render services with technologies to host websites on the internet. After successfully hosting the website, users or customers can then access it via the web browser using the domain name. Some people outsource their website to a company or organization for hosting while few others have their servers to manage their hosting in-house, which tends to save time and reduce cost. The legal issue, renewal, security, and risk involved in the hosting agreement should be carefully handled during the web hosting to avoid any legal issue in the future.

- Communication strategy

It is no doubt that e-commerce has modernized the way business are been done, this has been made possible with effective and efficient communication strategy which includes marketing, advertising, and search engine use.

> *Marketing*: this involves taking measures to use various tactics to electronically get traffic and drive people's attention to products and

services. Some business owners reach out to their customers via email or through the list of registered customers they were able to get on their website. This is done to easily inform the customers about new products, sales discounts, promotions or a website update. This is quite easier than the traditional means of contacting visitors or customers one by one whenever they visit the shop or company. Although, sending emails to customers should be done with great caution, so as not to lose customers in the process due to annoyance of frequent emails. Customers can be given the option to opt-out from receiving the newsletter, as well as given various options on how frequently (such as monthly, weekly, or daily) they want to receive emails about products, newsletters, or any related news to the business.

Advertising: this is the methods deployed to promote products and services. E-commerce advertising and marketing are very essential steps that a business owner should not toy with. The idea is to reach out to target customers easily about their products and services.

To reach out to as many people as possible, apart from advertising on their platform, an e-commerce site can also lookout for a website that sells similar products or rent an advertising website space; negotiate with them and ensure all legal agreements are given proper consideration. Also, social media sites can be linked-to websites while blogs can be created also for smooth interaction with users and potential customers.

Search engine use: the search engine is one of the ways consumers can discover and reach out easily. The search engine works in three basic ways which include crawling, indexing, and ranking. Crawlers also known as spiders are used to scour the internet or the World Wide Web to pull out the code or content that matches the URL or use search terms. It can catalog websites in the engine such that web crawlers add all cataloged websites to the search engine index automatically. Indexing works such a way that it enables the download and storing of all discovered data and information into the search engines database to enable ease and prompt display of results to users (Daoud, Naqvi & Ahmad, 2014).

4.0 Self-Assessment Exercise(s)

1. Which of these gives a simple description of e-commerce?
   (a) Carrying out business electronically
   (b) Sorting out goods
   (c) Sales of goods
   (d) All of the above

2. The URL represents
   (a) Uniform Resource Line
   (b) Uniform Resource Locator

(c) Uniform Required Loader

(d) Uniform Reading Loader

5.0   Conclusion

The unit shows that Web design is a very important skill required for website development on internet. E-commerce has emerge as a new way of performing business transactions online and the need to design and develop an efficient and effective e-commerce website is important.

6.0   Summary

You are believed by now to have understand the processes of designing and developing a website for e-commerce. And that, the benefit of this website range from ease and convenience of buying and selling to consistency of information.

7.0   References/Further Readings

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Unit 2: Managing and Methodologies for Developing E-Commerce Websites

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1.0   Introduction
2.0   Intended Learning Outcomes (ILOs)
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        3.1   Managing E-commerce Website
        3.2   Methodologies
4.0   Self-Assessment Exercise(s)
5.0   Conclusion
6.0   Summary
7.0   References/Further Readings

1.0 Introduction

In this unit, you will acquire knowledge on managing website, customer service, communication and methodologies for developing websites.

2.0 Intended Learning Outcomes (ILOs)

By the end of this unit, you will be able to:
Manage website
Develop methodologies for e-commerce website

3.0 Main Content

3.1 Managing E-commerce Website

To manage a website, it is very important to place customer service into high consideration. Customer service will bring about satisfaction to potential customers or associated organizations and this will automatically boost business sales and improve the business turnover (Standing & Australia, 1999). Since products and services can only be viewed online, it is therefore essential for an e-commerce website to have a good customer and communication service strategy.

Some of the roles of customer service include:

- Identity maintenance: It is important to maintain the company or organization's originality and a true picture of what the organization

sells to enable buyers to have a true perception of their products and services as well as build trust in them

- Relationship maintenance: A strong professional skill is required to be nice and friendly, as well as build a good customer and communication relationship (Wang, 2016). This will bring about a good relationship and trust in the brand.

The customer and communication service strategy for pre-sales and after-sales cannot be overemphasized, some of them are:

- Sound and improved communication and technical skill.
- A clear understanding of the organization and the customer needs.
- Maintenance of the relationship between the old and new customers, as well as frequently reminding them about the organization's sales and promotion activities.
- Always keep in touch with customers by calling or chatting to remind them of a new product and ensure they drop a review on every purchase as this will help in ensuring standards of products and services.
- Effective and efficient product and service delivery after purchase.

Security is another major thing to be considered in terms of managing an e-commerce website. Security issues may lead to losing business integrity, customer loss, or even business loss at large.

3.2 Methodologies

The E-Commerce website methodology is a methodology that has been in use over the years and proved successful. It is made up of five main phases which include:

3.2.1 Analysis/Planning: In this phase, the aim and objectives of the business are being identified. This is an important phase to plan, gather all essential information, and determine solutions to the business challenges. The analysis and planning will lead an organization to certain functionalities that will help in achieving the vision and mission of the business.
This phase investigates the order flow, recommended features, and direction on the overall e-commerce website development. The purpose and content of the website should be carefully handled here, as this is what the target audience shall look out for as well as trigger traffic on the site.

3.2.2 Design: This stage is about the logical and physical design of the website. It is a stage that describes the website result, the system components, functionalities, and relationships between all components. This phase also handles the type of database management system software to be used, the security mechanisms, and control measures to be put together for the development. It is crucial at this stage to have an outstanding and well-captured logo with colors depicting what the

business represents, as this will attract the target audience. It is therefore important to include any addition or changes and remove any unnecessary functionality.

3.2.3   Building the Website: This involves prototype design and system application building. This phase should be handled with care as it will display the final look of the website. Good knowledge of HTML and CSS is needed because all coding will be performed at this stage.

3.2.4   Testing the System: As soon as the coding and building of the system are completed, the system needs to be tested. At this point, there is a need to check that all the HTML and CSS code used for designing meets the latest web development standards.
This stage also includes the website delivery (the point at which website can be uploaded to the server) once all the requirements have been met, the account has been set up, all files rightly uploaded and website SEO performed.

3.2.5   Implementation and Maintenance: Implementation occurs after the website design and development; it is the final phase after which you began to use the website. Maintenance is another crucial thing, just like any other software, it is very important to ensure continuous technical checking, testing, and repair of any faults as soon as possible to avoid the website break down (Siau, Rossi, &Purao, 2001).

4.0   Self-Assessment Exercise(s)
1. Which of these is not a function of e-commerce?
    (a) Advertising
    (b) Marketing
    (c) Warehousing
    (d) None of the above

2. Which of the following is part of the four main types of e-commerce model?
    (a) Business to Business (B2B)
    (b) Business to Consumer (B2C)
    (c) Consumer to Consumer (C2C)
    (d) All of the above

5.0   Conclusion
The unit shows how customer services are placed in high consideration and how customer service roles affect positively managing the e-commerce website. The unit also shows that analysis, planning, design, testing, building,

implementation and maintenance plays a virtal role in developing an e-commerce website.

6.0 Summary

You are believed by now to have understand that implementation and maintenance process starts after building a website for e-commerce. Managing e-commerce website involves giving high priority to customer service, as this attracts customers and give satisfaction.

7.0 References/Further Readings

Siau, K., Rossi, M., &Purao, S. (200). E-Commerce Systems Development Methodologies. In *Proceedings of the 34th Annual Hawaii International Conference on System Sciences (HICSS-34)-Volume 7-Volume 7* (p. 7029).

Standing, C., & Australia, W. (1999). Managing and developing Internet commerce systems with ICDM. In *Proceedings of the Xth Australasian Conference on Information Systems* (pp. 850-862).

Wang, Y. (2016). Planning and management of E-commerce Website: Guide for startup B2C E-commerce companies.

Unit 3: Creating and Maintaining a Successful Web Presence

Contents

1.0 Introduction

This unit highlight steps used to create and successfully maintain a website.

2.0 Intended Learning Outcomes (ILOs)

By the end of this unit, you will be able to:
  Create a website
  Maintain a website

3.0 Main Content

3.1   Creating and Maintaining Website

The steps to create and maintain a successful website includes:

   5.1.1   Setting the website goals: From the onset, every website should set its aim and objectives. This will guide them through making decisions, reaching their goals, and maximizing their web presence. Some of the goals to set include; information about the organization, information about products and services, how to sell the products, and of course customer service. From time to time all the goals should be measured, such as; checking the number of old and new visitors on the website, number of phone calls, the feedback being received, etc.

   5.1.2   Target audience: After setting the goals, the next question to ask and answer is 'who is the target audience'. Once the audience is known, you can easily set priorities and make decisions for website relevancy. You have to find out why the customers visit the website, the kind of information they are looking for and most important things to do to protect the site content and make it more appealing

   5.1.3   Be consistent: It is essential to focus on the website's content, meeting customer's needs and making the needed information available will greatly enhance the web presence and improve productivity.

   5.1.4   Branding: The web presence is a true reflection of the website, and as such it has to be well branded because this is likely the only information the website visitors know about the seller or the organization. The brand is a way the organization or company is perceived by the customers (a true picture of who or what the organization is) which has to do with the overall packaging from the product quality to the customer service. It can also involve having a

consistent logo and printed materials like a shirt, cap, business cards, or writing materials that has the company name and logo boldly written.

5.1.5 Website style: The website should be accessible and usable. The site design should have a good interface, a responsive design; that can easily be used on a smaller or large screen, graphics with adobe fireworks, adobe flash, or photoshop should be optimally used to ensure easy navigation and a GUI environment to users (Kalia, Kaur, and Singh, 2014).

4.0 Self-Assessment Exercise(s)
1. Which of the following can be considered as a security measure to protect the e-commerce website store?
   (a) Use of firewall
   (b) Encryption
   (c) Decryption
   (d) All of the above

2. What is the name of the attack that floods a website with many service requests and slows it down?
   (a) Worm
   (b) Denial-of-Service attack
   (c) Trojan horse
   (d) None of the above

3. What is the process of making a copy of information stored in a computer?
   (a) Firewall
   (b) Antivirus
   (c) Resistant
   (d) Backup

5.0 Conclusion
The unit shows that consistency is important while creating a website. Best contents are presented and meets the customers' needs and also availability of information.

6.0 Summary
You are believed by now to have understand the steps used for creating and maintaining a successful e-commerce website, which include setting goals, target audience, consistency, branding and website style.

7.0   References/Further Readings

Kalia, P., Kaur, N. and Singh, T. (2014), "Importance of Website Quality in Online Shopping",in Bansal, M. and Singla, B. (Eds.),*Proceedings of the Ist International Conference on Issues and Perspectives in Brand Management*, Baba Farid College of Management and Technology, Bathinda, India, pp. 107–109.

Module 4:   Product Catalogue and Processing Orders

Module Introduction

This module introduces learners to product catalogue and orders. A product catalogue is a document that lists the details of the products or services offered by a business that aids the purchase decision of buyers. A catalogue shows the features, descriptions, availability, size, price, and even reviews of the business' products and services. Product catalogue is useful not only for the customers but for the business stakeholders like the sales representatives, store managers and even for the business owner or decision-makers because a good product catalogue presents clear and concise information, enhances branding and smooth flow of information, ensures positive user experience and makes the whole business procedure generally easier. An order is a request by a person to another who is to deliver the product or service that is being ordered. When a customer places an order for a product or service, then a sales rep for a business receives the order, gets additional needed information from the customer to ensure smooth delivery of their product or service to satisfy the customer's order, that is order processing. This module has three (3) units:

Unit 1:   E-Commerce Catalog Development
Unit 2:   Processing Orders in E-Commerce
Unit 3:   Online Shop

In each of these units, I will go through a topic and give a self-assessment exercise(s) at the end of the unit. Then, give resources for further reading at the end of each units.
Introduce the module and state the units under the module.

Unit 1:   E-Commerce Catalog Development

Contents
1.0   Introduction
2.0   Intended Learning Outcomes (ILOs)
3.0   Main Content
       3.1   Introduction

1.0 Introduction

In this unit, u will acquire the knowledge and understand on developing catalogue in e-commerce. These are activities that take place from the inception until when the catalogue is been developed.

2.0 Intended Learning Outcomes (ILOs)

By the end of this unit, you will be able to:

Develop e-commerce catalogue

3.0 Main Content

3.1 Introduction

We already know what a catalogue is; Let us take a brief look at what e-commerce is. E-commerce simply means Electronic commerce which is the buying and selling of goods and services using the internet; popular examples include Amazon, Shopify, Ebay, OLX, Jumia, Konga, Payporte and the likes.

3.2 E-Commerce Catalogue Development

E-commerce catalogue development is a process that requires a lot of planning because you don't want to piss off your customers with unordered or irrelevant information that can make them not to end up patronizing you. The following are some things to note in developing a good e-commerce catalogue:

- Highlight each product and service with their features, descriptions, availability, size, price, and reviews if available as it convinces people about how genuine a business and its products are. Jumia as an example, has the products properly labelled and described, price is stated, availability status is made known, reviews are also displayed if available. If a customer wants to buy a lady shoe on Jumia, the maker or designer of the shoe is made known, the sizes available, the colours

available, type of heels, the material (maybe suede or leather) and other details that is relevant to the purchase decision of the customer.

- Create your own content, do not copy content. Be creative and carve out your own rich, unique and quality keywords as this improves the search engine optimisation of your e-commerce rather than copying content and be in supplemental results of searches. The content Jumia uses is unique to them, it is original. If one is starting an e-commerce, a content creator could be outsourced for as it is very essential.

- Words are good, image is better. Having professional photographs with well-crafted descriptions of your products as well as instructions and manuals can serve as advantages that one can leverage on to generate relevant search engine traffic. Jumia uses clear pictures to describe goods, their pictures are taken from different angles to have a clear view and knowledge of product ton be purchased. The picture can aid customer's understanding of the size or colour of the product.

- Cross selling is a very important aspect to consider. Identify the Popular products, related products, and purchased. If your customer's search is sweater, various popular sweaters could be returned such as hoodie or knitted sweater as popular products, socks and gloves could be returned as also purchased and turtleneck clothing could be returned as related products.

- Let your interface be appealing to sight. Use large font and bold colours, catchy buttons and a generally attractive environment. Ensure simplicity also, customers will get discouraged in using a complicated platform. Jumia.com is quite appealing to sight, the colors used are catchy, the texts are legible, the navigation is understandable, it is easy to use (creating an account, logging in, shopping, adding items to cart, making payment and the likes are all achievable).

4.0   Self-Assessment Exercise(s)
1. Which of these statements are true about a product catalog?
(a) A catalog is a document that contains only the pictorial representation of goods and services.

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(b) A catalog is a document that aids the purchase desion of customers.
(c) A catalog is useful for only the customers and not other stakeholders like business owners or store keeper.
(d) A catalog can never be in electronic form, it is always in hard copy.

2. The following are the advantages that ecommerce gains from a catalog except?
(a) Ensures smooth flow of information.
(b) Presents clear and concise information.
(c) Wastes users time and results in negative user experience.
(d) Fast identification of available goods and the ones that are out of stock.

5.0   Conclusion

The unit shows that to develop e-commerce catalogue, you need to highlight comprehensively the product and services. You need to create good contents, words and images. Identifying popular products is important.

6.0   Summary

You are believed by now to have understand that e-commerce catalogue development is a process which needs planning due to the facts that you don't want to burden your customers.

7.0   References/Further Readings

Paperflite (2019). What is a product catalog and why do you need it? Retrieved from https://www.paperflite.com/blogs/product-

Unit 2:   Processing Orders in E-Commerce

Contents
1.0   Introduction
2.0   Intended Learning Outcomes (ILOs)
3.0   Main Content
        3.1   Order Processing
        3.2   Process Flow
4.0   Self-Assessment Exercise(s)
5.0   Conclusion
6.0Summary
7.0   References/Further Readings

1.0 Introduction

In this unit, you will acquire knowledge on process order and process flow. These activity take place to ensure that placed orders are efficiently sorted so that they reach the customers at the right time.

2.0 Intended Learning Outcomes (ILOs)

By the end of this unit, you will be able to:

Understand the activities for processing customers' order
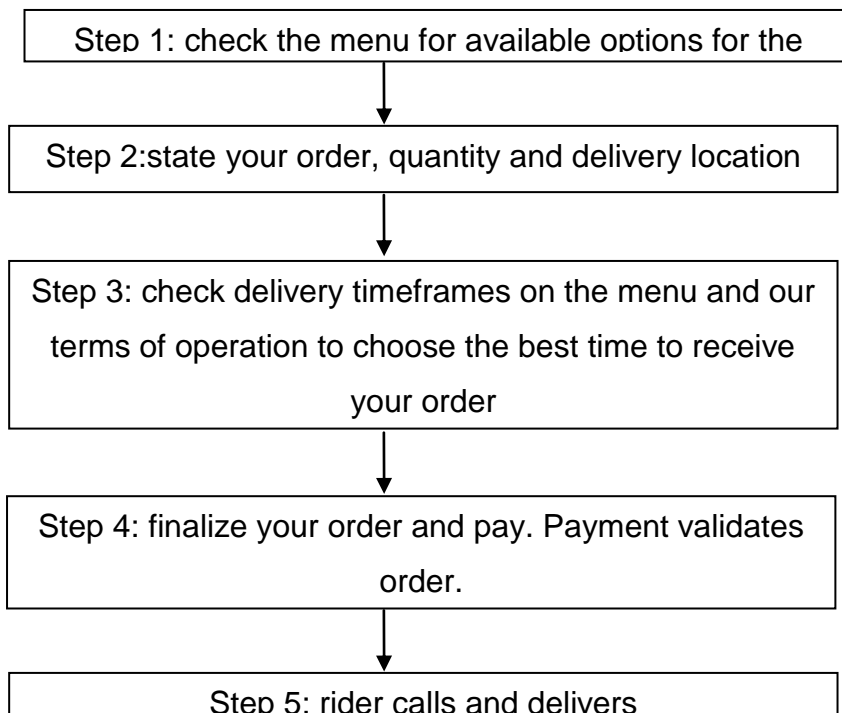
Draw the process flow

3.0 Main Content

3.1 Order Processing

Some define order processing as the length of time between the date that an order is placed and the date when the order is shipped to the customer, however, from the time an order is placed by a customer to the time that they receive the order, the business is responsible and held accountable for delivering the ordered product or service within the shortest time frame and in the most efficient way; this activity is called order processing. Hence, order processing are the activities or procedures that takes place to ensure that placed orders are efficiently sorted so that they reach the customers at the right time and in perfect condition.

Taking a clothing line as an example of the e-commerce to be patronize; their catalog should have provided the customers with relevant information of material of cloth, sizes available, dimension, available colours and the likes. After knowing all these, if the customer decides to eventually place an order, the ecommerce platform should allow the customers to specify their preferences and make payment including specified delivery fee. Finally, the business should make cloths according to the specified preferences of customers and should ensure that they do not deliver later than agreed day of delivery.

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┌─────────────────────────────────────────────────┐
│  Step 1: check the menu for available options for the │
└─────────────────────────────────────────────────┘
                         │
                         ▼
┌─────────────────────────────────────────────────┐
│  Step 2:state your order, quantity and delivery location │
└─────────────────────────────────────────────────┘
                         │
                         ▼
┌─────────────────────────────────────────────────┐
│  Step 3: check delivery timeframes on the menu and our │
│  terms of operation to choose the best time to receive │
│  your order │
└─────────────────────────────────────────────────┘
                         │
                         ▼
┌─────────────────────────────────────────────────┐
│  Step 4: finalize your order and pay. Payment validates │
│  order. │
└─────────────────────────────────────────────────┘
                         │
                         ▼
┌─────────────────────────────────────────────────┐
│  Step 5: rider calls and delivers │
└─────────────────────────────────────────────────┘
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3.2 Process Flow

To keep costs as low as possible, it's important that businesses have a clear process flow to follow which will help maintain the smooth running of e-commerce operation. It reduces stress on the business because all the necessary information are put out already rather than telling the same thing to a thousand people in a thousand times. Ease of processing orders lies in the hands of the business owners; Let's take Lolu's cuisine as an example, this is a catering outlet in Ibadan, the following steps describes their order processing:

4.0   Self-Assessment Exercise(s)

1. The following are necessary details to ask the customers when they place their orders to achieve smooth delivery except?
   (a) Name
   (b) Delivery address
   (c) Date of birth
   (d) Mobile number

2. The following activities simplifies order processing except?
   (a) Having a list of available products and services
   (b) Indicating availablity of goods and services
   (c) Request customer to send a message to get the price of the good or service they are interested in.
   (d) Have a media section that shows pictures and videos of goods and services.

5.0   Conclusion

The unit shows order processing allowed customer to receive order on time. It highlights the activities involve that makes order to be process on time.

6.0   Summary

You are believed by now to have understand that proceesing order involve activities that allow the process flow of order to arrive on time with hitches.

7.0   References/Further Readings

Paperflite (2019). What is a product catalog and why do you need it? Retrieved from https://www.paperflite.com/blogs/product-

Business Dictionary (N.D). Definition of order. Retrieved from http://www.businessdictionary.com/definition/order.html

Mountain media (N.D). E-Commerce catalog development. Retrieved from https://www.mountainmedia.com/c1/c102/ecommerce-catalog-development-c103.html

Unit 3:   Online Shop

Contents
1.0   Introduction
2.0   Intended Learning Outcomes (ILOs)
3.0   Main Content
        3.1   Introduction
        3.2   Online Business Models
4.0   Self-Assessment Exercise(s)
5.0   Conclusion
6.0   Summary
7.0   References/Further Readings

1.0 Introduction

This unit will highlight the online business models, where a customer place order and make payment online, such as the business to business and business to consumer.

2.0 Intended Learning Outcomes (ILOs)

By the end of this unit, you will be able to:
        Understand the operation of an online shop
        Demonstrate how to shop online

3.0 Main Content

3.1 Introduction

An online shop is a website through which customers place orders and makes payment through channels approved by the shop. It may represent a small local store, a major retailer, an e-commerce store or an individual who sells products through a third-party site, such as e-Bay.

3.2 Online Business Models

The online store can operate under a number of business models such as:

- Business-to-consumer: this model allows the final consumer to buy directly from the retailer like a regular physical store.
- Business-to business: this model will allow businesses to purchase products from some other businesses.

Examples of online shops include; jumia, Alibaba, konga and OLX among others. The products in online shops range from physical products like clothes and gadgets to digital products like software and music and even food and beverages.

Some advantages of the online shop is its convenience: the online shop is very convenient for users, it's opened for 24 hours and you can buy anything, from anywhere at any time; especially with the provision of delivery companies everywhere. Online shop also makes it easier to get reviews and enough information products from customers after their patronage as these feedbacks helps to improve the business process. While the shop owner may want to sugar coat, candid reviews and opinions will be made available by other consumers from various parts of the world. Selection of products is also made easy by online shops by the availability of filters and search engines, hereby saving shopping time. Consumers can easily filter goods based on price, colour, size and delivery in a short period of time. Merchants as well face low risk of robbery as they operate with warehouses instead of having regular shelves and counters with money in drawers.

Everything with its pros and cons, as advantageous as online shop is, it has its disadvantages which include the fact that a lot of people are concerned about fraud and security which might be a discouragement for people to actually patronize online shops. Since they haven't been able to inspect the products thoroughly and physically before purchase, customers can only hope to get what they ordered. Phishing is another problem. Consumers sometimes face the risk of having to deal with fake websites and providing sensitive details to malicious parties. Sometimes, costs and fees are not fully disclosed till checkout point or delivery point. Privacy of personal information is very important to a lot of consumers. Online shops sometimes use these pieces information without the knowledge of the consumers for example, sharing of catalogues by e-mail.

4.0 Self-Assessment Exercise(s)

1. Which of these is not a type of online shop?

(a) Business to consumer
(b) Business to business
(c) Business to administration
(d) Business to education

2. Advantages of online shop include all the following except?
   (a) It aids convenient shopping.
   (b) Personal information of customers can be used for other purposes other than the purpose of collection without customers' knowledge and permission.
   (c) Reviews from previous patronages are available to rate how genuine the shop and its products are.
   (d) Availability detail is known at the click of a button.

5.0   Conclusion

The unit shows some advantages of the online shop as convenient way to buy and sell. This allow customers to place order at convenient time, check the products and edit their order.

6.0   Summary

You are believed by now to have understand the online business model as it has business to business for product purchase from other business and business to customer for product purchase by customers.

7.0   References/Further Readings

Paperflite (2019). What is a product catalog and why do you need it? Retrieved from https://www.paperflite.com/blogs/product-

Business Dictionary (N.D). Definition of order. Retrieved from http://www.businessdictionary.com/definition/order.html

Mountain media (N.D). E-Commerce catalog development. Retrieved from https://www.mountainmedia.com/c1/c102/ecommerce-catalog-development-c103.html

Module 5:   Shopping Cart

Module Introduction

This module introduces learners to shopping cart, its functions and problems. The module also highlights the payment gateways for shopping cart in and e-commerce website. This module has four (4) units:

Unit 1:   Introduction to Shopping Cart
Unit 2:   Functions of a Shopping Cart
Unit 3: Payment Gateways for Shopping Carts
Unit 4:   Shopping Cart Problems

In each of these units, I will go through a topic and give a self-assessment exercise(s) at the end of the unit. Then, give resources for further reading at the end of each units.
Introduce the module and state the units under the module.

Unit 1:   Introduction to Shopping Cart

Contents
1.0   Introduction
2.0   Intended Learning Outcomes (ILOs)
3.0   Main Content
        3.1   Introduction
        3.2   Types of Shopping Carts
                3.2.1   Open source shopping cart
                3.2.2   Licensed shopping cart
                3.2.3   Hosted shopping cart
        3.3   Components of a shopping cart software
                3.3.1   The store front
                3.3.2   The administration
4.0   Self-Assessment Exercise(s)
5.0 Conclusion
6.0   Summary
7.0   References/Further Readings

1.0 Introduction
        In this unit, u will acquire the knowledge of shopping carts, how it functions and few issues associated to the shopping cart. The units will explain the types of carts and associated components of the shopping cart software.

2.0 Intended Learning Outcomes (ILOs)

By the end of this unit, you will be able to:

Explain the shopping cart

Highlight types of shopping cart

Evaluate the components of a shopping cart software

3.0 Main Content

3.1 Introduction

A shopping cart is a piece of software embedded on an online market platform that facilitates the purchase of a product or service. That is, it keeps record of products a buyer has selected for subsequent purchase (farris, paul W,Neil T et al., 2010). The customer typically picks goods for purchase on the online market, the shopping cart then catalogs the items that has been choosen by the customers and then places the items in his or her Shopping cart. The Shopping cart usually keeps a sum of the items kept therein. It allows a buyer to gather products, assess the selected items and make changes or add extra items if needed before going on to make purchase immediately or later in the future.

3.2 Types of Shopping Carts

3.2.1 Open source shopping cart

This type of shopping cart is easily available, free to own, modify and use. No licensing fee is required in order to gain complete control over the site. To use an open source shopping carts, the user must download the software and install it on a website which meets the software's system requirements. It is better to have an open source shopping cart when you intend on setting up and handling a complex large shop with a different variety of products. Developer skills is necessary when using open source software and Customer support is very limited. It has a well-designed user interface and also Numerous integration can be added to it. Open source shopping cart requires Adds on to perform higher level functions. The set up process and maintenance of an open source shopping cart is not easy and straight forward as the other types. PayPal is an example of open source shopping cart.

3.2.2 Licensed shopping cart

Licensed shopping cart is usually owned by the owner of a business. the owner acquires in order to host on his own server. It is a more direct type compared to open source. It is created by business organizations then they make it accessible for buyer to purchase and use. To use this software a user must acquire license from the organization. All modifications are managed by the organization that created it, although they may create a method for independent developers to create add ons. Usually it is always a one-time investment for utilization of the production

but some organization charge monthly or on a yearly model. licensed shopping cart needs to be set up and maintained in the same way as open source shopping cart. Example of licensed shopping carts include OpenCart, Magento, and Woocommerce (datafeedwatch, 2019)

3.2.3 Hosted shopping cart

These are standard solutions managed by the company that developed them. Users only need to sign up with the host they have chosen and commence selling immediately. It consists both shopping cart software and web hosting. Unlike the other types hosted software, it provides a web based user interface with which a user can manage his store instead of downloading software which enables them to run their business directly. Most hosted shopping carts are charged on monthly basis depending on your subscription. Costlier plans have more built in features and advantages. Free trials are made available by the organization in order to assists a user in picking the best plan that suits their needs. Shopify and Big commerce are great example of hosted shopping cart.

3.3 Components of a Shopping Cart Software

The storefront and the administration are the two main components of a shopping cart.

3.3.1 The store front

The store front is the part of the web store that the customers can easily access. These parts include product pages, category navigation, search pages and checkout pages where the customer can complete their transaction after entering the product details. The appearance of the store front can normally be modified the online shop owner in for better customer satisfaction.

3.3.2 The administration

The administration is the part of the web store which is only accessible to the merchant. Management and maintenance of these webstore is done here. On the administration page a merchant is able to remove add or edit product categories, shipping options, currency and sales tax and accounting tools. Orders and inventories can also be managed in administration. The administration area can be web based or desktop based.

4.0 Self-Assessment Exercise(s)

1. the following are examples of shopping cart except:
(a) Shopify
(b) BigCommerce
(c) 3dcart
(d) MineCart

5.0 Conclusion

The unit shows that appearance of the store front of shopping cart software can be modifies. These components are the store front and the administration of the shopping cart software.

6.0 Summary

This units highlights the different types of shopping carts which are open source, licensed shopping cart and hosted shopping cart. It also discuss about the components of a shopping cart software.

7.0 References/Further Readings

Datafeedwatch. (2019, july 30). *shopping cart*. Retrieved from datafeedwatch: datafeedwatch .com

Unit 2: Functions of Shopping Cart

Contents
1.0   Introduction
2.0   Intended Learning Outcomes (ILOs)
3.0   Main Content
        3.1   Introduction
                3.1.1   Shopping security
                3.1.2   Solitary hub
                3.1.3   Retail store
                3.1.4   Compatibility of various payment modes
                3.1.5   Feedback and Product Review
4.0 Self-Assessment Exercise(s)
5.0   Conclusion
6.0   Summary
7.0   References/Further Readings

1.0 Introduction

In this unit, you will acquire knowledge on numerous functions of shopping carts, and compatibility of various payment modes.

2.0 Intended Learning Outcomes (ILOs)

By the end of this unit, you will be able to:

Highlight the functions of shopping carts

3.0 Main Content

3.1 Introduction

There are numerous functions of a shopping cart such as:

3.1.1 Shopping security

With certain compliance and certification, a shopping cart protect customer's identity and information from theft. The shopping cart secures all credit card and financial information that are used on the site by customers. Ensuring that payment and transactions are enabled and well managed, a shopping cart addresses security issues associated with online shopping.

3.1.2 A solitary hub for data management

Order and payment history of each costumer are maintained on the shopping cart. credit card information and banking details are also stored with customer's permission which makes subsequent transactions easier. User browsing criteria and activities are monitored and collected, thereby helping them develop more image of what the selling trend is for different periods of time

3.1.3 An established retail store front

A shopping cart provides easy access to selected products and it also collects other related pages that may interest customer. Shopping cart improves the shopping experience of a customer by keeping track of all the activities of customers. This aids in creating a more professional image of what a shopping cart owner can offer to the customers.

3.1.4 Compatibility of Various Payment Modes

The last step a customer must carry out is paying for a purchase. An important function of a shopping cart is the ability to collect payments in a stress-free way. The shopping cart provides all the necessary tools to charge customers without them needing to abandon their carts. The tools for processing and connecting credit cards to bank account and operating in synchronization with payment gateways are provided on a shopping cart. With or without a third party, the shopping cart triggers an immediate process of billing and invoicing. The shopping cart ensures every payment can be processed.

3.1.5 Feedback and Product Review

According to a study by the Nielsen company in 2009, up to 70% of respondents find "consumers opinion posted online" reliable. Customers are asked to rate the store's service and give

tips on what more can be done to improve the offered services. This ratings and reviews give new customers insight on making better buying choices.

4.0 Self-Assessment Exercise(s)

1. These are available e-commerce payment option except:
(a) Mobile payment
(b) E-wallet
(c) Bank Transfer
(d) Banknote

5.0 Conclusion

The unit shows that functions of the shopping carts. Shopping cart provides easy access to selected products and also collects other related pages of interest to customer. Compatibility of various payment modes are seen to make payment effective and feedback had help in a number of way to increase customer satisfactions.

6.0 Summary

By now, you are believed to have grab understand of the functions of shopping cart divided by security, solitary hub and retail store. Compatibility of various payment modes is find to be an important function of a shopping cart. Feedback helps with the customers rating of products or services.

7.0 References/Further Readings

Baker, S. (n.d.). *What is Shopping Cart Software: Analysis of Features, Benefits and Pricing*. Retrieved from FinancesOnline : financesonline.com/shopping-cart-software-analysis-features-benefits-pricing/

ch4ntix. (2012, April 21). *Shopping cart Disadvantages*. Retrieved from ch4ntix: ch4ntix.wordpress.com/2012/04/21/shopping-cart-4/amp/

Unit 3: **Payment Gateways for Shopping Carts**

Contents

1.0 Introduction

This unit will highlight shopping cart payment gateway, different types of the payment gateways and then give factors to consider when choosing payment gateway.

2.0 Intended Learning Outcomes (ILOs)

By the end of this unit, you will be able to:
        Differentiate between the different types of payment gateways
        Demonstrate payment gateway to consider and give the reason

3.0 Main Content

3.1   Introduction

Payment gateway securely authorizes online payment. It allows for the transmission of credit card information, approval code, and any confirmation details back to shopping carts in a secured way. Examples include; PayPal, Mollie, Square, Venmo, Apple Pay, Amazon Pay, etc.

3.2   Types of Shopping Carts Payment Gateways

There are different ways with which a consumer can pay for items purchased. Each gateway has it peculiarities so, a consumer chose based on the type of gateway they feel is best. The following are the types of shopping carts payment gateway:

- IMA (Internet merchant account)
- TTP (Third party payment)
- MPP (Manual payment processing)

3.2.1 Internet Merchant Account: This is an account issued by a financial institution. It enables merchants to accept credit card

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payment online. So, business has to have separate account for every type of credit card they intend to accept (E.G master card, VISA E.T.C).

3.2.2 Third Party Payment: This involves the introduction of another body that serves as an intermediary between the merchants and the consumers. The benefit of the third party is that they make selling of goods easier and quicker. Here, the money for the transaction is deposited in a special account that is controlled by the service provider.

In order the merchant to obtain the money, they will make request to the service provider, the service provider will in turn request for the proof of the transaction success, if they are to provide it, then the funds will be released and if there is a dispute over the transaction, they may withhold the funds for a loner period. The most common type of the third party payment is the *PAYPAL*.

3.2.3 Manual Payment Processing: This is the type of gateway option usually employed when there is limited number of online orders. Here, users can make orders online but payment will be done manually (i.e credit cards are processed manually instead of automatic processing). Credit card information are acquired via a secure server.

3.3 Factors to consider when choosing a payment gateway

- Privacy of the transaction data
- Credibility of the service provider
- Cost associated with payment gateways.

4.0 Self-Assessment Exercise(s)

1. One of the following is not a payment gateway:
(a) PayPal
(b) Dubbet Pay
(c) Apple Pay
(d) Amazon Pay

5.0 Conclusion

The unit shows that third party payment is very important in e-commerce, as request will be made to service provider and then service provider request for the proof of transaction success, the fund will be released. With this transaction, privacy could be considered and credibility of the service provider is very important.

6.0 Summary

You are believed by now to have understand of the types of shopping cart to be internet merchant account, third party payment, and manual payment

processing. While privacy of transaction data, credibility of service provider and cost associated with payment gateway are to be considered when choosing a payment gateway.

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Unit 4:   Shopping Cart Problems

Contents
1.0   Introduction
2.0   Intended Learning Outcomes (ILOs)
3.0   Main Content
        3.1   Introduction
        3.2   Security and Fraud issue
        3.3   Confidentiality
        3.4   Lack of total disclosure
        3.5   Shopping cart abandonment
4.0   Self-Assessment Exercise(s)
5.0 Conclusion
6.0   Summary
7.0   References/Further Readings

1.0 Introduction

This unit will highlight the problems associated with shopping cart which range from security and fraud issue, confidentiality to lack of total disclosure and shopping cart abandonment.

2.0 Intended Learning Outcomes (ILOs)

By the end of this unit, you will be able to:
        Highlight the issues associated with shopping cart

3.0 Main Content

    3.1   Introduction

Shopping carts are widely known for its benefits which is rightly so. However, there has been a massive drop in the usage of shopping c,
arts due to the problems associated with it. Some of the problems are explained below.

3.2 Security and fraud issue

Due to the fact that items bought online cannot be physically inspected, there is always the risk of purchasing substandard or even fake goods. A phenomenon called" phishing" is also a huge security problem. It's a situation where by false websites are created with the aim of fooling people in to thinking they are dealing with trustworthy entities. Consumers are required to provide sensitive details such as credit card detail, passwords, username and so on. The provided details can then be used to attack them. Issues of stolen cards being used to purchase goods which leads to repudiation is also rampant.

3.3 Confidentiality

There are many websites that keep track of consumers shopping habit in order to recommend other items and websites to view. Some keep record of mail addresses and phone numbers and in turn utilizes it to advertise their product which is not something every consumer want.

3.4 Lack of total disclosure

The lack of full disclosure with respect to the price of items purchase is one of the reasons people abandon the usage of shopping carts. This is so because the total cost of goods cannot be seen until the final stages of the purchasing process as additional fees such as shipping fees are not usually included at the first steps of the purchasing process. This situation is more evident when it involves international purchases where additional fees like brokerages and duties fee are not even included at the final stages of the purchasing process but rather at the delivery point.

3.5 Shopping cart abandonment

After selecting items for purchase on their shopping cart, customers leave the shopping cart for different reasons and fail to complete their purchase i.e. the shopping cart has been abandoned. The most common reason is that most people are just browsing for options.
Some of these reasons include:
- The checkout process taking too long.
- Check outs can be done without creating an account with the merchants.
- Crashing during checkout or website interrupted by bugs.
- Bad return policies dissuade customers from buying.
- Credit card not verified.
- Unavailability of mobile-friendly payment options.

4.0   Self-Assessment Exercise(s)
1. One of the following is not a problem of a shopping cart.
(a) security
(b) payment
(c) fraud
(d) confidentiality

5.0   Conclusion
The unit shows that some factors actually influes the use of shopping carts. These issues are fraud issues, security breech, confidentiality, abandonment and lack of disclosure.

6.0   Summary
You are believed by now to have understand of those issues that prevent the use of shopping cart, such as shopping cart abandonment, lack of total disclosure, confidentiality and security issues.

7.0   References/Further Readings

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Module 6:   Completing Purchasing Process and Tracking Information

Module Introduction

This module introduces learners to purchasing and information access due to the increase in the adoption of online shopping by customers, more e-commerce websites are being created and hosted globally. Purchasing items online involves numerous activities and mechanisms. This module discusses processes involved in purchasing goods and services online and emphasis on the methods used for tracking shopper's information. This module also discusses various security concerns in online shopping and describes some of measures and tips for ensuring a seamless, safe and secure shopping process for shoppers. This module has three (3) units:

Unit 1:   Completing the Purchasing Process
Unit 2:   Tracking Shoppers' Information
Unit 3: Security in E-Commerce

In each of these units, I will go through a topic and give a self-assessment exercise(s) at the end of the unit. Then, give resources for further reading at the end of each units.
Introduce the module and state the units under the module.

Unit 1:   Completing the Purchasing Process

Contents
1.0   Introduction
2.0   Intended Learning Outcomes (ILOs)
3.0   Main Content
        3.1   Introduction
                3.1.1   Shopping carts
                3.1.2   Secure Server
                3.1.3   Payment Processing System
        3.2   Choosing a payment option for online store
        3.3   Online Purchasing Process
4.0 Self-Assessment Exercise(s)
5.0   Conclusion
6.0   Summary
7.0   References/Further Readings

1.0 Introduction

In this unit, online purchasing process knowledge will be acquired. The customer will check different option for payment purposes. Shopping carts, secure server and payment processing system will be discuss in this unit.

2.0 Intended Learning Outcomes (ILOs)

By the end of this unit, you will be able to:
        Evaluate all activities of a webstore and supporting mechanism for e-commerce
        Evaluate online purchase process

3.0 Main Content

3.1   Introduction

Electronic commerce is an evolving concept that involves buying and selling of goods and services in a virtual environment (online). E-Commerce is a technology that is gaining a widespread adoption among sellers and buyers due to its numerous advantages such as ease of use, speed of searching and purchasing of goods and services, ability to find and compare prices without leaving your house, ability to save time and costs, as well as adequate support services.

In an online environment, products are provided through online stores. Online store (or webstore) is a website owns by a company where goods and services are provided for sales. A webstore may be created to serve a targeted customers or market (e.g cattoy.com). it could be owned by a manufacturer (e.g cisco.com, dell.com), retailer (e.gamazon,com, konga.com) or individuals selling at home. Therefore, purchasing and selling online via a webstore involve several supporting mechanisms that work in synergy to ensure a seamless, complete and secure transaction. The supporting mechanisms for electronic commerce are categorized into three and described as follows:

3.1.1 Shopping Carts: An electronic shopping cart (also known as shopping bag or shopping basket) is a software that keeps track of items selected by users or customers for purchase from an online store before proceeding to payment and checkout. An electronic shopping cart is much like a shopping cart in a supermarket. A shopping cart automatically calculates the total cost of the selected items, adds tax and shipping charges depending on the type used as applicable. It enables customers to review and revise their shopping list before the purchase in completed by clicking on the "submit" button. In addition, shopping cart software is usually provided free or sold to store builders. Typically, an online shopping cart consists of the following three parts:

(a) **Catalogs:** An electronic catalog (e-catalog) is an essential part of an e-commerce webstore, it is made up of all the required information needed to present products to customers. E-catalog consists of product databases, directory, and including presentation functions. It serves as the back bone of mots e-commerce webstores. Generally, some of the information

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included in the product database are the price, product identification number, image, video or other multimedia-based information, product alternative. E-catalog contains a very large information and search engine (SE) is mostly used to quickly search the database to locate information on products and services. Most of the early e-catalog were static presentation based on text and messages from paper catalogs. However, the evolvement of the online catalogs make the recent catalogs to be dynamic, customizable, and possibly integrated with purchasing and selling procedures, shopping carts and payment systems.

(b) Shopping list: Shopping list provides dynamic behaviour to the shopping carts. It allows users to track the selected items or products for purchase. A shopping cart image is mostly used to show the items selected by shopper. However, for shopping carts to function properly the user's computer must be set to allow "cookies". Cookies are small piece of software installed on user's computer by a website to keep track of visitors and to understand how they use such a website.

(c) Checkout: checkout includes series of steps that allows a customer purchase the selected items on an ecommerce website. It allows shoppers to click on "Add items to cart" button which makes shopping cart to add the item to the total price of the purchase for onward payment.

3.1.2 Secure Server: Generally, servers are dedicated computers set up for the purpose of serving users' requests on the internet. A secure server ensures that the customer's personal information is protected against lost, modification or malicious use. Secure Socket Layer (SSL) is the most popular technology for securing online transaction. SSL encrypts (or codes) all data between shopper's computer (or browser) and the shop's server. The use of a secure server makes it very difficult for a third party (intruder) to decode any information exchange between shoppers and the webstore such as credit card number.

3.1.3 Payment Processing System: Payment is the most important aspect of e-commerce. It allows shoppers to pay for the purchased items or products. Payment system consists of several but technology simplified processes with the help of payment cards including Credit Cards, Charge Cards, or Debit Cards, and any other emerging payment technology such as crypto-currency like Bitcoin. A payment card is an electronic card that contains data related to payment. Processing payment with credit or debit cards involve two phases: Settlement and Authorization. The **authorization** determines the validity of a buyer's card (that is, not expired) and determine whether there is sufficient credit or funds in the shopper's account. On the other hand, **Settlement** involves the process of transferring funds from the shopper's account to the merchants. Online payment processing involves quit a number of concern parties including customer, merchant, issuing bank, merchant acquiring bank, credit or debit card network, and payment service provider. To process the payment, there are three payment processing options for merchants that include: Third party payment processing software, Internet merchant account, or manual payment processing.

a) **Third party payment processing:** This enables a third-party financial institution to handle the payment processing services for webstore owner. This is an alternative method to obtaining internet merchant account for online payment processing. It can be set up easily and make selling more quickly and easy. Examples of the third-party online payment service providers are PayPal, CCNow, PsiGate, Beanstream, and InternetSecure. Third party payment processing works by depositing the transaction money from customer's account to a special account controlled by the service provider. If there is no dispute over the deposited money, the funds will be transferred to the merchant's account as soon as the transfer is initiated by the merchant, otherwise, the money is delayed for longer period.

b) **Internet Merchant Accounts:** This is a payment service issued by a financial institution that enables customers payment for

goods and services online using a payment card. This payment system enables merchants to obtain a separate Internet Merchant Account (IMA) for each type of payment cards such as Verve, VISA or Mastercard. IMA ensures that the transferred money is deposited directly into the account of the right merchant automatically and quickly. Some of the companies to authorize bank to issue internet merchant identification (IMI) are InterSecure, PsiGate.

c) **Manual Credit Card Processing:** In this payment processing system, merchant set up website where customers can order goods and services online but process the payment credit cards manually. This system does not employ online payment processing option, it allows credit cards information to be obtained through a secure server while transaction is processed manually. However, this method is limited to a store with a few numbers of online orders.

3.2 Choosing a payment option for online store

Payment processing is an important part of an ecommerce website. Therefore, webstore owners must consider some factors while chosen the payment option for their shop. Some of these factors include but not limited to:

- **Associated Cost:** this include the cost for setting up the system and its maintenance e.g monthly; charge back fees, and the fees associated with the various payment options and accounts.
- **Security and protection:** ability to ensure secure transaction, provide data privacy and detect fraudulent transaction in a real time
- **Credibility of the Service provider:** such as expert staff, user friendly policies, no hidden charges.
- **Support Services:** ability to provide support services at any time.

3.3 Online Purchasing Process

The main purpose of an EC website is to present products and services from catalogs to customers and for online purchase. Depending on the method adopted, product prices may either be fixed or dynamic. Fixed pricing method displays products and describe them along with fixed prices. Sometimes,

prices may also be negotiated or discounted. In a situation whereby the price is not fixed but rather determined by some factors is referred to as a dynamic pricing model such as in product auctioning and stock exchange.

Typically, depending on the method adopted, online purchase process begins with a buyer visiting a seller's website either as a registered customer or a guest. As a registered customer, a buyer will enter the store via buyer's "My Account" and non-register user will enter through the store catalog. Part of the important tools available for buyers is the search engine that can help customers search through the large E-catalog database and present the details of the products related to the used "search terms". Nowadays, some merchants provide features where buyers can compare prices with their competitors. If customer is not satisfied with the price or any other description, the buyer may abandon the site. Otherwise, the buyer may select one or more item as s/he wants and placed it in shopping cart. After the items have been selected for purchase, the buyer moves to a checkout by clicking on "Proceed to checkout", add address and select a shipping (standard, next day etc) and billing option for delivery such as (first class, express etc). The system calculates the total sum of the selected items including the shipping fee. A payment method is selected such as payment by credit cards, PayPal, check after billing, instalments and so on. Finally, the buyer clicks on "submit" after confirming the accuracy of the ordered items. This process can be summarized in the following shopping process flowchart

Shopping Cart > Checkout >> Billing Information>>> Shipping Information >>>> Shipping Method>>>>> Preview Order >>>>>> Payment >>>>>> Confirmation

4.0   Self-Assessment Exercise(s)
1)   ……………………. is an evolving concept that involves buying and selling of goods and services in a virtual environment.
(a) commerce
(b) virtual market
(c) electronic commerce
(d) electronic market**.**

2)   Shopping cart is also known as …………………………..
(a) shopping cat

(b) shopping sack
(c) shopping file
(d) shopping basket.

5.0 Conclusion

The unit shows that catalog, shopping list and checkout are within shopping carts, different payment methods can also be used, however, this could be due to any of the factors such as associated cost, security and protection, credibility of the service provider and support services.

6.0 Summary

You are believed by now to have understand the processes of online purchase, payment option and the reason for choosing the option, and supporting mechanism for e-commerce.

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Unit 2: Tracking Shoppers' Information

Contents
1.0   Introduction
2.0   Intended Learning Outcomes (ILOs)
3.0   Main Content
  3.1   Introduction
  3.2   Techniques for Tracking Customer Information
    3.2.1   Cookies
    3.2.2   Tracking Pixel
    3.2.3   Web Beacons

1.0 Introduction

In this unit, you will realized that customers are the most important in e-commerce and the need to track the information in significant to the progress of e-commerce. Different techniques for tracking customers will be discuss.

2.0 Intended Learning Outcomes (ILOs)

By the end of this unit, you will be able to:

Develop techniques for tracking customers

3.0 Main Content

3.1 Introduction

Customer can be regarded as the most important part of eCommerce ecosystem. In fact, they are the reason for the existence of eCommerce websites in the first place. Therefore, it is very essential for businesses to know their customers (current and potential customers). Customer tracking is a technique for collecting and organizing customer's information. Many businesses collect information about their customers such as name, address, and phone numbers. However, the evolvement of the eCommerce and its related technologies show that there is more to customer tracking than just collecting names. With an appropriate tracking tools webstore owner can collect enormous data from visitors for the purpose of increasing sales, create targeted marketing campaign, determine customer online or sale behaviours and providing a customized experience for users.

3.2 Techniques for Tracking Customer Information

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In order to track customer's information, online shop owners use one or more techniques. Some of the popular techniques are described as follows:

3.2.1 **Cookies:** Cookie is a computer program that a website install on user's computer (or browser) and gets loaded whenever the website is visited. Cookie enables websites to identify and remember its users. It is the used online tracking technique used on eCommerce websites. In addition, cookies can also be used to serve the purpose of monitoring users and give insight about user's behaviours. Cookies can also be employed for user profiling as well as a tool to aid targeted marketing. Cookies placed by the website visited is referred to as "first-party cookies", while a cookie placed by someone other the website visited is referred to as "third-party cookies". A third-party cookie may be used to deliver some ads to you, perform analysis or monitor your behaviour over time. There exist different kinds of cookies, the most popular ones are analytics, necessary, and marketing cookies.

    a) **Analytics cookies:** Analytics (or statistics cookies) is (often) a third-part cookies that collects, logs, and analyse user data using advance or statistical techniques to provide insight about the user behaviour to the website owner.

    b) **Necessary cookies:** This is the basic cookies that allow website performs its normal function.

    c) **Marketing cookies:** Marketing (or advertisement) cookies are used to target visitors for advertisement purpose. These cookies track user behaviour in order to determine what product customer is likely to buy.

3.2.2 **Tracking Pixel:** Tracking pixel (or pixel tag) is a user tracking technique that contains invisible and transparent images of a single pixel, usually present on a webpage or an email. The invisible images load when a user loads a webpage or open an email and allows the sender of the tracking pixel (an ad server) to read and record the opening of the webpage or email and monitor the user activities. information that may be obtained from user include: operating system, browser, Email program, website visitation/loading time, user IP address and location, as well as user behaviour. However, most of the data and privacy protection laws such as General Data protection regulation

(GDPR) now requires that the user consent must be obtained prior to its activation on a webpage.

3.2.3   Web beacons: Web beacons (or ultrasound beacons) are online user tracking technique that emits high-pitch sounds from the device a user is using to access a webpage that has beacon installed. The sound is inaudible to humans but all the nearby devices can react to it. Web beacons also known as Ultrasound cross-device tracking (uXDT) are technology to bridge the gap between physical world and the digital world. For example, an IT based store with an ultrasound beacon installed on their website may gain insight from the connected devices and probably use it to suggest similar or alternative products to the ones a customer is currently using.

3.2.4   Browser fingerprinting: Browser (or device) fingerprinting is an online user tracking technique that collects user highly specific information about their system and settings. The collected information is used to create a fingerprint (a unique identification) for the device that can be tracked across the web. This technique works irrespective of whether cookie is blocked or not.

3.2.5   Other Techniques: Other user information tracking techniques are zombie cookies, dynamic cookies, flash cookies, IndexedDB etc.

4.0   Self-Assessment Exercise(s)

1) An online user tracking technique that usually installed on user's computer and gets loaded whenever the website is visited is known as ……………….
(a) cookies
(b) Tracking pixel
(c) web beacon
(d) browser fingerprinting.

2) Analytical cookies are used to provide insight about a shopper while …………………… cookies are used to target visitors for advertisement.
(a) necessary
(b) target
(c) marketing
(d) special purpose.

5.0   Conclusion

The unit shows that customers are the most important in e-commerce. Managing and satisfying and tracking customer information played an important role in getting necessary information on customers. Techniques for tracking customers such as cookies, tracking pixel, web beacons, browser fingerprinting and other techniques such as IndexedDB are very important in e-commerce.

6.0   Summary

You are believed by now to have understand that customers are important in e-commerce and different methods are used to track their information for future use.

7.0   References/Further Readings

Federal Trade Commission (2016). *Online Tracking*. Retrieved from https://www.consumer.ftc.gov/articles/0042-online-tracking

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Unit 3:   Security in E-Commerce

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        3.1   Introduction
        3.2   Electronic commerce security requirement
        3.3   Security protocol in internet
                3.3.1   Secure socket layer
        3.4   Minimizing security threat on E-commerce website
4.0 Self-Assessment Exercise(s)
5.0Conclusion
6.0Summary
7.0   References/Further Readings

1.0 Introduction

This unit will highlight the security features and requirements for e-commerce. Security protocols in the internet and how to minimize security threat on e-commerce will be discuss.

2.0 Intended Learning Outcomes (ILOs)

By the end of this unit, you will be able to:
Understand e=commerce security requirements
Minimise security threat on e-commerce website

3.0 Main Content

3.1 Introduction

Electronic commerce (EC) security refers to the principles that allow buying and selling of goods and services online are conducted in a safe and secure conditions. EC security ensures the protection of E-Commerce assets (including computers, servers, networks, databases and user data) from unauthorized access or use, alteration, or destruction with the use of security protocols and mechanisms. EC security is an integral part of any online business, as it determines the success of online stores. In other words, the level of trust and patronage enjoin by online stores depend on how customers feel safe and secure while performing e-payment or transaction on their platforms.

In recent years, the demand for online transaction has increased due to the enormous growth in the areas of computing and connectivity. However, the growth in computing capabilities and bandwidth have also brought about sophistication of cyber-attacks and tools, thereby creating security and privacy issues in an online environment. It is very important for online store owners and customers to be aware of various security threats associated with online transactions. Some common security threats to E-commerce include fraudulent use of credit cards, identity theft, loss or modification of personal information, information leakages or illegal disclosure of personal data, phishing, spam, computer viruses, ransomware and other forms of malware attacks. Therefore, it is highly important for eCommerce website owners and users to be aware of the various security and privacy issues associated with the platform and ensure that standard security measures are included from the inception of webstores.

3.2 Electronic Commerce Security Requirement

A good security determines the success of electronic commerce. To provide a safe and secure online transaction, the following security requirements are required to prevent or minimize online transaction risks:

1) **Confidentiality:** This is the assurance that information is accessed or used only by an authorized person. A good EC webstore must ensure that information is not accessible to an unauthorized individual during the storage, processing, and transmission.

2) **Integrity:** The assurance that information stored or transmitted over the network is not altered by an unauthorized person (or illegally).

3) **Availability:** the assurance that information should be available to the authorized users whenever and wherever. It requires that EC transactions are always available to the authorized persons.

4) **Authenticity:** This requires that a mechanism be put in place to ensure that users are authenticated before granting access to the required information. It ensures that only people with correct credentials get access to the information.

5) **Authorization:** it ensures that an authenticated person has permission to perform a specified operation on a specific system.

6) **Non-Repudiation:** This requires the use of mechanism to protect users against denial of order or denial or payment. The makes sure that sender could not deny sending a message, while the recipient could not deny the receipt either.

7) **Encryption:** This ensures that information is encrypted and decrypted only be an authorized user.

8) **Auditability:** it ensures that data is recorded in a manner that make it possible to conduct auditing for integrity requirement.

3.3 Security protocol in Internet

One of the most commonly used protocols for ensuring secure online transactions is secure socket layer (SSL)

3.3.1 Secure Socket Layer (SSL): This is the most commonly used security protocol for online transaction. This protocol encrypts information between user devices and webstore servers. It makes it difficult for an authorized party

to decode any information exchange such as credit card number. Hypertext Transfer protocol (HTTP) is one of the basic internet protocols for file exchange on the world wide web. Recently, this protocol has been enhanced with some security protocols including secure socket layer that makes it difficult for unauthorized persons to access communication (or transaction) between customers and webstore's servers. An enhanced http protocol with secure socket layer (https) allows EC transactions to meet authentication, encryption, integrity and non-repudiation security requirements.

To identify an EC website with a secure transaction between user's computer and the website, the following measures should be noticed:

a) A URL address that begins with **"https//"** instead of the popular **"http//".**

b) A browser that shows a **lock icon or a message** that notifies you that you are on a secure site.

3.4 Minimizing Security Threat on EC Website

To ensure a secure transaction on electronic commerce website, a great deal of efforts must be put in place to minimize security threats. Some of the processes for minimizing security threats are:

1. **Security risk assessment:** A security risk assessment must be performed from time to time to identify the level of security required for each of the firm's assets. To do this, the list of information assets must be identified and the security priority level must be ascertained.

2. **Security policy:** A security policy statement must be developed specifying the responsibility of the stakeholders and how to go about their day to day activities without compromising security standards. The statement usually species: the assets to be protected by/from whom; reasons for assets protection; the person responsible for the protection; and the acceptable and unacceptable behaviours.

3. **Implementation plan:** A clear plan must be developed to describe the steps to be taken in order to achieve the security goals.

4. **Security organization:** A unit or department to be overseeing the administration of security policy needs to be created. This unit is responsible for ensuring that everyone works in tandem with the developed security policy.

5. **Security audit:** A review of policies, security access and procedure need performed in a routine manner. The review process provides an evaluation procedure to uncover the vulnerability in your security architecture.

4.0   Self-Assessment Exercise(s)

1) The level of trust and patronage enjoin by online stores depend on how customers feel …………… and ……..……. while performing e-payment or transaction on their platforms.
   (a) safety and security
   (b) safe and secure
   (c) covered and identified
   (d) remembered and secure

2) ……………………. is an online security protocol that encrypts information between user devices and webstore servers.
   (a) electronic security
   (b) secure socket layer
   (c) file transfer protocol
   (d) server secure layer.

5.0   Conclusion

The unit shows that e-commerce security ensures the protection of e-commerce assets from unauthorized access and use. Secure socket layer is presented as one of the most commonly used security protocol for online transaction.

6.0   Summary

You are believed by now to have understand security requirements, security protocols and methods to minimize security threat on e-commerce website.

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