MODULE 1 -3

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ITRACKB1
Web Systems and Technologies: Web Design
Catanduanes State University CICT

Module Overview
This module will guide the students to examines the concepts, technology, and applications of electronic commerce, or e-commerce on both traditional fixed e-commerce and mobile e-commerce or m-commerce. The topics also include the rising role of social commerce, security and payment in e-commerce, B2B e-commerce and B2C e-commerce.

Learning Outcomes
At the end of the lesson, the students should be able to:
1. Discuss e-commerce basic concepts, its advantage and disadvantages and the evolution of its growth;
2. Determine the process involve in e-commerce payment systems;

Pre-Test

Encircle the best answer.

1. Which of the following is/are not an obstacle/s of m-commerce?
     [a] slow connectivity [b] standardization   [c] security   [d] none from the choices

2. The major factor that drives the m-commerce could be _____
     [a] user friendly interface [b] innovation   [c] availability on socia media [d] none of the above

3. Smart phone, PDA, computer mediated network are the need in _____.
     [a] network marketing [b] e-commerce [c] m-commerce [d] marketing

4. Focuses on providing products from one business to another _____.
     [a] B2C Model   [b] B2B Model [c] C2C Model [d] B2G Model

5. Online learning platforms earn from a subscription that is paid by students to access various video lessons for 3/9/12 months.
     [a] Advertisements   [b] Affiliate Partnership [c] Sponsored Emails   [d] Subscription

6. - 10 What are the differences between e-commerce and m-commerce?
_____
_____
_____
_____
_____
_____

MODULE 1

Module Map
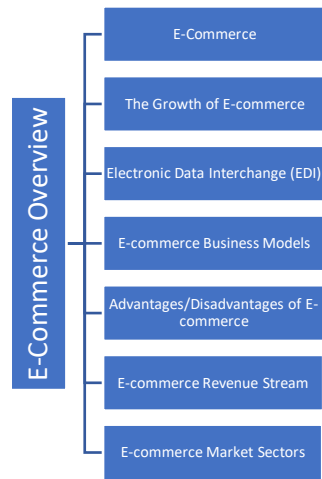
E-COMMERCE OVERVIEW

a. E-commerce

E-commerce (electronic commerce) is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the internet. These business transactions occur either as business-to-business (B2B), business-to-consumer (B2C), consumer-to-consumer or consumer-to-business.

b. The Growth of E-commerce

Let us look at statistics and trends that depict the growth of eCommerce globally. We are going to describe the growth of eCommerce according to a report published in 2019 by Aaron Orendorff to help businesses launch beyond borders

Retail ecommerce sales worldwide
2014 to 2021 by trillions of USD

$1.3T 2014
$1.5T 2015
$1.8T 2016
$2.3T 2017
$2.8T 2018
$3.5T 2019
$4.1T 2020
$4.9T 2021

Data via eMarketer (Statista)

Image Source: Shopify Plus | Global eCommerce market size: Retail eCommerce sales worldwide

The report presents statistics and trends about eCommerce since 2014 and also gives estimates of the future of eCommerce up to 2023. Cumulative data over the most-recently tracked period anticipates a 276.9% increase in eCommerce sales globally.

The following is a regional breakdown of the eCommerce market ranks in 2019.

Asia and the US

E-commerce activities in the Asia-Pacific region represent over 70% of global eCommerce. China alone accounts for $740 billion, while the US accounts for over $560 billion in eCommerce sales. Estimates show that China will reach $1,086 billion in eCommerce sales by 2023. Similarly, the US is also expected to reach $735 billion in eCommerce sales by 2023.

Europe

Statistics from the report also depict the growth of eCommerce in European markets. However, Western Europe has accounted for the highest eCommerce growth in this region. The United Kingdom accounts for over $93 billion in eCommerce sales, which may grow to 31.5% by 2023. Similarly, Germany and France account for $77 billion and $55 billion in eCommerce sales, respectively.

Africa and the Middle East

Africa and the Middle East, however, portray the slowest eCommerce growth rates. The slow growth of eCommerce in Africa is due to low Internet penetration and slow adoption of technology by its population. E-commerce activities in this region only represent 1% of total eCommerce transactions worldwide. This estimate is expected to increase slightly by 2021.

Things to Note
- As Internet penetration and accessibility increases, more people can benefit from the majority of online services, including eCommerce.
- E-commerce has become mainstream in people's daily lives with profound benefits.
- The eCommerce sector is expected to break the net accounting for double-digit growth in all locations around the world. Of course, the highest emergency market growth rates are in the Asia-Pacific and Latin America regions. Countries in these regions are responsible for the greatest eCommerce market success. Also, as digital payment options becoming more prevalent in these regions, eCommerce will thrive immensely.
- As of now, about 22% of the world shops online.
- Retail eCommerce sales may reach $5 trillion by 2021.

c. Electronic Data Interchange (EDI)

Electronic Data Interchange (EDI) is the computer-to-computer exchange of business documents in a standard electronic format between business partners.

By moving from a paper-based exchange of business document to one that is electronic, businesses enjoy major benefits such as reduced cost, increased processing speed, reduced errors and improved relationships with business partners.

Each term in the definition is significant:

Computer-to-computer– EDI replaces postal mail, fax and email. While email is also an electronic approach, the documents exchanged via email must still be handled by people rather than computers. Having people involved slows down the processing of the documents and also introduces errors. Instead, EDI documents can flow straight through to the appropriate application on the receiver's computer (e.g., the Order Management System) and processing can begin immediately. A typical manual process looks like this, with lots of paper and people involvement:
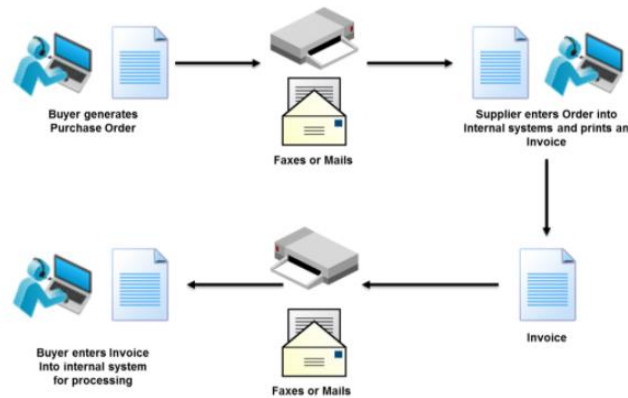
The EDI process looks like this — no paper, no people involved:
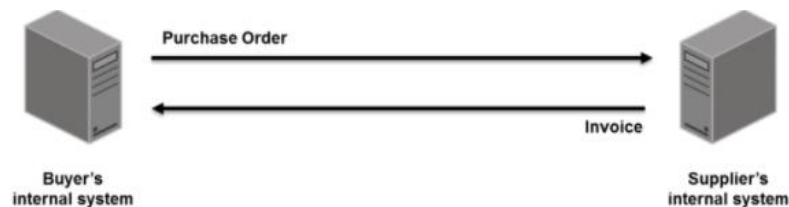
- **Business documents** – These are any of the documents that are typically exchanged between businesses. The most common documents exchanged via EDI are purchase orders, invoices and advance ship notices. But there are many, many others such as bill of lading, customs documents, inventory documents, shipping status documents and payment documents.

- **Standard format**– Because EDI documents must be processed by computers rather than humans, a standard format must be used so that the computer will be able to read and understand the documents. A standard format describes what each piece of information is and in what format (e.g., integer, decimal, mmddyy). Without a standard format, each company would send documents using its company-specific format and, much as an English-speaking person probably doesn't understand Japanese, the receiver's computer system doesn't understand the company-specific format of the sender's format.

- There are several EDI standards in use today, including ANSI, EDIFACT, TRADACOMS and ebXML. And, for each standard there are many different versions, e.g., ANSI 5010 or EDIFACT version D12, Release A. When two businesses decide to exchange EDI documents, they must agree on the specific EDI standard and version.
- Businesses typically use an EDI translator – either as in-house software or via an EDI service provider – to translate the EDI format so the data can be used by their internal applications and thus enable straight through processing of documents.

- **Business partners** – The exchange of EDI documents is typically between two different companies, referred to as business partners or trading partners. For example, Company A may buy goods from Company B. Company A sends orders to Company B. Company A and Company B are business partners.

### d. E-commerce Business Models

Electronic commerce encompasses all online marketplaces that connect buyers and sellers. The internet is used to process all electronic transactions.

The first thing to think about is the type of business transaction you're going for. When you think about the business you want to run, who do you see yourself selling to? Is your business B2B, B2C, C2C, or C2B?

Do you have an idea for a type of ecommerce business that you've been thinking about for a while? Do those acronyms make your head spin? Let's take a look at the most common ways online transactions occur.

d.1 B2B: Business To Business Ecommerce

A **B2B model focuses on providing products from one business to another**. While many businesses in this niche are service providers, you'll find software companies, office furniture and supply companies, document hosting companies, and numerous other ecommerce business models under this heading
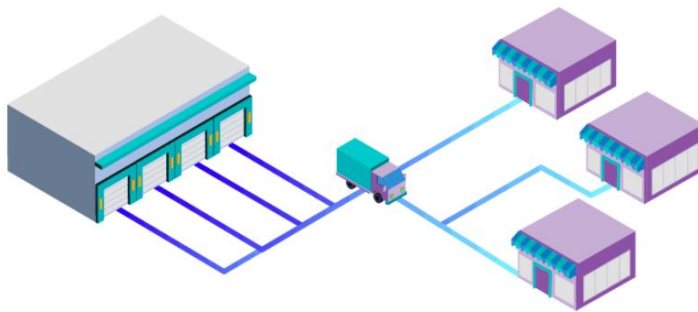
**B2B ecommerce examples** you may be familiar with include the ExxonMobil Corporation and the Chevron Corporation, Boeing, and Archer Daniel Midlands. These businesses have custom, enterprise ecommerce platforms that work directly with other businesses in a closed environment. **A B2B ecommerce business typically requires more startup cash.**

ACTIVITY 01-M1: Give a local example of a B2B operational in Philippines.

d.2 B2C: Business To Consumer Ecommerce

The B2C sector is what most people think of when they imagine an ecommerce business. This is the deepest market, and many of the names you'll see here are known quantities offline, too. B2C sales are the traditional retail model, where a business sells to individuals, but business is conducted online as opposed to in a physical store.
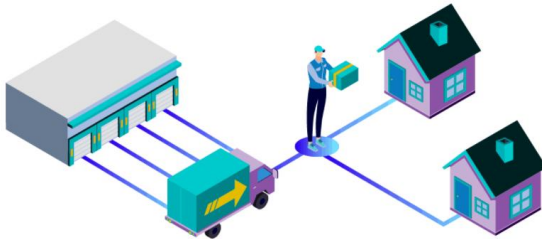
TO DO: state reasons why physical stores resisted the practice for B2C.

Examples of B2C businesses are everywhere. Exclusively online retailers include Newegg.com, Overstock.com, Wish, and ModCloth, but other major B2C model brick-and-mortar businesses like Staples, Wal-Mart, Target, REI, and Gap.

ACTIVITY 02-M1: Give a local example of a B2C operational in Philippines.

d.3 C2C Ecommerce
B2B and B2C are fairly intuitive concepts for most of us, but the idea of C2C is different. What does a consumer-to-consumer ecommerce business look like?

Created by the rise of the ecommerce sector and growing consumer confidence in online business, these sites allow customers to trade, buy, and sell items in exchange for a small commission paid to the site. Opening a C2C site takes careful planning.

Despite the obvious success of platforms like eBay and Craigslist, numerous other auction and classified sites (the main arenas for C2C) have opened and quickly closed due to **unsustainable models.**

d.4 C2B: Consumer To Business Ecommerce

C2B is another model most people don't immediately think of, but that is growing in prevalence. This online commerce business is when the consumer sells goods or services to businesses, and is roughly equivalent to a sole proprietorship serving a larger business.

Reverse auctions, service provision sites like UpWork, and **several common blog monetization** strategies like affiliate marketing or **Google AdSense** also fall under this heading.

d.5 Government / Public Administration Ecommerce

The models listed above are the primary ecommerce retail structures, but they aren't the only ones. Other types involve government/public administration conducting transactions with businesses or consumers.

- **B2G (also called B2A)**, for businesses whose sole clients are **governments or type of public administration**. One example is Synergetics Inc. in Ft. Collins, Colorado, which provides contractors and services for government agencies.
- **C2G (also called C2A):** typically individuals paying the government for taxes or tuition to universities.

Two sectors that are closed for entrepreneur owners but are growing include G2B for government sales to private businesses, and G2C, for government sales to the general public

e.   Advantages/Disadvantages of E-commerce

ADVANTAGES	DISADVANTAGES
Speed up the buying process and save time for costomers.	Lack of personal touch.
Personalize the stire as per the customer expectation.	Unsure about the quality.
Personalize the store as per the customer expectation.	Late delivery.
Reduce recurring cost while hiring virtual support resources.	Some products are difficult to purchase online.
Easily retarget customers.	E-commerce is highly compertitive.
Easier to encourage an impulse buy.	It is difficult to try before buying.
Reviews available.	Security issues.

ACTIVITY 03-M1:

Compete the the advantages and disadvantages of ecommerce by reading the article at https://magnetoitsolutions.com/blog/advantages-and-disadvantages-of-ecommerce, then find other online presentations of the same topic and present it in a tabular form with brief explanations.

Ref: https://magnetoitsolutions.com/blog/advantages-and-disadvantages-of-ecommerce

f.   E-commerce Revenue Stream

E-commerce being the buzzword in the world of entrepreneurs, it is inevitable to hear of new e-commerce ventures coming up each day. E-commerce has emerged as the favorite business option for entrepreneurs. One big reason for being preferred over other businesses is the proportion of revenue investment, which is apparently better than other options and requires less investment. To make millions online, you just have to be cognizant of the multiple revenue streams available out there.

For those who want to start an e-commerce website or make some more money from their existing e-commerce ventures, here is a list of some revenue generation methods.

Commissions

This is one of the most popular and guaranteed revenue generation methods followed by most of the e-commerce portals. The model is really simple – the seller sells and the buyer buys, and you make money out this transaction. Wondering how?

Let me explain: The website owner predefines a percentage (commission) that ischarged on each product which is sold on the e-commerce website by various merchants (sellers). This percentage (commission) can be set keeping in the view the market scenario and of course your business goals.

Subscriptions

For many websites, it's the primary source of revenue generation. Such sites earn revenue by charging a subscription/membership fee from buyer or seller to access/avail/buy/sell the services or products available on the website.

For instance, online learning platforms earn from subscription that is paid by students to access various video lessons for 3/9/12 months.

Advertisements

Site owners can charge advertisers for displaying their ads on site. Ads may be served by the site owners own ad server or through third party networks like Google AdWords. The revenue can vary depending upon the type of advertisement i.e. CPC (cost per click) or CPM (cost per thousand).

Featured Listings

Due to high level of competition that vendors/sellers are willing to pay more to showcase their products and services on top. This applies to P2P marketplaces where you being the site owner act as a connectorand buyers and sellers meet through your website.

As they say - competition is always good, as long as you are winning. So having a featured listing functionality in your e-commerce website can be a good decision considering it will bring extra revenue to your pocket.

Affiliate Partnership

E-commerce websites can partner with other third party websites and serve as their affiliate partners. By doing so they redirect visitors to third party sites and earn commission whenever their redirected visitor makes a purchase on the third party site. This is quite a steady and painless way of earning more revenue as you don't have to worry about storage, shipping, etc. Online fashion social networks like Wanelo.com work on affiliate marketing model.

Sponsored Emails

This marketing tactic is widely controversial as different marketers have different views on it-some consider it good and some bad. But we always look at the sunny side of the story. If your email/newsletter subscribers have given their consent that they are happy to receive emails from you or third parties, then there is absolutely no issue in sending them emails until and unless the emails and newsletters are of use to them. So charging money for adverts placement in newsletter or delivering a separate email on behalf of advertisers is probably a good way to earn more revenue.

Keep in mind that advertisement should be related to your business. As nobody, who is expecting emails on fashion would welcome advertisement emails on financial products. So choosing the right advertiser is the key to earn from sponsored mails.

Strategic Partnerships

Counting revenue in monetary terms is not always appropriate. Sometimes there are other things like brand value, goodwill, credibility, etc. which equally matter. Coming together for something like this is always a good option and can also indirectly increase monetory gains. One such example is of Amazon and Motorola. In May 2016, Motorola chose Amazon as its exclusive partner for selling the newly launched G4 phones. This news created buzz amongst customers and even rivals and helped Amazon get the edge over competitors.

The decision of revenue streams if taken before setting upthe eCommerce website can yield better results and prove more productive. And, even if you missed planning your revenue model efficaciously while setting up your store, you can make changes to your website now for adding new revenue streams. Updating your business site may be require in few cases.

g. E-commerce Market Sectors

Travel and related services were the top e-commerce category in 2012, with clothing retail and property also in strong demand.

- Travel
- Clothing Retail
- Real Estate

ACTIVITY 04-M1:
Relate E-commerce Market Sectors in Philippines practices, give examples; and add other market sectors available in our country.

MODULE 2

Module Map

Application of electronic commerce, or e-commerce and mobile e-commerce or m-commerce

Discover the differences between E-commerce and M-commerce;

APPLICATION OF ELECTRONIC COMMERCE, OR E-COMMERCE AND MOBILE E-COMMERCE OR M-COMMERCE

eCommerce development and its applications are an unavoidable sector in the present day to day life. eCommerce improves its sales performance. Given below are the most common eCommerce applications.

- Retail & wholesale
- Marketing
- Finance
- Manufacturing
- Auctions
- Education

ASSIGNMENT 01-M2:
1. What is m-commerce?
2. Advantages of m-commerce

Other than the straightforward m-commerce transactions of buying and selling of goods and services, they have so many applications. Few examples, are:

- Mobile Banking: Using a mobile website or application to perform all your banking functions. It is one step ahead of online banking and has become commonplace these days. For example, in Nigeria, the majority of banking transactions happen on mobile phones.

- Mobile Ticketing and Booking: Making bookings and receiving your tickets on the mobile. The digital ticket or boarding pass is sent directly to your phone after you make the payment from it. Even in India now IRTC and other services provide m-ticketing services.

- E-bills: This includes mobile vouchers, mobile coupons to be redeemed and even loyalty points or cards system.

- Auctions: Online auctions having now been developed to be made available via mobile phones as well.

- Stock Market Reports and even stock market trading over mobile applications.

Advantages of M-commerce

- It provides a very convenient and easy to use the system to conduct business transactions.

- Mobile commerce has a very wide reach. A huge part of the world's population has a mobile phone in their pocket. So the sheer size of the market is tremendous.

- M-commerce also helps businesses target customers according to their location, service provider, the type of device they use and various other criteria. This can be a good marketing tool.

- The costs of the company also reduced. This is due to the streamlined processes, now transaction cost, low carrying cost and low order processing cost as well.

Disadvantages of M-commerce

- The existing technology to set up an m-commerce business is very expensive. It has great start-up costs and many complications arise.

- In developing countries, the networks and service providers are not reliable. It is not most suitable for data transfer.

- Then there is the issue of security. There are many concerns about the safety of the customer's private information. And the possibility of a data leak is very daunting.

ACTIVITY 05-M2:
1. What are the differences between e-commerce and m-commerce? Present it in a tabular form;
2. What are the function and uses of mobile devices in both e-commerce and m-commerce?